



DEC Case# CO2-20110512-25, Modification to CO2-20000107-8

CSO Order on Consent  
**Quarterly Progress Report**  
**Fourth Quarter 2016**  
(October 1<sup>st</sup> – December 31<sup>st</sup>)

**January 30, 2017**

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# 1. Executive Summary

*The City of New York (the “City”), the New York City Department of Environmental Protection (DEP), and the New York State Department of Environmental Conservation (DEC) entered into the Combined Sewer Overflow Order on Consent (DEC Case # CO2-20000107-8) on January 14, 2005, which was modified April 14, 2008, September 3, 2009, March 8, 2012, and March 26, 2015 (collectively, the “CSO Order”). Pursuant to the Order, the City is required to submit quarterly status reports to DEC (“Quarterly Reports”) describing actions taken toward achieving compliance with the Order during the prior three-month period.*

This Quarterly Report summarizes DEP’s actions and activities between **October 1, 2016** and **December 31, 2016** toward complying with the Order’s milestones. 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 **December 12, 2016 at Hazen and Sawyer’s New York City Office** to discuss issues related to the Order and review milestones met during the fourth quarter of 2016.

## Critical Events This Quarter

Date	Location	Event Description
Oct 20, 2016	Jamaica Bay	XII.K.8 26 <sup>th</sup> Ward – Construction completion of high level main sewage pumps; DEP submitted a Notice of Force Majeure
Nov 10, 2016	Westchester Creek	IX.F.2 Pugsley Creek Parallel Interceptor – Final Design Completion; DEP responded to DEC’s comments
Nov 14, 2016	Flushing Bay	V.J.3 Divert Low Lying Sewers/Raise Weir BB-R02 – Construction Completion; DEP submitted a Notice of Force Majeure and Modification Request
Nov 15, 2016	Westchester Creek	IX.F.2 Pugsley Creek Parallel Interceptor – Final Design Completion; DEC approved DEP response to comments and final design.
Dec 9, 2016	Jamaica Bay	XII.K.9 26 <sup>th</sup> Ward – Construction Completion Preliminary Treatment Reliability Improvements to PSTs #1 to 4 and Construction of PST #5; DEC responded to Notice of Force Majeure

Date	Location	Event Description
Dec 9, 2016	Jamaica Bay	XII.K.8 26 <sup>th</sup> Ward High Level Sewer Separation – Construction Completion; DEC responded to Notice of Force Majeure.
Dec 21, 2016	Westchester Creek	IX. Westchester Creek CSO, F. Pugsley Creek Parallel Interceptor start from CSO-24, 3. Notice to Proceed to Construction; DEP certified NTP. DEC acknowledged on Dec 28, 2016.
Dec 30, 2016	Flushing Bay	V.M.1 Long Term Control Plan – Submitted LTCP report to DEC

## Major Actions This Quarter

Location	Item Description	Milestone Date	Action Required	Status
Flushing Bay	Low Lying Sewers / Raise Weir at BB-R02	Dec 2016	Construction Completion	Force Majeure/Mod Request submitted on Nov 14, 2016
Flushing Bay	Submit Approvable LTCP	Dec 2016	Submit Report	On Schedule
Westchester Creek	Pugsley Creek Parallel Interceptor	Dec 2016	Construction NTP	On Schedule

## Major Actions Next Quarter

Location	Item Description	Milestone Date	Action Required	Status
Jamaica Bay	Parallel 48-inch Siphon/Interceptor	Feb 2017	Construction Completion	On Schedule
Wards Island	Hydraulic Analysis	Mar 2017	Submit Report	On Schedule
Jamaica Bay	26 <sup>th</sup> Ward HLSS Phase II	Mar 2017	Design Completion	On Schedule

