

City of New York  
Department of Environmental Protection  
Bureau of Engineering Design & Construction

CSO Order on Consent  
DEC Case # CO2-20110512-25, Modification to CO2-20000107-8

QUARTERLY PROGRESS REPORT

**First QUARTER 2014**  
**(January 1 to March 31)**

**April 30, 2014**

## Table of Contents

<b>Table of Contents .....</b>	<b>i</b>
<b>List of Tables .....</b>	<b>ii</b>
<b>1.0 Executive Summary .....</b>	<b>1-1</b>
<b>2.0 Construction Contracts .....</b>	<b>2-4</b>
<b>3.0 Detailed Description of Work Performed.....</b>	<b>3-1</b>
1.1. Alley Creek CSO .....	3-1
1.2. Inner Harbor CSO .....	3-2
1.3. Paerdegat Basin CSO .....	3-6
1.4. Flushing Bay CSO.....	3-8
1.5. Jamaica Tributaries CSO .....	3-11
1.6. Coney Island Creek CSO .....	3-13
1.7. Newtown Creek CSO.....	3-14
1.8. Westchester Creek CSO .....	3-16
1.9. Bronx River CSO.....	3-18
1.10. Hutchinson River CSO.....	3-19
1.11. Jamaica Bay CSO .....	3-20
1.12. Environmental Benefits Projects.....	3-23
1.13. Green Infrastructure Program Implementation.....	3-28
<b>4.0 Community Relations .....</b>	<b>4-1</b>
<b>5.0 Key Personnel Changes .....</b>	<b>5-1</b>
<b>6.0 Other Issues .....</b>	<b>6-1</b>
<b>7.0 Status of LTCP Development .....</b>	<b>7-1</b>

## List of Tables

Table 1 – Milestones Certified This Quarter (Jan – Mar 2014).....	1-2
Table 2 – Milestones Next Quarter (Apr – Jun 2014) .....	1-3
Table 3 – Outstanding Modification Requests and Force Majeure Notices .....	1-3
Table 4 – Construction Contracts and their Status.....	2-4
Table 5 – Alley Creek CSO Projects .....	3-1
Table 6 – Inner Harbor CSO Projects.....	3-5
Table 7 – Paerdegat Basin CSO Projects .....	3-7
Table 8 – Flushing Bay CSO Projects .....	3-10
Table 9 – Jamaica Tributaries CSO Projects .....	3-12
Table 10 – Coney Island Creek CSO Projects .....	3-13
Table 11 – Newtown Creek CSO Projects.....	3-15
Table 12 – Westchester Creek CSO Project .....	3-17
Table 13 – Bronx River CSO Project .....	3-18
Table 14 – Hutchinson River CSO Project.....	3-19
Table 15 – Jamaica Bay CSO Projects .....	3-22
Table 16 – 2008 Modified CSO Consent Order Environmental Benefits Projects .....	3-25
Table 17 – 2012 Order - EBP Green Infrastructure Grant Program Projects .....	3-27
Table 18 – Green Infrastructure Neighborhood Demonstration Project Status.....	3-29

## 1.0 Executive Summary

The Combined Sewer Overflow Order on Consent (DEC Case # CO2-20000107-8) was entered into by the City of New York (City), the New York City Department of Environmental Protection (DEP) and the New York State Department of Environmental Conservation (DEC) on January 14, 2005. This Order on Consent was modified on April 14, 2008, September 3, 2009, and March 8, 2011 (collectively, the “Order”). Pursuant to the Order, the City shall submit quarterly status reports to DEC (Quarterly Reports). The Quarterly Reports shall describe the actions that have been taken toward achieving compliance with this Order during the past three-month period. This Quarterly Report sets forth the status of and progress made by DEP in complying with the milestones set forth in the Order between **January 1, 2014 and March 31, 2014**.

### Critical Events This Quarter

The following critical events occurred this quarter:

1. DEC and DEP continued to discuss a resolution to the NOV issued on June 10, 2013 in connection with the milestone for final design of 26<sup>th</sup> Ward Wet Weather Stabilization.
2. DEP certified final design completion of the Jamaica Tributaries Bending Weirs on November 22, 2013. DEC acknowledged receipt on November 27, 2013 and sent comments on January 10, 2014. DEP responded to the comments on February 24, 2014 and DEC approved the certification on February 25, 2014.
3. DEP filed an Article 78 proceeding on February 21, 2014 related to DEC’s December 2013 disapproval of DEP’s November 2013 Alley Creek LTCP submittal.
4. DEC issued the final permit for Dredging of Flushing Bay with an effective date of permit (EDP) of March 7, 2014. With the issuance of the final permit, the milestone for Notice to Proceed with dredging has been established as March 7, 2016, or 2 years from EDP, in accordance with the terms of the Order.
5. DEP submitted sediment sampling results for the Gowanus Canal Dredging project on February 19, 2014 and requested DEC consider suspending the project due to the ongoing Superfund process. On February 25, 2014, DEC acknowledged and commented on DEC’s request. DEP submitted a Notice of Force Majeure and Request for Modification for the Gowanus Canal Dredging project on March 7, 2014.
6. DEP submitted a Modification Request on December 11, 2013 that would switch the Milestone dates of the Coney Island Creek and Westchester Creek LTCPs so that Westchester Creek would be due June 2014 and Coney Island Creek would be due June 2016. DEC requested additional information on the rationale for the switch on January 22, 2014 and DEP responded on March 7, 2014.

7. On March 14, 2014, DEP responded to DEC’s comments on the Newtown Creek Bending Weir/Floatables Control design and on March 24, 2014, the DEC approved the Final Design Plans and Specifications for Newtown Creek Bending Weirs/Floatables Control.
8. On March 4, 2014, DEP certified completion of Aeration in Lower English Kills, Newtown Creek.
9. On January 31, 2014, DEP certified design completion for Divert Low Lying Sewers/Raise Weir BB-R02 project in Flushing. This was acknowledged by DEC on February 3, 2014 and sent comments on March 7, 2014.

**Major Actions This Quarter**

DEP continued to make progress in the planning, design and construction of its CSO facilities during this quarter, as documented in this report. As required by the Order, DEP and DEC held a Quarterly Progress Meeting on **March 10, 2014 at DEP’s Kingston Facilities** to discuss issues related to the Order and to review milestones met during the last quarter.

Table 1 presents the milestones that occurred this quarter. For each milestone listed in Table 1 below, either met or postponed, written notification was submitted by DEP to DEC.

**Table 1 – Milestones Certified This Quarter (Jan – Mar 2014)**

LOCATION / PROJECT AREA	ITEM DESCRIPTION	MILESTONE DATE	ACTION REQUIRED	STATUS
Newtown Creek CSO	English Kill Enhanced Aeration	Mar 2014	Construction Completion	<b>Certified Completion Mar 4 2014</b>
Flushing Bay CSO	Divert Low Lying Sewers/Raise Weir	Jan 2014	Final Design Completion	<b>Certified Completion Jan 31 2014</b>

**Major Actions Next Quarter**

The following major actions are expected to occur from **April through June 2014**:

Hold the next Quarterly Progress Meeting between DEC and DEP on **June 2, 2014** at the Hunts Point WWTP. Table 2 presents the status of the milestones for next quarter and Table 3 provides a list of outstanding modification requests and force majeure notices.

**Table 2 – Milestones Next Quarter (Apr – Jun 2014)**

LOCATION / PROJECT AREA	ITEM DESCRIPTION	MILESTONE DATE	ACTION REQUIRED	STATUS
Citywide	Annual Green Infrastructure Report	Apr 2014	Submit Report	On Schedule
Jamaica Bay	26 <sup>th</sup> Ward Wet Weather Stabilization	Apr 2014	NTP	Discussions on NOV resolution continue
Westchester Creek	Modifications to CSO-29 and CSO-29A	Jun 2014	Final Design Completion	On Schedule
Newtown Creek	Enhanced Aeration in East Branch and Upper NC	Jun 2014	Final Design Completion	On Schedule

**Table 3 – Outstanding Modification Requests and Force Majeure Notices**

LOCATION/ PROJECT AREA	ITEM DESCRIPTION	ACTION(S)	REASON FOR ACTION(S)	MILESTONE DATE	STATUS
Inner Harbor	Gowanus Pumping Station and Flushing Tunnel Modernization	Notice of Force Majeure Nov 19 2012	Superstorm Sandy	Construction Completion Sep 2014	Update provided Apr 12 2013
Flushing Bay	Tallman Island WWTP	Notice of Force Majeure Nov 19 2012	Superstorm Sandy	Construction Completion Jul 2015	Under Consideration
Flushing Bay	Low Lying Sewers, Raise Weirs	Modification Request May 1 2013	Portion of project transferred to DDC	Design Completion Jan 2014  NTP Dec 2014	Mod Request granted Dec 18 2013
Coney Island Creek	Submit LTCP	Modification Request Dec 11 2013 Swap dates with Westchester Creek LTCP	Additional time for force main repair	Submit Report June 2014	<b>Additional info submitted to DEC on Mar 7, 2014</b>
Gowanus Canal	<b>Dredging</b>	<b>Notice of Force Majeure on March 7, 2014</b>	<b>Gowanus Canal Superfund Record of Decision and analytical data</b>	<b>NTP and Construction Completion Dates</b>	<b>Under Consideration</b>

Changes from the previous reporting period are shown in **bold**

## 2.0 Construction Contracts

The 2012 CSO Consent Order contains milestones and schedules governing the planning, design and construction of DEP's Citywide CSO Program. Numerous CSO related facilities will be constructed to reduce combined sewage discharges to the receiving waters surrounding the City. The table below provides a list of construction contracts, identified in Appendix A of the Order, necessary to fulfill the requirements of the Order. This table identifies, by percentage, the estimated amount of construction that has been completed.

**Table 4 – Construction Contracts and their Status**

WATERBODY	ITEM DESCRIPTION	NOTICE TO PROCEED	CONSTRUCTION COMPLETION	PROJECTED COMPLETION	% OF TIME ELAPSED	% OF CONSTRUCTION COMPLETED <sup>(1)</sup>
Alley Creek	CSO Retention Facility	Dec 2006	Dec 2009	Certified Mar 2011	100%	100%
Inner Harbor	Gowanus Flushing Tunnel Modernization	Feb 2010	Sep 2014	Sep 2014	85%	78%
	Gowanus Pumping Station Reconstruction	Feb 2010	Sep 2014	Sep 2014	85%	78%
	Dredging of Gowanus Canal	TBD <sup>(2)</sup>	TBD <sup>(2)</sup>	TBD <sup>(2)</sup>	-	-
Paerdegat Basin	Structures and Equipment	Sep 2005	May 2011	Certified May 2011	100%	100%
	Dredging of Paerdegat Basin	Mar 2013	Mar 2015	Mar 2015	42%	25%
Flushing Bay	Tallman Island Whitestone Interceptor	Dec 2011	Jul 2015	May 2015	58%	49%
	Tallman Island Flushing Interceptor	TBD	TBD	-	-	-
	Divert Low-Lying Sewers	<b>Dec 2014</b>	Dec 2016	Dec 2016	-	-
	Raise Weir BB-R02	Jun 2014	Dec 2016	Dec 2016	-	-
	Regulator Modifications	Dec 2015	Jun 2018	Jun 2018	-	-
	Environmental Dredging of Flushing Bay	<b>March 7, 2016</b>	TBD <sup>(3)</sup>	TBD <sup>(3)</sup>	-	-
Jamaica Tributaries	Destratification Facility	Sep 2010	Mar 2012	Certified Mar 2012	100%	100%
	Parallel 48-Inch Siphon / Interceptor	Aug 2014	Feb 2017	Feb 2017	-	-
	Bending Weirs	Dec 2014	Jun 2016	Jun 2016	-	-
Coney Island Creek	Avenue V Pumping Station Upgrade	Nov 2005	Jun 2012	Certified Jun 2012	100%	100%
	Avenue V Force Mains	Jul 2007	Jun 2012	Certified Jun 2012	100%	100%
Newtown Creek	Enhanced Aeration Lower English Kills	Apr 2013	<b>Mar 2014</b>	<b>Jan 2014</b>	82%	98%
	Enhanced Aeration East Branch, Upper Newtown Cr	Jun 2015	Jun 2018	Jun 2018	-	-

WATERBODY	ITEM DESCRIPTION	NOTICE TO PROCEED	CONSTRUCTION COMPLETION	PROJECTED COMPLETION	% OF TIME ELAPSED	% OF CONSTRUCTION COMPLETED <sup>(1)</sup>
	Enhanced Aeration Dutch Kills, Lower Newtown Cr	Dec 2016	Dec 2019	Dec 2019	-	-
	Bending Weirs / Floatables Control	Dec 2014	Dec 2017	Dec 2017	-	-
	GI Demonstration	Oct 2012	May 2013	Certified May 2013	100%	100%
Westchester Creek	Modifications to CSO-29 and CSO-29A	Dec 2015	Dec 2019	Dec 2019	-	-
	Pugsley Creek Parallel Interceptor	Jun 2016	Dec 2019	Dec 2019	-	-
Bronx River	Floatables Control	Jun 2009	Oct 18 2012	Certified Oct 2012	100%	100%
Hutchinson River	GI Demonstration	Aug 2012	Apr 2013	Certified Apr 2013	100%	100%
Jamaica Bay	Hendrix Creek Dredging	Feb 2010	Feb 2012	Oct 2011	100%	100%
	26 <sup>th</sup> Ward HLSS Phase 1	Mar 2016	Dec 2018	Dec 2018	-	-
	26 <sup>th</sup> Ward HLSS Phase 2	Mar 2018	Dec 2020	Dec 2020	-	-
	26 <sup>th</sup> Ward HLSS Phase 3	Mar 2020	Dec 2022	Dec 2022	-	-
	GI Demonstration 26 <sup>th</sup> Ward	Jun 2012	Dec 2012	Certified Dec 2012	100%	100%
	26 <sup>th</sup> Ward Low Level MSPs	Sep 2012	Apr 2015	Jun 2014	<b>52%</b>	<b>39%</b>
	26 <sup>th</sup> Ward PST#5 and High Level MSPs	Apr 2014	Dec 2017	Aug 2018	-	-
	26 <sup>th</sup> Ward Stabilization of PSTs #1 to 4	Dec 2017	Jul 2019	Nov 2019	-	-
	Rockaway WWTP Conveyance Improvements		Dec 2017	Dec 2017	-	-

Note: Changes from the previous reporting period are shown in bold

(1) Percentage Construction Completion is tracked based on cost incurred.

(2) Dredging NTP 3 years from effective date of permit (EDP) (DEC and USACE); completion within 5 years of EDP.

(3) Dredging; completion milestone to be submitted as part of the final permit modification per DEC permits.



### 3.0 Detailed Description of Work Performed

#### 1.1. Alley Creek CSO

The Alley Creek CSO Facilities Planning area is within the Tallman Island Wastewater Treatment Plant (WWTP) service area in Queens and included Consent Order projects constructed under contracts ER-AC1 and AC2. DEP certified Construction Completion of the Alley Creek CSO Facility on June 27, 2011. The facility was certified as being operational as of March 11, 2011 and the certification of Construction Completion was accepted by DEC on September 25, 2012.

**All projects under this planning area except the LTCP have been certified complete and accepted by DEC. See Section 7 for further information about the LTCPs.**

**Table 5 – Alley Creek CSO Projects**

<i>Phase I, Stage 2</i>	
<i>Contract ID</i>	ER – AC2
<i>Plan Elements</i>	Alley Creek CSO Abatement Facilities
<i>Location</i>	Northern Boulevard and Alley Park in Bayside, Queens
<i>Actions</i>	Construction of CSO abatement facilities, including modifications to the Old Douglaston Pumping Station; hydraulic control structures and facilities to activate the 5 MG CSO storage facility constructed under Phase I, Stage 1; and rehabilitation of the CSO Outfall TI-008 structure.
<i>Cost</i>	\$35,629,594
<i>Status</i>	Certification accepted Sep 25 2012
<i>Other Issues</i>	None – all projects in this planning area have been certified and accepted

## 1.2. Inner Harbor CSO

The Inner Harbor CSO Facility Planning area consists of the drainage areas of the North River, Newtown Creek, and Red Hook WWTPs and their associated sewers and pumping stations. The receiving waters of the study area include the Lower East River, Hudson River, Upper New York Bay, and Gowanus Canal and Bay. The Consent Order projects are constructed under contracts CSO-DRDG/DRG, GI, and CSO-GCER, which include the following items:

- ◆ Environmental dredging in approximately 825 feet of the head end of Gowanus Canal to a final water depth of 3.0 feet below mean lower low water
- ◆ Gowanus Pumping Station reconstruction to improve operational reliability and to redirect flow directly to the Columbia Street Interceptor via a new force main to be constructed within the Flushing Tunnel.
- ◆ Rehabilitation of the Gowanus Canal Flushing Tunnel System to eliminate shutdowns during low tide and many maintenance operations with the installation of a new pumping system with redundant, interchangeable pumps.
- ◆ On December 18, 2013, DEC acknowledged and requested additional information on DEP's Notice of Force Majeure for the Gowanus Canal Flushing Tunnel Modernization and Pump Station Reconstruction projects submitted July 26, 2013.

Gowanus Canal was added to the US EPA Superfund National Priorities List (NPL) on March 2, 2010. On September 27, 2013, EPA issued the Record of Decision, which describes the factual and legal basis for the selected remedy for the contaminated sediments and source controls at the site.

### Design Work Performed During This Quarter

- DEP is incorporating design modifications to address flood adaptation, which will be a combination of dyke walls, raising of control rooms / equipment, flood gates and door bulkheads.
  - Environmental Dredging

**DEP analyzed the data collected through the sampling program that was conducted through 2013. DEP corresponded with DEC about the data results and CEQR determination through March 2014 and submitted a Notice of Force Majeure and Request for Modification for the Gowanus Canal Dredging project on March 7, 2014.**

### Anticipated Design Activities for Next Quarter

- Environmental Dredging
  - No activities are anticipated in the next quarter (see above).