## Outstanding Modification Requests (MR) and Force Majeure Notices (FM)

Location	Item Description	Action(s)	Reason for Action(s)	Milestone Date	Status
Flushing Bay	Low Lying Sewers/Raise Weir at BB-R02	<ul style="list-style-type: none"> <li>MR and FM submitted 11/14/16</li> </ul>	<ul style="list-style-type: none"> <li>Unexpected large volume of groundwater at excavation</li> </ul>	Dec 2016	Construction Ongoing
Jamaica Tributaries	VI.H Parallel 48" Siphon / Interceptor	<ul style="list-style-type: none"> <li>FM submitted 10/13/15</li> <li>DEC accepted FM 11/2/2015 and requested updates</li> </ul>	<ul style="list-style-type: none"> <li>Work embargo by National Grid during low temperatures (&lt;25°F)</li> </ul>	Feb 2017	Construction ongoing
Newtown Creek	VIII.K.4 Bending Weir / Floatables Control	<ul style="list-style-type: none"> <li>FM submitted 10/9/15</li> <li>DEC accepted FM 11/2/15 and requested updates</li> </ul>	<ul style="list-style-type: none"> <li>Subsurface obstructions at Q-1 regulator site that were not identified during design phase</li> </ul>	Dec 2017	Construction ongoing
Newtown Creek	VIII.J.3 & VIII.J.4 NC Enhanced Aeration in Dutch Kills and Lower Newtown Creek	<ul style="list-style-type: none"> <li>MR submitted 3/31/16</li> <li>DEC approved MR 8/28/16</li> </ul>	<ul style="list-style-type: none"> <li>To align with Newtown Creek LTCP submittal and availability of data</li> </ul>	VIII.J.3 Dec 2017 & VIII.J.4 Dec 2020	In Procurement (on hold)
Jamaica Bay	XII.K.8 26 <sup>th</sup> Ward WWTP Preliminary Treatment Reliability Improvements	<ul style="list-style-type: none"> <li>FM submitted 12/30/15</li> <li>DEC accepted FM 2/29/16 and requested updates</li> </ul>	<ul style="list-style-type: none"> <li>Discovery of a void in a portion of an abandoned outfall structure</li> </ul>	Jul 2018	Construction ongoing
Jamaica Bay	XII.K.8 26 <sup>th</sup> Ward WWTP Preliminary Treatment Reliability Improvements	<ul style="list-style-type: none"> <li>FM submitted 10/20/16</li> <li>DEC requested additional information 12/9/16</li> </ul>	<ul style="list-style-type: none"> <li>Test failure of three HLMSP castings</li> </ul>	Jul 2018	Construction ongoing
Jamaica Bay	XII.K.9 26 <sup>th</sup> Ward WWTP Preliminary Treatment Reliability Improvements to PSTs #1 and PST #4, and construction of PST #5	<ul style="list-style-type: none"> <li>FM submitted 8/17/16</li> <li>DEC accepted FM 12/9/16</li> </ul>	<ul style="list-style-type: none"> <li>Unexpected rupture of sludge line during a routine operation</li> </ul>	XII.K.9 Jul 2020	Construction Ongoing
City-Wide	LTCP Submittal	<ul style="list-style-type: none"> <li>MR submitted 6/24/16</li> </ul>	<ul style="list-style-type: none"> <li>Large geographical area, requires extensive sampling to support LTCP</li> </ul>	Dec 2017	

Wards Island WWTP	Headworks Improvements, Reconstruction of MSPs	<ul style="list-style-type: none"> <li>• FM submitted 5/31/16</li> <li>• <b>DEC accepted FM 8/29/16</b></li> <li>• <b>DEP sent police report and update of no schedule impact on 11/11/16</b></li> </ul>	<ul style="list-style-type: none"> <li>• On May 11, 2016 discovered damage to 4 stored MSPs due to vandalism</li> </ul>	Dec 2017	Construction Ongoing
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## 2. Construction Contracts

The CSO 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 identifies, by percentage, the estimated amount of construction that has been performed on projects that are in progress.