### **Construction Work Performed During This Quarter**

- Gowanus Canal – Rehabilitation of Flushing Tunnel (FT) System and Reconstruction of Gowanus Pumping Station.
- **Interim Oxygen Transfer System (OTS) - The Interim Oxygen Transfer System was dismantled by the G Contractor and the OTS Supply pumps and piping were removed within the footprint of the OTS pad. A plan to remove the OTS piping and anchors from within the canal was submitted to EPA for review.**
- **The Interim Wastewater Pumping Station (IWWPS) was put back on to Con Edison Interim power on February 21, 2013. Currently, the Rudox Generator is on standby service should the Con Edison power fail. The Contractor continues with weekly testing of the generator.**
- **A second FT Pump was placed into operation on March 26, 2014 with turbidity monitoring occurring as per the Flushing Tunnel Start Up Plan that was reviewed and accepted by DEC.**
- **Flushing Tunnel Building: The G Contractor continued work on the rehabilitation of the masonry walls along the north, south and east walls. The contractor also continued work on the roof of the building. The E Contractor completed pulling wire and cable for controls and power for the Flushing Tunnel Pumps. Installation of conduit into the Control Room from the Service Building was completed. The E Contractor also continued installation of conduit and racks along with north, south and east walls.**
- **Force Main: Installation of all piping was completed and the final hydrostatic test of the force main was successful. Contractor completed the installation of all the air release valves and appurtenances. The Contractor completed the bypass pumping and connection of the secondary Wastewater Forcemain to the 30-inch Forcemain in Butler Street.**
- **Wastewater Pumping Station (WWPS): The G Contractor continued with the installation of Stainless Steel paneling on the exterior of the Wastewater Pumping Station. The Contractor completed the testing of the sluice gates within the WWPS influent channels and wet wells and the bypass pumping and connection of the secondary Wastewater Forcemain to the 30-inch Forcemain in Butler Street. The E Contractor continued pulling, testing, and terminating of power and control wiring at elevation 10.75 of the WWPS along with the installation of terminal boxes. The Contractor began the installation of conduit to the 20” ball valve actuators and level sensors at elevation 2.00 level.**
- **Service Building: The G Contractor continued with the installation of stainless steel paneling on the exterior of the Service Building. The Contractor also continued the installation of stainless steel louvers at the Generator Room on the 2<sup>nd</sup> floor of Service Building and on the south wall of the Electrical Room. The E Contractor continued pulling, testing, and terminating of power and control wiring on the 1<sup>st</sup> and 2<sup>nd</sup> floors and in the Storage Room. The Contractor continued pulling wire/cable and testing for the switchgear to the variable frequency drives for the**

**Flushing Tunnel and Wastewater pumps. The installation of the Generator silencer and exhaust began during this period.**

- **CSO Screening Area – Contractor completed the installation of oscillating floatable baffles on the influent side of the dry weather flow channels. The window walls between Outfall Numbers 2 and 3 and Outfall Numbers 2 and 1 were demolished. Contractor also continued installation of formwork, reinforcing steel and placement of concrete for new concrete beams at these locations.**

#### **Anticipated Construction Activities for Next Quarter**

- **Gowanus Canal – Rehabilitation of Flushing Tunnel (FT) System and Reconstruction of Gowanus Pumping Station**
  - **The Interim Wastewater Pumping System will continue operation.**
  - **The Oxygen Transfer System cone, piping and anchors will be disassembled and removed. Field sampling will commence during the removal process.**
  - **Flushing Tunnel: continue start-up of the Flushing Tunnel Pumping System. Commence with the 10-day operational test of all three Flushing Tunnel Pumps**
  - **Flushing Tunnel Building: Complete masonry restoration within the interior of building. Complete installation of Main System Control Panel and associated conduit, wire and terminations. Installation of HVAC equipment and ductwork. Complete the replacements and repairs to the slate shingle roof. Complete lead abatement and painting of the Flushing Tunnel Building ceiling.**
  - **Wastewater Pumping Station: Continue installation of electrical conduit, support racks and panels. Complete installation and testing of slide gates. Complete installation of stainless steel wall panels and louvers. Complete pulling control and power wire. Continue installation of local control panels and conduit. Complete limestone pilaster masonry work.**
  - **Service Building: Continue with the installation of conduit, piping and ductwork at the first and second floors. Installation of stainless steel wall panels and louvers. Complete pulling power and control wire. Installation of the Emergency Generator and associated equipment, piping and appurtenances. Complete the installation of stainless steel architectural roofing and limestone pilaster masonry work. Complete installation of all Electric Unit Heaters. Begin installation of all HVAC temperature control wiring and panels. Complete 3<sup>rd</sup> party testing of Motor Control Centers. Complete manufacturer start-up services for ATSS and UPS for the Instrumentation Panel.**
  - **CSO Area: Complete the installation of CSO Level Control System Type B Weirs. Complete the demolition of the window walls between Outfalls Numbers 3 and 4 and the installation of new concrete beams.**

**Table 6 – Inner Harbor CSO Projects**

	<i>Dredging of Gowanus Canal</i>	<i>Gowanus Canal Pumping Station and Flushing Tunnel</i>
<i>Contract ID</i>	CSO-DRDG/DRG-GC	CSO-GC
<i>Plan Elements</i>	Dredging Gowanus Canal Head End	Rehabilitation of Pumping Station and Flushing Tunnel
<i>Location</i>	Gowanus Canal	Gowanus Pumping Station Property Brooklyn
<i>Actions</i>	Design on hold	Wastewater Pumping Station and Flushing Tunnel Pumping System upgrades
<i>Construction Cost</i>	\$13,100,000 (based on concept design)	<b>\$156,881.161</b>
<i>Status</i>	In Design	In Construction
<i>Other Issues</i>	<b>DEC is considering whether to defer and/or eliminate this and related subsequent milestones.</b>	

Changes from the previous reporting period are shown in **bold**.

### 1.3. Paerdegat Basin CSO

The Paerdegat Basin CSO Facility Planning area includes the portion of the Coney Island WWTP service area, associated sewers, and pumping stations that discharges to Paerdegat Basin in Brooklyn. The Consent Order projects are constructed under contracts CSO-5 and CSO-DRDG, which include the following items:

- ◆ The Paerdegat Basin CSO Retention Facility was completed in 2012. Environmental dredging in the head end of Paerdegat Basin to a final water depth of 3.0 feet below mean lower low water.

#### Design Work Performed During This Quarter

- Environmental Dredging
  - The design is complete; design services during construction (DSDC) continued in this quarter.
  - DEP is in receipt of the sampling and analytical results completed by National Grid in response to the oil spill. In these data there were two sediment samples collected within the DRG-PB dredge area that were found to be above the PCB concentration level of 2 PPM. These data may not be representative of the complete DRG-PB dredge area. In order to verify the accuracy of these results, the Contractor is required by Contract to perform sediment sampling throughout the dredge area. The Contractor's Field Sampling program was completed and based on preliminary numbers no PCBs were found above 2 PPM level. **The contractor completed all submittals needed to start work and prepared a cost proposal for a change order to removed old bridge piles. Revised dredge prism was submitted and approved reducing the amount of dredging.**

#### Construction Work Performed During This Quarter

- Environmental Dredging
  - **Contractor completed the set up of the site trailers and mobilized his equipment to start dredging at the mouth end. Dredging started Feb 17<sup>th</sup> at the mouth end after the set up of the silt curtain. Dredging of the head end was started shortly thereafter while the demolition barge set up and removed the old piles at the mouth. Debris and old piles at the head end were also removed to allow access to the outlet structures.**

#### Anticipated Design Activities for Next Quarter

- Design services during construction for environmental dredging will continue.

#### Anticipated Construction Activities for Next Quarter

- **The contractor should complete the dredging operation and start the sand capping at the head end. CM will monitor the placement of the sand cap for quality and thickness.**

**Table 7 – Paerdegat Basin CSO Projects**

	<i>Phase III</i>	<i>Dredging</i>
<i>Contract ID</i>	CSO - 5	DRG-PB
<i>Plan Elements</i>	Structures and Equipment	Environmental Dredging
<i>Location</i>	West Shore of Paerdegat Basin	Head end of Paerdegat Basin
<i>Actions</i>	Minor items and documentation	Dredge bottom sediments to finish depth of three ft. below MLLW
<i>Construction Cost</i>	\$ 207,324,114	\$8,884,940
<i>Status</i>	DEC formally accepted construction completion on Aug 24 2012.	Construction NTP issued on Mar 18 2013
<i>Other Issues</i>		National Grid oil spill (Sep 28 2012) (Notice of FM submitted Oct 18 2013 and closed by DEC on Sep 11 2013)

Changes from the previous reporting period are shown in **bold**.

## 1.4. Flushing Bay CSO

The Flushing Bay CSO Facility Planning area includes the portions of the Tallman Island WWTP and the High Level Interceptor of the Bowery Bay WWTP drainage areas, associated sewers, and pumping stations that discharge to Flushing Bay and Flushing Creek in Queens. The Consent Order projects are constructed under contracts TI-WW-1, EE-DSGN-4, CS-FB-LLD, CS-FB-BWR, and CSO-DRDG, which respectively include the following items:

- ◆ Tallman Island Whitestone Interceptor
- ◆ Tallman Island Flushing Interceptor
- ◆ Diversion of low-lying sewers and raising of the weir at BB-R02
- ◆ Regulator Modifications
- ◆ Environmental dredging of Flushing Bay

### Design Work Performed During This Quarter

- Tallman Island Flushing Interceptor
  - **Flow monitoring and the conceptual design work continued in the first quarter.**
- Divert Low-Lying Sewers
  - **Job was bid and Request for Approval package went to ACCO's office. Vendex approval is pending.**
- Regulator Modifications
  - **Value engineering was completed.**
  - **Continued coordination with NYCDOT, NYSDOT, NYC Transit, Port Authority, Con Edison, National Grid, FDNY, Verizon, and cable companies.**
  - **Advanced CEQR review.**
  - **60% design documents are under review.**
- Environmental Dredging
  - **DEP posted the public notice for the DEC Permit to Dredge Flushing Bay on February 6, 2014 in the *New York Daily News*. DEC issued the final permit for Dredging of Flushing Bay on March 7, 2014.**
  - **The final design phase of the project was initiated based on issuance of the permit by DEC, including a meeting with NYC Department of Parks and Recreation (DPR) on March 5, 2014 to facilitate coordination on the project based on the location of two piers of the World's Fair Marina within the dredge area.**

### Construction Work Performed During This Quarter

- Tallman Island Whitestone Interceptor
  - **Completed Construction of New Whitestone Interceptor in Powell's Cove Park to Station 14+50 including Turning Chamber #4. Completed Construction of the Interceptor from Turning Chamber #5 to Connection Chamber inside the Plant.**



- **Construction of the Interceptor started between Turning Chamber #4 and Turning Chamber #5.**
- Continued construction of the new interceptor diversion chamber at 11<sup>th</sup> Ave and 131<sup>st</sup> Street.
- Continued operation of dewatering system.
- Maintained erosion and sediment control measures in wetland and adjacent areas.