Location	Item Description	Notice to Proceed	Construction Completion	Projected Completion	% of Time Elapsed	% of Construction Completed <sup>(1)</sup>
Flushing Bay	Flushing Interceptor	TBD	TBD	-	-	-
	Divert Low-Lying Sewers/Raise BB-R02	Dec 2014	Dec 2016	December 2017	137%	28%
	Regulator Modifications	Dec 2015	Jun 2018	Jun 2018	44%	39%
	Flushing Bay Dredging	Sep 2016	<b>Mar 2018</b>	<b>Mar 2018</b>	21%	4%
Jamaica Tributaries	Parallel 48-Inch Interceptor	Aug 2014	Feb 2017	Feb 2017	88%	80%
	Bending Weirs	Dec 2014	Jun 2016	Jun 2016	100%	100%
Newtown Creek	Enhanced Aeration East Branch, Upper	Oct 2015	Jun 2018	Jun 2018	60%	30%
	Enhanced Aeration Dutch Kills, Lower	Dec 2017	Dec 2020	Dec 2020	-	-
	Bending Weirs/Floatables Control	May 2015	Dec 2017	Dec 2017	55%	50%
Westchester Creek	Modifications to CSO-29 & 29A	Dec 2015	Dec 2020	Dec 2020	9%	0%
	Pugsley Creek Parallel Interceptor	Dec 2016	Dec 2019	Dec 2019	-	-
Jamaica	26 <sup>th</sup> Ward HLSS Phase 1	Mar 2016	Dec 2018	Dec 2018	24%	26%

Location	Item Description	Notice to Proceed	Construction Completion	Projected Completion	% of Time Elapsed	% of Construction Completed <sup>(1)</sup>
<b>Bay</b>	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	-	-
	26 <sup>th</sup> Ward Low Level MSPs	Aug 2012	Apr 2015 <sup>(2)</sup>	Apr 2015	97%	100%
	26 <sup>th</sup> Ward High Level MSP	Jun 2015 <sup>(2)</sup>	<b>Jul 2018<sup>(2)</sup></b>	<b>Feb 2018</b>	<b>58%</b>	<b>44%</b>
	26 <sup>th</sup> Ward PSTs 1-5	Jan 2016 <sup>(2)</sup>	<b>Jul 2020<sup>(2)</sup></b>	<b>Nov 2020</b>	<b>24%</b>	<b>21%</b>
	Rockaway WWTP Conveyance		Dec 2017	Dec 2017	-	-
<b>WI WWTP</b>	MSP Replacement	Mar 2015	Dec 2017	<b>Jan 2018</b>	<b>48%</b>	<b>41%</b>
	Bar Screen	Dec 2014	Jun 2018	Jun 2018	<b>80%</b>	<b>85%</b>

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

(2) Modifications to the CSO Order related to the Wards Island and 26th Ward WWTPs are memorialized in a Consent Order effective March 26, 2015.





### 3. 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 Bowers Bay WWTP drainage areas, associated sewers, and pumping stations that discharge to Flushing Bay and Flushing Creek in Queens.

#### Construction Contracts

	Tallman Island Flushing Interceptor	Divert Low-Lying Sewers / Raise Weir BB-R02	Regulator Modifications	Environmental Dredging
<i>Contract ID</i>	TBD	CS-FB-LLD	CS-FB-BWR	CSO-DRDG DRG-FB
<i>Plan Elements</i>	Address Flushing Interceptor sag in Ulmer Street <b>if periodic monitoring indicates necessity</b>	Divert Low Lying sewers in the vicinity of Bowers Bay WWTP. Raise weir at regulator BB -02	Bowers Bay High Level Interceptor regulator modifications at 10 regulators	Environmental Dredging of Flushing Bay
<i>Location</i>	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.	Five of ten regulators along 108 <sup>th</sup> street, Ditmars Blvd and the LaGuardia Airport site	Proximate to CSO Outfalls BB006 and BB008
<i>Cost</i>	TBD	\$5,610,000	\$28,820,000	\$34,720,000
<i>Status</i>	<b>No activity</b>	<b>In Construction</b>	<b>In Construction</b>	<b>In Construction (mobilization)</b>

## Design Activity Summary

This Quarter		Next Quarter
Tallman Island Flushing Interceptor	<ul style="list-style-type: none"> <li>No activity</li> </ul>	<ul style="list-style-type: none"> <li>A CCTV/Sonar inspection <b>to be performed in late 2017</b> to monitor structural integrity of pipe.</li> </ul>
Divert Low-Lying Sewers / Raise Weir BB-R02	<ul style="list-style-type: none"> <li><b>In Construction</b></li> </ul>	<ul style="list-style-type: none"> <li>Design services during construction (DSDC) to continue at DDC.</li> </ul>
Regulator Modifications	<ul style="list-style-type: none"> <li>DSDC.</li> </ul>	<ul style="list-style-type: none"> <li>Continue with DSDC.</li> </ul>