#### **Anticipated Design Activities for Next Quarter**

- Tallman Island Flushing Interceptor
  - **The conceptual design work will continue and the six months of flow monitoring will be completed. A vendor presented their technology for performing a structural condition assessment of the sewer invert and the consultant is in the process of evaluating it to determine whether it will provide useful information.**
- Divert Low-Lying Sewers
  - **Contract is expected to be awarded. OMB and FCB are expected to give approval. Contract is to be registered.**
- Regulator Modifications
  - **Commence 90% design work.**
  - **Continue coordination with Port Authority, NYCDOT, NYSDOT, NYC Transit, Con Edison, National Grid, Verizon, cable companies, and DPR.**
  - **Continue utility coordination.**
  - **Continue CEQR review.**
  - Continue permitting activities.
- Environmental Dredging
  - **Continue work on final design, including follow up teleconference with DPR.**

#### **Anticipated Construction Activities for Next Quarter**

- Tallman Island Whitestone Interceptor
  - Continue construction of New Whitestone Interceptor in Powell's Cove Park and north toward Tallman Island WWTP.
  - Complete construction of turning chambers # 4 and #5.
  - Continue construction of Diversion Chamber at 11<sup>th</sup> Avenue.

**Table 8 – Flushing Bay CSO Projects**

	<i>Tallman Island Whitestone Interceptor</i>	<i>Tallman Island Flushing Interceptor</i>	<i>Divert Low- Lying Sewers / Raise Weir BB- R02</i>	<i>Regulator Modifications</i>	<i>Environmental Dredging of Flushing Bay</i>
<i>Contract ID</i>	TI-WW-1	TBD	CS-FB-LLD	CS-FB-BWR	CSO-DRDG DRG-FB
<i>Plan Elements</i>	New section of Whitestone Interceptor; Regulators 10, 10A and 13	Address Flushing Interceptor sag in Ulmer Street	Divert Low Lying sewers in the vicinity of Bowery Bay WWTP. Raise the weir at regulator BB - 02	Bowery Bay High Level Interceptor regulator modifications at 10 regulators	Environmental Dredging
<i>Location</i>	From existing junction chamber at 11 <sup>th</sup> Ave / 130 <sup>th</sup> St to the WWTP, College Point, Queens	From MH 45 at Whitestone Expressway to MH 29 at Ulmer Street and 25 <sup>th</sup> Avenue	Regulator BB- 02. Berrian Blvd and 19 <sup>th</sup> Ave between 43 <sup>rd</sup> St. and 45 <sup>th</sup> St.	Six of ten regulators along 108 <sup>th</sup> street, Ditmars Blvd and the LaGuardia Airport site	Proximate to CSO Outfalls BB006 and BB008
<i>Actions</i>					Dredge bottom sediments to final depth of 4 ft below MLLW
<i>Cost</i>	\$22,071,512	TBD	\$5,610,000	\$41,400,000	\$38,100,000 (based on 30% Design)
<i>Status</i>	Construction NTP Issued Dec 22 2011	TOC (PW-088- 03) issued for potential design activities described above	In Design	In Design	<b>In Design</b>
<i>Other Issues</i>	FM submitted Nov 19 2012 (Superstorm Sandy)				None

Changes from the previous reporting period are shown in **bold**.

## 1.5. Jamaica Tributaries CSO

The Jamaica Tributaries CSO Facility Planning area includes the drainage area of the Jamaica WWTP and its associated sewers and pumping stations. The receiving waters of the study area are Bergen, Thurston, Shellbank, and Hawtree Basins, which are located along the eastern shore of Jamaica Bay on either side of JFK International Airport. The Consent Order projects are constructed under contracts CSO-JT-SB, CS- JA-BBS, and CS-JA-BWR, which include the following items, respectively:

- ◆ The Destratification Facility, a permanent diffused-air bubble mixing system at Shellbank Basin designed to eliminate temperature stratification during the summer season, which leads to poor water quality conditions in the basin, odors and marine life kills.
- ◆ A Parallel 48-inch sewer under the Belt Parkway to complement the existing 36-inch double barrel Belt Parkway crossing in the West interceptor.
- ◆ Bending Weirs at regulators J3 and J14 in the West Interceptor and J6 in the East Interceptor drainage area.

DEP Certified Construction Completion of the Destratification Facility on March 20, 2012, and DEC accepted the certification on July 23, 2012.

### Design Work Performed During This Quarter

- Parallel 48-inch Siphon/Interceptor
  - **Advertised construction contract on Feb 6, 2014.**
  - **Opened bids for construction contract on March, 13, 2014.**
  - **In process of evaluating apparent low bidder.**
- Bending Weirs
  - **Submitted contract documents for Legal review.**
  - **Addressed comments from Legal review.**

### No Construction Work Performed During This Quarter

### Anticipated Design Activities for Next Quarter

- Parallel 48-inch Siphon/Interceptor
  - **Finalize evaluation of low bidder and proceed to award construction contract.**
- Bending Weirs
  - **Advertise construction contract.**

**Table 9 – Jamaica Tributaries CSO Projects**

	<i>Destratification Facility</i>	<i>Parallel 48-inch Siphon / Interceptor</i>	<i>Bending Weirs</i>
<i>Contract ID</i>	CSO-JT-SB	CS-JA-BBS	CS-JA-BWR
<i>Plan Elements</i>	Destratification	Parallel 48-inch Sewer	Bending Weirs
<i>Location</i>	Shellbank Basin Queens	Belt Parkway Queens	Regulator J6 on the East Interceptor and regulators J3 and J14 on the West Interceptor
<i>Actions</i>	Construct Permanent Facility	Design and construct system upgrades	Design and construct system upgrades
<i>Construction Cost</i>	\$2,776,054	<b>\$20,256,909</b>	<b>\$7,256,000</b>
<i>Status</i>	Complete	Bid and Award	In Design
<i>Other Issues</i>	Certification Accepted Jul 23 2012		

Changes from the previous reporting period are shown in **bold**.

## 1.6. Coney Island Creek CSO

The Coney Island Creek CSO Facility Planning area is within the Owls Head WWTP service area in Brooklyn and includes Consent Order projects constructed under contracts PS-79 F, G, H, P, and E. DEP certified Construction Completion of the Avenue V Pumping Station and Force Mains on June 29, 2012. The certification was accepted by DEC on October 23, 2012.

**All projects in this planning area except the LTCP have been certified complete and accepted by DEC. See Section 7 for further information about the LTCPs.**

**Table 2 – Coney Island Creek CSO Projects**

	<i>Avenue V Pumping Station Upgrade</i>	<i>Avenue V Force Mains</i>
<i>Contract ID</i>	PS-79G, H, P, E	PS-79F
<i>Plan Elements</i>	Upgrade Pumping Station	42-inch and 48-inch force mains
<i>Location</i>	Avenue V and West 11th Street Brooklyn	Shore Parkway to Regulator 9A Brooklyn
<i>Actions</i>	Increase capacity to 80 MGD; Lower wet well operating level; Improve station reliability; Architectural restoration	New force mains to convey dry and wet weather flow
<i>Construction Cost</i>	\$80,213,297	\$116,818,080
<i>Status</i>	Certification Accepted Oct 23 2012	Certification Accepted Oct 23 2012
<i>Other Issues</i>		

Changes from the previous reporting period are shown in **bold**.

## 1.7. Newtown Creek CSO

The Newtown Creek CSO Facility Planning area includes the portions of the Newtown Creek WWTP and the Low Level Interceptor of the Bowery Bay WWTP drainage areas that discharge to Newtown Creek, English Kills, Dutch Kills, Whale Creek, Maspeth Creek and the East Branch along the Brooklyn-Queens border. The Consent Order projects are constructed under contracts CSO-NC-2, CSO-NC-3, CSO-NC-4, CS-NC-REG & FLO, GBNC15-05, which include the following items:

- ◆ Enhanced Aeration in the Lower English Kills
- ◆ Enhanced Aeration in East Branch and Upper Newtown Creek
- ◆ Enhanced Aeration in Dutch Kills and Lower Newtown Creek
- ◆ Bending Weirs / Floatables Control
- ◆ Green Infrastructure Demonstration project in the Newtown Creek drainage area
  - Updates on the GI Demonstration Project are discussed in the Green Infrastructure Section of this report.

Newtown Creek was added to the EPA Superfund National Priorities List (NPL) on September 29, 2010. According to EPA, placing Newtown Creek on the list allows the Agency to further investigate contamination at the site and develop an approach to address the contamination.

### Design Work Performed During This Quarter

- Enhanced Aeration
  - Contractor started construction activities and completed installation of the new blower and aeration piping. Testing of the new aeration system is expected to be completed in early January. DEP submitted and DEC approved a request to modify the completion date from December 2013 (NC-2) to March 2014.
  - **Completed 60% and began design toward 90% for the Enhanced Aeration in East Branch and Portions of Newtown Creek Enhanced Aeration project. Continue working with and addressing comments received from City Planning and Public Design Commission regarding the design of the project.**
  - **Continued design of the project toward 30% completion.**
  - **Bending Weirs and Floatables Control -Responded to DEC comments on Final Design of Bending Weirs and Floatables Control Facilities on March 7, 2014.**
  - **Submitted revised construction documents for legal review in preparation of advertising and bidding of the project.**

### Anticipated Design Activities for Next Quarter

- Enhanced Aeration
  - Enhanced Aeration in Lower English Kills project is expected to be complete in January 2014.

- Complete 60% design for the Enhanced Aeration in East Branch and Portions of Newtown Creek project (NC-3) and initiate the 90% design of the project.
- Continue preliminary design (30%) of the Enhanced Aeration in Dutch Kills and Portions of Newtown Creek project (NC-4).
- Bending Weirs and Floatables Control
  - Prepare for procurement phase.

**Anticipated Construction Activities for Next Quarter**

- DEP submitted a Modification Request on the Milestone Date for Construction Completion of the Newtown Creek Enhanced Aeration in the Lower English Kills. On December 18, 2013 DEC approved the Milestone extension from December 31, 2013 to March 31, 2014.

**Table 3 – Newtown Creek CSO Projects**

	<i>Enhanced Aeration 1</i>	<i>Enhanced Aeration 2</i>	<i>Enhanced Aeration 3</i>	<i>Bending Weirs / Floatables Control</i>
<i>Contract ID</i>	CSO-NC-2	CSO-NC-3	CSO-NC-4	CS-NC-REG & FLO
<i>Plan Elements</i>	Enhanced Aeration	Enhanced Aeration	Enhanced Aeration	Floatables Controls and Overflow Reduction
<i>Location</i>	Lower English Kills	East Branch and Upper Newtown Creek	Dutch Kills and Lower Newtown Creek	Dutch Kills, Maspeth Creek, English Kills and East Branch
<i>Actions</i>	Substantial completion was issued as of 2/20/2014.	The design of the blower building and aeration system continues.	The design of the blower building and aeration system continues	Design of bending weirs and baffles, to reduce overflows/floatables
<i>Construction Cost</i>	\$1,769,000	\$18,730,791	\$26,147,164	<b>\$38.0 Million</b>
<i>Status</i>	<b>Construction</b>	Design	Design	Prepare for Procurement Phase
<i>Other Issues</i>				

Changes from the previous reporting period are shown in **bold**.

## 1.8. Westchester Creek CSO

The Westchester Creek CSO Facility Planning area includes the portion of the Hunts Point WWTP drainage area, its associated sewers, and pumping stations that discharges to Westchester Creek and Pugsley Creek in the Bronx. The Consent Order projects are constructed under contracts CS-ER-WCM and CS-ER-WCP, which respectively include the following items:

- ◆ Modifications to CSO-29 and CSO-29A to increase conveyance to the WWTP and reduce discharges from Outfall HP-014
- ◆ Pugsley Creek Parallel Interceptor to increase conveyance to the WWTP and reduce discharges from Outfall HP-013

### Design Work Performed During This Quarter

- Modifications to CSO-29 and 29A
  - **Completed 60% Design Activities and initiated 90% Design Activities**
  - **Met with NYCDOT representatives and private utility owners to discuss the project and coordinate traffic signal/street lighting and utility relocations.**
  - **Met with Community Board 11 representatives to review project and potential local impacts during construction.**
- Pugsley Creek Parallel Interceptor
  - **Preliminary Design is approximately 20% complete.**

### Anticipated Design Activities for Next Quarter

- Modifications to CSO-29 and 29A
  - **Complete Final Design and submit to DEC in June 2014.**
  - **Continue coordination with local stakeholders to review project and potential impacts during construction.**
  - Initiate and complete additional fieldwork to include topographic survey, ground penetrating radar survey at project sites and testing of existing relief structure concrete at CSO-29 and CSO-29A.
- Pugsley Creek Parallel Interceptor
  - Preparation of design drawings to continue.



**Table 42 – Westchester Creek CSO Project**

	<i>Modifications to CSO-29 and CSO-29A</i>	<i>Pugsley Creek Parallel Interceptor start from CSO-24</i>
<i>Contract ID</i>	CS-ER-WCM	CS-ER-WCP
<i>Plan Elements</i>	Improve flow control structures in sewers to convey more flow to the Hunts Point WWTP	Add capacity to convey more flow to the Hunts Point WWTP
<i>Location</i>	Eastchester Road, Bronx	Classon Point, Bronx
<i>Actions</i>	Continue Design	Continue Design at DDC
<i>Construction Cost</i>	\$16.6 Million	\$65.8 Million (Estimated)
<i>Status</i>	90% Design currently being prepared	Preparation of design drawings to commence
<i>Other Issues</i>		

Changes from the previous reporting period are shown in **bold**.

## 1.9. Bronx River CSO

The Bronx River CSO Facility Planning area includes the portion of the Hunts Point WWTP service area, the associated sewers, and pumping stations that discharge to the Bronx River in the Bronx. The Consent Order project is constructed under contract ER-BR-1 which includes the following items:

- ◆ Floatables Control at the Bronx Zoo site (CSO-27)
- ◆ Floatables Control at the Bronx Park Avenue site (CSO-27A)
- ◆ Floatables Control at the Soundview Park site (CSO-13)
- ◆ Floatables Control at the West Farm Road site (CSO-28)
- ◆ Green Infrastructure Demonstration project in the Bronx River watershed
  - The Green Infrastructure Demonstration project originally intended for the Bronx River CSO drainage area has been modified to take place in the Hutchinson River drainage area due to a lack of viable sites in the originally planned area. Updates on the GI Demonstration Project are discussed in the Green Infrastructure Section of this report.

**All projects under this planning area except the LTCP have been certified complete and accepted by DEC.**

**Table 5 – Bronx River CSO Project**

<i>Floatables Control</i>	
<i>Contract ID</i>	ER – BR - 1
<i>Plan Elements</i>	Floatables Control Facilities at CSO Outfalls HP-004, HP-007 and HP-009
<i>Location</i>	West Farms Road, Bronx Park Avenue, Bronx Zoo, Soundview Park
<i>Actions</i>	Design and construction of floatables control facilities for CSO Outfalls HP-004, HP-007 and HP-009
<i>Construction Cost</i>	\$29,025,336
<i>Status</i>	Certified Completion on Oct 18 2012
<i>Other Issues</i>	

Changes from the previous reporting period are shown in **bold**.

### 1.10. Hutchinson River CSO

The Hutchinson River CSO Facility Planning area includes the portion of the Hunts Point WWTP drainage area, its associated sewers, and pumping stations that discharges to the Hutchinson River in the Bronx. The Consent Order projects include the following items:

- ◆ Waste Load Allocation Field Sampling
- ◆ Green Infrastructure Demonstration- The project that had originally been planned for the Bronx River drainage area was changed to the Hutchinson River drainage area within subcatchment HP-024, per approved Modification Request submitted by DEP to DEC on Mar 30, 2012. Updates on the GI Demonstration Project are discussed in the Green Infrastructure Section of this report.

**All projects under this planning area except the LTCP have been certified complete and accepted by DEC. See Section 7 for further information about the LTCPs.**

**Table 64 – Hutchinson River CSO Project**

<i>Waste Load Allocation Field Sampling</i>	
<i>Contract ID</i>	LTCP1
<i>Plan Elements</i>	Surface water and discharge outfall water quality sampling and characterization to develop Waste Load Allocation (WLA) for the Hutchinson River
<i>Location</i>	Hutchinson River
<i>Actions</i>	
<i>Construction Cost</i>	n/a
<i>Status</i>	Completed
<i>Other Issues</i>	

Changes from the previous reporting period are shown in **bold**.

## 1.11. Jamaica Bay CSO

The Jamaica Bay CSO Facility Planning area includes the drainage areas of the 26<sup>th</sup> Ward, Coney Island, and Rockaway WWTPs and their associated sewers and pumping stations. The receiving waters of the study area include Fresh Creek, Hendrix Creek, Spring Creek, and the open waters of Jamaica Bay. The Consent Order projects are constructed under contracts CSO-DRG and CSO-GCER, which include the following items:

- ◆ Interim dredging of the head-end of Hendrix Creek
- ◆ Improving conveyance to the Rockaway WWTP
- ◆ 26th Ward High Level Sewer Separation (HLSS)
- ◆ 26th Ward Wet Weather Stabilization

In addition, the 26<sup>th</sup> Ward Green Infrastructure Demonstration Project was performed under a separate contract. Updates on the GI Demonstration Project are discussed in the Green Infrastructure Section of this report.