## Construction Activity Summary

This Quarter		Next Quarter
Tallman Island Flushing Interceptor	<ul style="list-style-type: none"> <li>No activity</li> </ul>	<ul style="list-style-type: none"> <li>No activity</li> </ul>
Divert Low-Lying Sewers / Raise Weir BB-R02	<ul style="list-style-type: none"> <li>All precast sections of manhole 1 are installed. All dewatering equipment moved to manhole # 2</li> <li>Manhole # 2 has reached a depth of 20 ft. Dewatering is progressing as designed and no issues to report.</li> </ul>	<ul style="list-style-type: none"> <li><b>Contractor to begin installation of Precast manhole sections for manhole #2</b></li> <li><b>Contractor to begin installation of 10" sanitary sewer in Berrian Blvd.</b></li> </ul>
Regulator Modifications	<ul style="list-style-type: none"> <li><b>Contractor completed relocation of utilities at BB-R10 and BB-R09. The installation of piles at BB-R10 and BB-R09 was completed. Temporary roadway decking at BB-R10 was installed and excavation has started. Work continued on the access vaults at BB-R04 and BB-R06, the vaults have been completed to the upper walls (BB-R04 and lower walls (BB-R06) completing relocation of existing utilities at BB-R09 and BB-R10.</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Continue excavation and installation of support walers at BB-R10. Install temporary roadway decking at BB-R09 and begin excavation and installation of walers and supports. Complete access vault walls and stairs at BBR06. Begin initial demolition work inside regulator chambers at BBR05 and BB-R06.</b></li> </ul>
Environmental Dredging	<ul style="list-style-type: none"> <li><b>Continued with pre-construction activities, mobilization</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Commence dredging</b></li> </ul>



## 4. 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.*

### Construction Contracts

	<b>Parallel 48-inch Siphon / Interceptor</b>	<b>Bending Weirs</b>
<i>Contract ID</i>	CS-JA-BBS	CS-JA-BWR
<i>Plan Elements</i>	Parallel 48-inch Sewer	Bending Weirs
<i>Location</i>	Belt Parkway Queens	Regulator J6 on the East Interceptor and regulators J3 and J14 on the West Interceptor
<i>Construction Cost</i>	\$20,256,909	\$6,853,955
<i>Status</i>	Construction	Completed
<i>Other Issues</i>	Downstream sewer issue. Construction of interceptor anticipated to be complete on time but will run at partial capacity temporarily. Potential resolutions to achieve full capacity are under review and will be discussed with DEC.	Force Majeure accepted November 2015.

## Design Activity Summary

	This Quarter	Next Quarter
<b>Parallel 48-inch Siphon/Interceptor</b>	<ul style="list-style-type: none"> <li>Continued design services during construction (DSDC)</li> </ul>	<ul style="list-style-type: none"> <li>Continue DSDC</li> </ul>
<b>Bending Weirs</b>	<ul style="list-style-type: none"> <li>Continued DSDC</li> </ul>	<ul style="list-style-type: none"> <li>Continue DSDC</li> </ul>

## Construction Activity Summary

	This Quarter	Next Quarter
<b>Parallel 48-inch Siphon/Interceptor</b>	<ul style="list-style-type: none"> <li>Completed construction of the South Receiver Pit.</li> <li>Completed demobilization from the North side.</li> </ul>	<ul style="list-style-type: none"> <li>Activate the new sewer line as noted above in "issues"</li> <li>Continue/Complete punch-list work</li> </ul>
<b>Bending Weirs</b>	<ul style="list-style-type: none"> <li>Completed regulator modification work at JA-3, JA-14, and JA-6</li> <li>Currently all bending weirs at all three regulators are in operation. They were inspected as of June 8, 2016 and verified by the NYSDEC representative</li> </ul>	<ul style="list-style-type: none"> <li>Complete punch-list work</li> </ul>