### Design Work Performed During This Quarter

- 26<sup>th</sup> Ward High Level Sewer Separation
  - **Preparation of design drawings has started for Phases 1a and 1b (SE-851, SE-852), which include sewer work in the vicinity of East 108th Street between Flatlands Avenue and the outfall at Avenue K, and on Vandalia Avenue from Pennsylvania Avenue to the outfall west of Louisiana Avenue. An EAS has been requested.**
  - **TV inspection reports for Phase 1a are being reviewed by DDC. TV reports for Phase 1b have been reviewed by DEP, and additional sewer work added to project.**
  - DDC is awaiting survey for Phases 2a and 2b (SE-853, SE-855) which include sewer work on Louisiana Avenue between Stanley and Flatlands Avenue, and on Farragut Road between East 102nd and East 108th Street. EAS has been requested.
  - DDC is awaiting survey for Phases 3a and 3b (SE-856, SE-857) which includes sewer work on Flatlands Avenue between Georgia and Van Sicken Avenues, and on Foster Avenue between Rockaway Parkway and Bank Street. An EAS has been requested.
- 26<sup>th</sup> Ward Wet Weather Stabilization
  - DEC requested information pertaining to DEP's certification of Design Initiation in a letter dated July 31, 2013. DEP submitted the requested information on September 20, 2013.
  - Negotiation and resolution of NOV are ongoing.
  - 26<sup>th</sup> Ward Wet Weather Stabilization (26W-20/21) Draft Revised BODR for HLMSP (26W-21) and PST work (26W-20) were submitted to DEP on September 5, 2013, and are under review.
  - Currently utilizing approximately 65% of existing 26W-20 design in the design effort.

### **Construction Work Performed During This Quarter**

- Hendrix Street Canal Dredging
- **Preparation of third Post Dredge Monitoring Report.**
- 26<sup>th</sup> Ward Wet Weather Stabilization (LL MSPs)
  - Continued with the replacement of Pump #4.
  - Installed all three resistor drives.

### **Anticipated Design Activities for Next Quarter**

- 26<sup>th</sup> Ward Wet Weather Stabilization (26W-20/21)
  - Finalize BODRs and continue working through detailed design.
- 26<sup>th</sup> Ward High Level Sewer Separation
  - Preparation of design plans for Phases 1a and 1b to continue.
  - **Survey is expected to be received for Phases 2a, 2b, 3a, and 3b.**

### **Anticipated Construction Activities for Next Quarter**

- Hendrix Street Canal Dredging
  - **Complete the third Post Dredge Monitoring Report and submit to DEC.**
- 26<sup>th</sup> Ward Wet Weather Stabilization (LL MSPs)
  - Complete startup and testing of Pump #4.
  - Start demolition of Pump #5.

**Table 7 – Jamaica Bay CSO Projects**

	<i>Hendrix Creek Dredging</i>	<i>Rockaway WWTP Conveyance Improvements</i>	<i>26<sup>th</sup> Ward HLSS</i>	<i>26<sup>th</sup> Ward Wet Weather Stabilization</i>
<i>Contract ID</i>	CSO-HC	Project not yet initiated	CS-FB-SEW	26W-12 (CO 128) 26W-20
<i>Plan Elements</i>	Removal of CSO sediment mounds from the head end of the Hendrix Street Canal	Improve collection system and WWTP capacity to achieve 2DDWF		Low Level MSPs High Level MSPs PST#5 PST1-4 Stabilization
<i>Location</i>	Hendrix Creek, Brooklyn	Rockaway WWTP, Queens	Fresh Creek, Brooklyn	26 <sup>th</sup> Ward WWTP, Brooklyn
<i>Actions</i>	None	None	None	-
<i>Construction Cost</i>	\$13.2 million	TBD	\$50 million for Phases 1a and 1b (estimated) \$51 million for Phases 2a and 2b (estimated). \$63 million for Phases 3a and 3b (estimated)	\$7.6 million \$126.4 million
<i>Status</i>	Construction Complete	Project not yet initiated	CPIs for all 3 phases have been sent to DDC.	<b>In Construction (LLMSPs)</b> In Design <b>(26W-20/21)</b>
<i>Other Issues</i>				New design contract necessitates a modification to the design completion date.

Changes from the previous reporting period are shown in **bold**.

## 1.12. Environmental Benefits Projects

These projects were undertaken in connection with the settlement of an enforcement action taken by New York State and DEC for violations of New York State law and DEC regulations. The Environmental Benefit Projects (EBPs) are funded by DEP and are designed to abate CSOs and/or address wet weather water quality impacts from CSOs and to benefit the waters in and around New York City. In addition to the EBPs discussed below, the 2012 Order requires that \$2 million in EBP funding be allocated toward the Hutchinson River and Newtown Creek Neighborhood Demonstration Areas, which are described in more detail under the Green Infrastructure Program in Section 3.13.

### 2008 CSO EBP Grants

The 2008 Modification to the CSO Consent Order requires not less than \$4 million worth of DEP-funded Environmental Benefit Projects (EBPs) designed to abate CSOs and/or address wet weather water quality impacts from CSOs and to benefit the waters in and around New York City.

- **Manhattan College**

The installation of approximately 14,666 sq. ft. of a modular green roof project on New York Hospital in Queens was completed in November 2012 and monitoring of flow data continues and is in year two of the three year monitoring period.

The total project value is \$660,440; \$357,917 has been invoiced through July 2013 **and no new invoices have been submitted.**

- **NYC Audubon Society**

A Greenstreets stormwater capture system in Rego Park that will retrofit an impervious surface and replace it with permeable pavement and vegetation to capture runoff from a three acre-watershed. A topographical survey of the site was conducted. 90% construction designs are in the process of being updated and additional permeability tests showed acceptable on-site infiltration rates. Alternative drainage conveyance into the sewer system will not be required. Construction is scheduled to start in August 2014 and be completed by October 2014. The total project value is \$448,803; \$75,000 has been invoiced to date **as work was stalled for a period of time. New invoices are expected submitted by the next Quarterly Report.**

- **Regional Plan Association**

Two Sponge Park™ bioretention basins were completed in June 2013 and monitoring will begin in spring 2014. Monitoring equipment was installed and data collection testing began in Fall 2013. The total project value is \$600,000; **\$406,213 has been invoiced through November 2013.**

- **Gowanus Canal Conservancy**

The 6th Street Green Corridor Project will build a series of curbside swales ranging from 400 square feet to 1,200 square feet along 6th Street and 2nd Avenue in Brooklyn. **100% designs have been developed completely. Bid documents were released in December 2013, and a vendor was selected in March 2014. Construction is scheduled to start in May 2014 and completed by late July 2014, with monitoring to commence**

**immediately after. The total project value is \$583,470 (\$873,470 including EPA Grant); \$280,784 has been billed through December 2013.**

▪ **Unisphere, Inc.**

Treatment wetland and rain garden for treating stormwater entering Meadow Lake. This project will receive runoff from approximately 3.26 acres consisting of portions from a parking area at the southwestern edge of Meadow Lake in Flushing Meadows Corona Park. Edesign Dynamics entered into a contract agreement with Excav Services and construction began on May 20, 2013. **Construction was halted due to the discovery of contaminated soil and will resume May 2014. The total project value is \$504,340; \$212,705 has been invoiced through January 2014.**

▪ **Drexel University**

Project was to design, construct, monitor, evaluate, report on and maintain a variety of green infrastructure stormwater capture technologies that also promote ecosystem services in the Bronx River watershed. **Due to high bedrock and low infiltration rate, the proposed location at Stratford Ave is being dropped as a viable site and alternative sites are being developed by Drexel University in coordination with Villanova University. Alternative site(s) are expected to be submitted for consideration in spring 2014. The total project value is \$893,493; \$75,000 has been invoiced to date.**



**Table 8 – 2008 Modified CSO Consent Order Environmental Benefits Projects**

<i>Plan Elements:</i>	<i>Bronx River</i>	<i>Flushing Bay and Creek</i>	<i>Gowanus Canal</i>	<i>DEC US Forestry Service Grant</i>
Location:	HP-009 service area	Multiple areas	6th St / 2nd Ave, Brooklyn	Bronx River and Newtown Creek CSO Areas
Description :	Stormwater BMP evaluations	Manhattan College New York Hospital Green roof (\$660,440); RPA bioretention basins under the LIE (\$600,000); Unisphere treatment wetlands and rain gardens for Meadow Lake (\$504,340); NYC Audubon Rego Park Green Streets (\$448,803);	Gowanus Canal Conservancy 6th Street Green Corridor Project	Enhanced tree pit evaluation in HP-009 service area; Green infrastructure installation in Newtown Creek CSO shed; Open source access for Drexel University's LIDRA model; Education and stewardship activities in the HP-009 area.
Cost:	Budget: \$850,000 JTD : \$75,000 This Qtr: \$0 Next Qtr: \$0	Budget: \$2,213,583 JTD: <b>\$1,051,835</b> This Qtr: <b>\$4,116</b> Next Qtr: \$300,000	Budget: \$583,470 JTD: <b>\$264,694</b> This Qtr: <b>\$35,679</b> Next Qtr: \$200,000	Budget: \$250,000 JTD: \$223,244 This Q: \$0 Next Qtr:
Status:	<b>Alternative BMP site location review underway</b>	<b>Manhattan College and RPA completed construction and Unisphere will be complete by June 2014. NYC Audubon is updating 90% designs to reflect soil infiltration investigation</b>	<b>Project was bid and contractor selected – construction scheduled to start by May 2014</b>	Contracts expire Jun 30 2013.
Other Issues:	Subsurface Drainage	None	None	Working with Riverkeeper to close out their contract.

Changes from the previous reporting period are shown in **bold**.

## **2012 Order - EBP Green Infrastructure Grant Program Projects**

The 2012 Order requires the extension of DEP's existing Green Infrastructure Grant Program and a commitment to use no less than \$3 million of EBP funds to expand the GI Grant Program over a three year period from 2012-2014. DEP identifies how it will commit the total funds in \$1 million increments by the end of each calendar year as part of the EBP Grant Plan. DEP committed a total of **\$2,013,548** under the Environmental Benefits Program (EBP) to five grantees of the Green Infrastructure Grant Program by December 31, 2013.

### **2012 Projects:**

- **Albert Einstein College of Medicine**

The College will construct a 12,589 square foot green roof on campus, located in the Westchester Creek watershed. The roof is designed to manage 0.47 acres of impervious area, and its 1" volume capacity is 2,830 cubic feet. **Construction is anticipated to begin in spring 2014.**

- **New School University**

The 13,542 square foot green roof at The New School's Manhattan campus has been completed. The building is located in the East River/Open Waters watershed. The roof is designed to manage 0.26 acres of impervious area. The roof's 1" volume capacity is 1,917 cubic feet.

- **St. Luke and St. Matthew Church**

The rain garden and porous pavement project, located in the East River/Open Waters watershed, is at the 90% design mark. The project will manage 0.21 acres of impervious area, and the project's 1" volume capacity is 1,749 cubic feet. **Construction is anticipated to begin in summer 2014.**

### **2013 Projects:**

- **Pratt Institute**

The green roof and bioinfiltration project, located in the East River/Open Waters watershed, has completed designs. The project manages 0.62 acres of impervious area, and has a 1" volume capacity of 9,483 cubic feet. **Construction is anticipated to begin in spring 2014.**

- **Banana Kelly Community Improvement Association**

The green roof and rain garden project, located in the East River/Open Waters watershed, has completed designs. The project manages 0.3 acres of impervious area, and has a 1" volume capacity of 4,653 cubic feet. **Construction is anticipated to begin in spring 2014.**

**Table 9 – 2012 Order - EBP Green Infrastructure Grant Program Projects**

	<i>2012 Projects</i>			<i>2013 Projects</i>	
<i>Project Name:</i>	<i>Albert Einstein College of Medicine</i>	<i>New School University</i>	<i>St. Luke and St. Matthew Church</i>	<i>Pratt Institute</i>	<i>Banana Kelly Community Improvement Association</i>
<i>Location:</i>	1300 Morris Park Avenue, Bronx NY	65 5 <sup>th</sup> Avenue, New York, NY	520 Clinton Avenue, Brooklyn, NY	200 Willoughby Avenue Brooklyn, NY	916 -928 Kelly Street, Bronx, NY
<i>Description:</i>	Green Roof	Green Roof	Rain Garden and Porous Pavement	Green Roof and Rain Garden	Green Roof and Rain Garden
<i>Cost:</i>	\$503,470	\$325,000	\$290,273	\$658,497	\$236,308
<i>Status:</i>	<b>In Construction</b>	Construction Complete	90% Design under review	<b>Design Complete</b>	<b>In Construction</b>
<i>Other Issues:</i>	None	None	None	None	None
<i>Total:</i>	<b>2012</b>			<b>2013</b>	
	\$1,118,743			\$894,805	

Changes from the previous reporting period are shown in **bold**.

### 1.13. Green Infrastructure Program Implementation

This section of the quarterly report provides the status of Green Infrastructure Program implementation required under the 2012 CSO Consent Order. The Order sets forth financial requirements including the requirement to spend no less than \$2M of EBP funds on the implementation of two Green Infrastructure Demonstration areas. The Order also sets forth schedule and stormwater capture targets, and other requirements for the program to reduce runoff and CSO through the use of green infrastructure. Additionally, Appendix A of the 2012 CSO Consent Order contains completion milestones for three Green Infrastructure Demonstration projects:

- ◆ Newtown Creek Green Infrastructure Demonstration Project (EBP Funded)
  - Right-of-way (ROW) construction completion certified May 10, 2013
  - Onsite construction completed September 16, 2013
  - Ongoing monitoring of Demonstration Area projects
  - Post Construction Monitoring (PCM) Report due August 2014
- ◆ Hutchinson River Green Infrastructure Demonstration Project (EBP Funded)
  - ROW construction completion certified April 30, 2013
  - Ongoing monitoring of Demonstration Area projects
  - PCM Report due August 2014
- ◆ Jamaica Bay Green Infrastructure Demonstration Project in 26th Ward Sewershed
  - ROW construction completion certified December 31, 2012
  - Onsite construction completed September 16, 2013
  - Ongoing monitoring of Demonstration Area projects
  - PCM Report due August 2014

This information is presented in addition to and complementary with the Environmental Benefits Projects described in the previous section. Quarterly expenses for ongoing monitoring are approximately \$40,000 for all three Demonstration Areas.

**Table 10 – Green Infrastructure Neighborhood Demonstration Project Status**

<i>Neighborhood Demonstration Area</i>	<i>CSO Tributary Area</i>	<i>Waterbody</i>	<i>Construction Status</i>	<i>EBP</i>	<i>Cost*</i>	<i>Other Issues</i>
<i>Area 1 ROW Only</i>	HP-024	Hutchinson River	Post-construction monitoring	EBP	<b>\$625,900</b>	None
<i>Area 2 ROW &amp; Onsite</i>	26W-003	Jamaica Bay	Post-construction monitoring	NA	<b>\$1,449,393</b>	None
<i>Area 3 ROW &amp; Onsite</i>	NCB-015	Newtown Creek	Post-construction monitoring	EBP	<b>\$1,571,073</b>	None
<i>Area 1 ROW Only</i>	HP-024	Hutchinson River	Post-construction monitoring	EBP	<b>\$625,900</b>	None

Changes from the previous reporting period are shown in **bold**.

\*Design, construction **and post-construction monitoring** costs.

During the First Quarter of 2014, design and construction work continued in three Green Infrastructure Program areas. Green Infrastructure design and construction work is focused in the following Priority Waterbodies: Bowery Bay, Bronx River, Flushing Bay, Flushing Creek, Gowanus Canal, Hutchinson River, Jamaica Bay, Newtown Creek, and Westchester Creek.

#### **Design and Construction Work Performed During This Quarter**

- Right-of-way Area-wide Green Infrastructure Contracts:
  - Continued design in 17 Priority CSO Tributary Areas.
  - Continued construction in three Priority CSO Tributary Areas.
- Public Onsite Retrofit Program:
  - Continued design of four onsite projects.
  - **Began construction of two onsite projects.** Continued identification of onsite projects with NYCDPR, NYCHA, DOE/SCA and Trust for Public Land, and NYCHHC.
- Green Infrastructure Grant Program:
  - **Continued construction of one grant project.**
  - **Started construction of two grant projects.**
  - **Continued funding agreement and design review for the remaining 2011, 2012, and 2013 grant recipients.**

### **Anticipated Design and Construction Activities for Next Quarter**

- Right-of-way Area-wide Green Infrastructure Contracts:
  - Continue design in 17 Priority CSO Tributary Areas.
  - Continue construction in three Priority CSO Tributary Areas.
- Public Onsite Retrofit Program:
  - Continue design of two onsite projects.
  - Complete design of two onsite projects.
  - Continue construction of two onsite projects.
  - Continue identification of onsite projects with NYCDPR, NYCHA, DOE/SCA and Trust for Public Land, and NYCHHC.
- Green Infrastructure Grant Program:
  - **Begin construction of one grant project.**
  - **Complete construction of one grant project.**
  - **Continue funding agreement and design reviews for the remaining 2011, 2012 and 2013 grant recipients.**
  - **Begin funding agreement and design review for the 2014 grant applications.**

## 4.0 Community Relations

DEP's public participation plan was released to the public on June 26, 2012 and describes the multipronged tools and activities DEP will utilize to inform and involve diverse stakeholders and the broader public throughout the LTCP process.

The purpose of the public participation plan is to create a framework for communicating with and soliciting input from interested stakeholders and the broader public on water quality and the challenges and opportunities for CSO controls. The public participation plan is designed to keep important stakeholder issues associated with the LTCP program before the public and ratepayers throughout the life of the program.

DEP will report quarterly to DEC on completed public participation activities outlined in the public participation plan as part of this and all future CSO Quarterly Reports. All updates to the Public Participation Plan implemented as a result of public comments received and quarterly reviews of public participation activities by DEC will be posted annually to DEP's website.

During the **First Quarter of 2014** DEP completed several community relations-related tasks and provided several LTCP-related updates and education materials to the public. All tasks, efforts and updates are described in this Quarterly Report.

### LTCP and Green Infrastructure Meetings

- February 6, 2014: S.W.I.M. public meeting (25 attendees)
- February 20, 2014: Urban Green Council (50 attendees)
- February 10, 2014: Bronx Community Board 9 Land Use and Zoning Committee – LTCP Presentation (6 attendees)
- February 26, 2014: CCNY class presentation and tour (15 attendees)
- March 5, 2014 – Bronx Borough Board Meeting with the Borough Services Cabinet – LTCP presentation (20 attendees)
- March 11, 2014 – LTCP Presentation to the Bronx Community Board 10 Municipal Services Committee (15 attendees)
- March 14, 2014: NYCHA Greening our Gardens presentation (75 attendees)
- March 18, 2014: American Society of Highway Engineers presentation (50 attendees)
- March 19, 2014: Green Infrastructure Grant workshop (36 attendees)
- March 20, 2014: Meeting with The Nature Conservancy (4 attendees)
- March 27, 2014: Green Infrastructure Grant workshop (35 attendees)

### LTCP Education and Outreach Activities

- On February 26, 2014, DEP held a public meeting for the Westchester Creek Long Term Control Plan at the Henry Hudson School in the Bronx. The meeting was advertised in newspapers, posted on the DEP LTCP website and emailed to stakeholders. Approximately 10 attendees from the public as well as representatives from DEC and DEP were present.