## 5. 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.

### Construction Contracts

	Enhanced Aeration 2	Enhanced Aeration 3	Bending Weirs / Floatables Control
<i>Contract ID</i>	CSO-NC-3	CSO-NC-4	CS-NC-REG & FLO
<i>Plan Elements</i>	Enhanced Aeration	Enhanced Aeration	Floatables Controls and Overflow Reduction
<i>Location</i>	East Branch and Upper Newtown Creek	Dutch Kills and Lower Newtown Creek	Dutch Kills, Maspeth Creek, English Kills and East Branch
<i>Construction Cost</i>	\$16,704,250 (G+E+H Contract amounts together)	\$31,695,425	\$41,900,419
<i>Status</i>	Construction	Procurement	Construction
<i>Other Issues</i>	<b>Expanded scope of work</b>	On hold pending result of Superfund-related water sampling and LTCP	

## Design Activity Summary

	This Quarter	Next Quarter
<b>Enhanced Aeration 2</b>	<ul style="list-style-type: none"> <li>Continued to provide DSDC</li> </ul>	<ul style="list-style-type: none"> <li>Continue providing DSDC</li> </ul>
<b>Enhanced Aeration 3</b>	<ul style="list-style-type: none"> <li>Submitted amendment to the permit to include changes per USACE and Community Board Coordination on August 10, 2016. The modified permit was approved on August 19, 2016.</li> </ul>	<ul style="list-style-type: none"> <li>Procurement of the construction contract is expected to remain on hold</li> </ul>
<b>Bending Weirs / Floatables Control</b>	<ul style="list-style-type: none"> <li>Continued to provide DSDC</li> </ul>	<ul style="list-style-type: none"> <li>Continue to provide DSDC</li> </ul>

## Construction Activity Summary

	This Quarter	Next Quarter
<b>Enhanced Aeration 2</b>	<ul style="list-style-type: none"> <li>Continued construction activities including the installation of piles and foundations for the Blower Building and Storage Shed</li> <li>Substantially completed the installation of aeration piping.</li> </ul>	<ul style="list-style-type: none"> <li>Complete the erection of the Blower Building and Storage Shed.</li> <li>Begin all other work inside and outside the two structures.</li> </ul>
<b>Enhanced Aeration 3</b>	<ul style="list-style-type: none"> <li>No activity</li> </ul>	<ul style="list-style-type: none"> <li>No activity</li> </ul>
<b>Bending Weirs / Floatables Control</b>	<ul style="list-style-type: none"> <li>Continue construction activities including the installation of Bending Weir gates and baffle guides at NC-015 and BB-026</li> <li>Continued installation of sluice gates at NC-015 and BB-026</li> </ul>	<ul style="list-style-type: none"> <li>Continue construction activities including structural modification at NC-83 and NC-77 and installation of bending weirs and other related equipment</li> </ul>



## 6. Westchester Creek CSO

The Westchester Creek CSO Facility Planning area includes a portion of the Hunts Point WWTP drainage area, its associated sewers, and pumping stations that discharge to Westchester Creek and Pugsley Creek in the Bronx.

### Construction Contracts

	<b>Modifications to CSO-29 and CSO-29A</b>	<b>Pugsley Creek Parallel Interceptor Start from CSO-24</b>
<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	Reduce CSO discharges to Pugsley Creek, which would otherwise <i>increase</i> as a result of the conveyance improvements in Eastchester Road
<i>Location</i>	Eastchester Road, Bronx	Classon Point, Bronx
<i>Construction Cost</i>	\$14.5 Million	\$81.5 Million
<i>Status</i>	In Construction	NTP Awarded December 19, 2016
<i>Other Issues</i>		<b>Field conditions</b>

## Design Activity Summary

This Quarter		Next Quarter
<b>Modifications to CSO-29 and CSO-29A</b>	<ul style="list-style-type: none"> <li>• Provide DSDC services</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to provide DSDC services.</li> </ul>
<b>Pugsley Creek Parallel Interceptor Start from CSO-24</b>	<ul style="list-style-type: none"> <li>• Final design is complete</li> </ul>	<ul style="list-style-type: none"> <li>• In Construction</li> </ul>

## Construction Activity Summary

This Quarter		Next Quarter
<b>Modifications to CSO-29 and CSO-29A</b>	<ul style="list-style-type: none"> <li>• <b>Continue Construction activities</b></li> <li>• <b>Potential delay associated with Utility relocation</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Continue construction activities</b></li> </ul>
<b>Pugsley Creek Parallel Interceptor Start from CSO-24</b>	<ul style="list-style-type: none"> <li>• Procurement completed, NTP issued December 19, 2016</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contractor preparing for ground breaking, submitting shop drawings, vendor and subcontractor approvals and site safety plans.</b></li> </ul>





# 7. 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.

## Construction Contracts

	Rockaway WWTP Conveyance Improvements	26 <sup>th</sup> Ward High Level Sewer Separation	26 <sup>th</sup> Ward Wet Weather Stabilization
<i>Contract ID</i>	Project not yet initiated	CS-FC-SEW	26W-12(CO 128) 26W-21, 26W-20
<i>Plan Elements</i>	Improve collection system and WWTP capacity to achieve 2DDWF	<b>Remove storm water contribution from 443 acres from the combined sewer system</b>	Low Level MSPs High Level MSPs PST#5 PST1-4 Stabilization
<i>Location</i>	Rockaway WWTP, Queens	Fresh Creek, Brooklyn	26 <sup>th</sup> Ward WWTP, Brooklyn
<i>Construction Cost</i>	TBD	\$57 million for Phases 1a \$71 million for Phases 2a and 2b (estimated). \$63 million for Phases 3a and 3b (estimated)	LLMSP \$7.6 million 26W-21 <b>\$15.4</b> million 26W-20 \$134.4 million
<i>Status</i>	Project not initiated	CPIs for all 3 phases have been sent to DDC. Phase 1 is in construction	Complete (LLMSPs) In Construction (26W-21) In Construction (26W-20)
<i>Other Issues</i>		<b>Utility Relocation</b>	

## Design Activity Summary

	This Quarter	Next Quarter
<b>26<sup>th</sup> Ward High Level Sewer Separation</b>	<ul style="list-style-type: none"> <li>Design is commencing for the phase 2 contracts</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Design to continue for Phases 2 and 3 contracts</li> </ul>
<b>26<sup>th</sup> Ward Preliminary Treatment Reliability Improvements</b>	<ul style="list-style-type: none"> <li>PST work (26W-20) NTP given on January 11, 2016</li> <li>HLMSP work (26W-21) NTP on June 01, 2015</li> </ul>	<ul style="list-style-type: none"> <li>Provide design services during construction (DSDC)</li> </ul>

## Construction Activity Summary

	This Quarter	Next Quarter
<b>26<sup>th</sup> Ward High Level Sewer Separation</b>	<ul style="list-style-type: none"> <li>Phase I construction is progressing Approx. 15,000 ft. of 20,510 ft. of water main installed.</li> <li>688 ft. of 847 ft. of sanitary sewer installed</li> </ul>	<ul style="list-style-type: none"> <li>Continue installation of water main and sanitary sewer</li> <li>Commence installation of combined and storm sewer</li> </ul>
<b>26<sup>th</sup> Ward Preliminary Treatment Reliability Improvements</b>	<p>PST work (26W-20):</p> <ul style="list-style-type: none"> <li>Completed demolition of Ammonia Building slab and installation of dewatering system.</li> <li>Completed installation of steel beams in the basement under the Transformer Room floor slab followed by installation of Transformers 3 &amp; 4 for the new blowers.</li> <li>Completed erecting and encasing columns for blower structure. Constructed blower slab deck. Blower switchgear was delivered and set in place; Blowers 1 - 4 installed. Began installation of process air piping. Began installing conduits between blower switchgear and transformers.</li> <li>Completed all soldier piles for the Support of Excavation (SOE) of PST-5, Meter Vault, and manhole MH-D6 with the exception of 4 which are in</li> </ul>	<p>PST work (26W-20):</p> <ul style="list-style-type: none"> <li>Continue installation of conduits and wire between the switchgear and transformers for blowers. Start-up of Blowers 1-4.</li> <li>Complete installation of temporary power to BNR Building and demolish 48" RCP pipe so that remaining 4 soldier piles for PST-5 SOE can be completed.</li> <li>Continue excavation on south side for PST-5 construction and start north side excavation for PST-5, Meter Vault, and MH-D6. Commission the dewatering system.</li> </ul>

conflict with the 5KV and abandoned 48" RCP pipe. Drained and cleaned PST-4 (start of Interim Limits). Started excavation and began installing SOE lagging between soldier piles on south side of PST-5.