- On March 26, 2014 – DEP held a public meeting for the Hutchinson River Long Term Control Plan at the Lehmann High School in the Bronx. Approximately 15 attendees from the public as well as representatives from DEC and DEP were present.

### **Planned Activities Not Conducted During This Quarter**

- DEP conducted all planned activities this quarter.

### **Summary of Comments Received**

DEP received six emails from citizens and citizen group representatives in February 2014. Five of these emails were from people who wanted to RSVP for the Westchester Creek LTCP Kickoff Meeting held on February 26th. These were representatives of citizen groups responding to the invite were the Friends of Ferry point Park, Bronx Council for Environmental Quality, Hutchinson River Restoration Project, Riverkeeper, and Bronx River Alliance. In addition one email from Waterbury LaSalle Community Association representative asked for access to the waterways and that the quality of the waters be improved so that children could swim, fish, go clamming and lobstering.

DEP received 28 emails from people and citizens groups in March 2014. Representatives from Riverkeeper, Friends of Ferry Point Park, New York City Water Trail Association, Yonkers Paddling and Rowing Club, Bronx Council for Environmental Quality, Hutchinson River Restoration Project, and the Bronx Borough Office wrote to DEP. Four of these emails were requests for information which were posted to the website, nine emails were RSVPs for the Hutchinson River LTCP Kickoff Meeting on March 26<sup>th</sup>, eight emails expressed support for a petition on Change.org to make Westchester Creek and Hutchinson River fishable and swimmable, two additional emails expressed desire for fishable, swimmable and boating standards, and two emails requested their emails to be removed or added.



## 5.0 Key Personnel Changes

There were no key personnel changes. The table below provides key personnel as of the **First Quarter of 2014**.

**Table 19 – Key DEP Personnel for Contracts Subject to the CSO Consent Order**

Planning Area	Project	DEP Responsible Personnel		
		Bureau	Chief	APM
Alley Creek	All projects complete	-	-	-
Outer Harbor	All Projects Complete	-	-	-
Inner Harbor	CSO-DRDG: Gowanus Dredging CSO-GC: Flushing Tunnel CSO-GC: Gowanus PS	BEDC BEDC BEDC	Tysvaer Clarke Clarke	Chao Joseph Joseph
Paerdegat Basin	CSO-5: Storage Facility (Complete) CSO-DRDG: Dredging	- BEDC	- Tysvaer	- Nayan Shah
Flushing Bay	CSO-DRDG: Dredging PW-088 Assn. 2B: Flushing Interceptor CS-FB-LLD: Low-Lying Sewers CS-FB-LLD R2 Weir CS-FB-BWR: Regulators TI-WW-1: Whitestone Interceptor	BEDC BWT BWSO BEDC BEDC BEDC	Tysvaer Lochan Barbaro Tbd Tysvaer Solimando	Chao Goldin Gordon/Shah Tbd Szeto Sadat
Jamaica Tributaries	CS-JA-BWR: Bending Weirs CS-JA-BBS: 48-Inch Sewer CSO-JT-SB: Destratification (Complete)	BEDC BEDC -	Tysvaer Tysvaer -	Szeto Szeto -
Coney Island Creek	PS-79F: Ave V Force Main (Complete) PS-79: Ave V Pump Station (Complete)	- -	- -	- -
Newtown Creek	CSO-NC-4: Dutch Kills, Lower Newtown CSO-NC-3: East Branch, Upper Newtown CSO-NC-2: Enhanced Aeration Lower English Kills CS-NC-REG&FLO: Regulators / Floatables Control	BEDC BEDC BEDC BEDC	Tysvaer Tysvaer Tysvaer Tysvaer	Meshkati Meshkati Adabi Chao
Westchester Creek	CS-ER-WCM: Modifications to CSO-29 / 29A CS-ER-WCP: Pugsley Creek Parallel Interceptor	BEDC BWSO	Tysvaer Barbaro	Chao Gordon/Shah
Bronx River	All projects complete	-	-	-
Hutchinson River	LTCP1: Waste Load Allocation	BWT	Mahoney	Lee
Jamaica Bay	CSO-HC: Hendrix Creek Dredging CS-FB-SEW: 26th Ward / Fresh Creek HLSS CO 26W-128: Low Level Main Sewage Pumps 26W-20: 26th Ward Wet Weather Stabilization	BEDC BWSO BEDC BEDC	Tysvaer Barbaro Solimando Solimando	Nayan Shah Gordon/Shah Radulescu D'Attile
G.I. Demonstrations	All projects complete	-	-	-

Changes from the previous reporting period are shown in **bold**.

## 6.0 Other Issues

Action Items generated during the **March 10, 2014** CSO Quarterly Meeting are summarized below.

**Table 20– Action Items from Quarterly Progress Meeting**

<i>Planning Area</i>	<i>Responsible Party</i>	<i>Required Action</i>	<i>Status</i>
Newtown Creek	DEC	DEC to identify appropriate permit mechanism for aeration system and flushing tunnel	In Progress
Green Infrastructure and EBPs	DEC and DEP	DEC and DEP to conduct telecom on relocating Drexel U. GI EBP and use of remaining \$27,000 from Newtown Creek EBP	Completed
General	DEP	<ul style="list-style-type: none"> <li>• DEP to provide recent data on inflatable dams operation</li> </ul>	In Progress
		<ul style="list-style-type: none"> <li>• DEC to clarify if NEIWPCCE IEMs can attend technical meetings in person</li> </ul>	In Progress
		<ul style="list-style-type: none"> <li>• DEP to send description of process for updating LTCP website</li> </ul>	In Progress
		<ul style="list-style-type: none"> <li>• DEP and DEC Legal to review 26<sup>th</sup> Ward mod to order</li> </ul>	In Progress
		DEP to submit technical questions in writing	In Progress

## 7.0 Status of LTCP Development

- The status of all Long-Term Control Plan development is described below. Where only the planning area and a LTCP due date are shown, work has not yet been initiated as of the reporting quarter.
  - Alley Creek LTCP : June 2013
    - LTCP was submitted on July 2, 2013 in accordance with the requirements of the Order. DEC provided comments on September 12, 2013. **DEP responded to DEC's comments on November 8, 2013 and requested an extension from November 12, 2013 to May 12, 2014. On December 12, 2013 DEC rejected the LTCP and the extension request. DEP filed an Article 78 proceeding on February 21, 2014, pursuant to the terms of the Order, to dispute DEC's December 2013 disapproval of DEP's November 2013 Alley Creek LTCP submittal. DEP continues to seek a resolution of this matter with DEC and is preparing a revised LTCP.**
    - **All additional sampling to further characterize dry weather sources was completed during this Quarter.**
  - Coney Island Creek LTCP: June 2014
    - The LTCP report is due June 2014 but operations of the Avenue V wet weather force-main has been delayed due to structural concerns in downstream existing brick lined sewers. Change order work is proceeding to correct the structural concerns and the pump station is projected to be operational in the Third Quarter of 2014. Additional time is required to conduct a post monitoring sampling program to evaluate the efficacy of the new pump station that is projected to reduce CSO discharges by 94%. Therefore, DEP submitted a Modification Request on December 11, 2013 that would switch this Milestone date with the Westchester Creek LTCP date of June 2016.
    - **An intensive dry weather water quality sampling run was conducted in Coney Island Creek March 2014. Harbor Surveys continues to conduct post construction monitoring in the Creek.**
  - Hutchinson River LTCP : September 2014
    - The Water Quality and Sewer System Report to support the waste load allocation was submitted to DEC in June 2103 in accordance with the Order. **This report will be revised and resubmitted next Quarter based on revisions to the Westchester County landside loadings that were developed using the County's modeling framework.**
    - **LTCP alternatives analyses were initiated.**
  - Flushing Creek LTCP: December 2014.
    - Continued water quality sampling of receiving waters and CSO overflow monitoring. Expect to conclude sampling program shortly
    - **Landside and receiving water modeling will be initiated next Quarter**

- Bronx River LTCP : June 2015
  - o **Developed detailed sampling plan and expect to initiate receiving water and sewer sampling next Quarter. Review of available WQ data indicates high levels of bacteria crossing over the City line.**
- Gowanus Canal: June 2015
  - o **Initiated alternatives analysis this Quarter. An alternatives brainstorming workshop was held in January and included representatives from multiple DEP Bureaus.**
  - o **Finalizing sampling plan and coordinating with DEP Superfund Program. Expect to initiate receiving water and sewer sampling next Quarter as Flushing Tunnel and Gowanus Pumping Station are completed.**
- Westchester Creek LTCP: June 2016
  - o Work on the Westchester Creek LTCP has commenced in anticipation of switching this Milestone date with the Coney Island Creek LTCP date per the December 11, 2013 Modification Request such that Westchester would be due June 2014.
  - o **Receiving water and sewer sampling programs were initiated this Quarter.**
  - o **An alternatives brainstorming workshop was held in March with representatives from multiple DEP Bureaus.**
  - o **Began drafting LTCP**
  - o **Public Meeting to review alternatives scheduled for May 7, 2014**
  - o **DEP intends to submit this LTCP in June 2014.**
- Jamaica Tributaries And Bay – June 2016
- Newtown Creek: June 2017
- Flushing Bay: June 2017
  - o Receiving water sampling for Flushing Bay has been integrated into the Flushing Creek sampling program and continued during this Quarter.
- Citywide: December 2017
- All Waterbody/Watershed Facility Plans (WWFPs) have been approved.