- Removed asphalt and utility work for Interim Grit Building (IGB). Completed piles for IGB utilities. Started excavation for the IGB slab. Completed construction of manhole MH-4 (replacement for MH-1).

HLMSP work (26W-21):

- Continued to install electrical conduits between switchgear, pumps and the Secondary Resistor Controls (SRC).
- Addressed pump castings non-conformance (yield stress failures) by successfully demonstrating 2 times hydrostatic test.
- Completed motor and SRC shop witness tests for all 3 HLMSPs.
- Delivered and set seal water skids on equipment pads.

- Continue work on installation of utilities and slab for IGB.

HLMSP work (26W-21):

- Continue to run conduit and wire in preparation for Main Sewage Pumps replacement.
- Demolition of HLMSP #1.
- Complete pump-motor-resistors shop witness testing.
- Shipment of HLMSP #1, 2, and 3.
- Begin installation of HLMSP #1.



# 8. Wards Island WWTP Headworks Wet Weather Improvements

*The Wards Island WWTP Headworks Wet Weather Improvements consist of work done at the WWTP to increase its wet weather handling capacity. The projects described in this section 3.7 were added to the 2012 CSO Order through a modification effective March 26, 2015 (DEC Case No. CO2-20140314-01).*

## Construction Contracts

	Main Sewage Pump Reconstruction	Bar Screen Replacement
<i>Contract ID</i>	WI - 288(R)	WI - 280
<i>Plan Elements</i>	Reconstruction of Six (6) Main Sewage Pumps	Replace Bar Screens at Bronx and Manhattan Grit Chambers
<i>Location</i>	Wards Island WWTP	Wards Island WWTP
<i>Status</i>	Certification of Notice to Proceed to Construction sent on March 31, 2015	Certification of Notice to Proceed to Construction sent on December 23, 2014
<i>Construction Cost</i>	\$3,689,000	\$13,229,000
<i>Other Issues</i>	<b>There were no outstanding issues at the end of the 4<sup>th</sup> Quarter</b>	None

## Design Activity Summary

	This Quarter	Next Quarter
<b>Main Sewage Pump Replacement</b>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>	<ul style="list-style-type: none"> <li>• Complete</li> </ul>
<b>Bar Screen Replacement</b>	<ul style="list-style-type: none"> <li>• Continued to provide DSDC</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to provide DSDC</li> </ul>

## Construction Activity Summary

	This Quarter	Next Quarter
<b>Main Sewage Pump Replacement</b>	<ul style="list-style-type: none"> <li>• Completed the commissioning of second pump which was put into service</li> <li>• Reconstruction of 3<sup>rd</sup> pump commenced</li> </ul>	<ul style="list-style-type: none"> <li>• Complete commissioning of 3<sup>rd</sup> pump</li> <li>• Start reconstruction of 4<sup>th</sup> pump.</li> </ul>
<b>Bar Screen Replacement</b>	<ul style="list-style-type: none"> <li>• 4 of 4 screens in each chamber have been completed</li> </ul>	<ul style="list-style-type: none"> <li>• Issue Substantial Completion</li> </ul>



## 9. Environmental Benefit Projects

*DEP has undertaken these projects 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.*

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. In addition to the EBPs summarized below, the 2012 Order requires that \$2 million in EBP funding be allocated toward the Hutchinson River and Newtown Creek Neighborhood Demonstration Areas. The funding commitment has been met and the Demonstration Area projects are now complete.

### ➤ **New York Hospital Green Roof**

*Manhattan College*

\$660,440 for the installation of a 14,666 sq. ft. modular green roof project. It will be designed to control runoff from a 1 to 1.5-inch rainfall on a half-acre roof.

*Status:* Year 3 of three-year monitoring period

*Invoiced to Date:* **\$503,269.**



### ➤ **Rego Park Green Streets**

*NYC Audubon Society*

\$580,245 for Green Street stormwater capture system that will retrofit an impervious surface and replace it with permeable pavement and vegetation to capture runoff from 7,753 sq. ft. tributary area.

*Status:* Construction Bidding

*Invoiced to Date:* \$128,414



➤ **Two Sponge Park™ Bioretention Basins**

*Regional Plan Association*

\$600,000 for bioretention basins under the Long Island Expressway near the Van Wyck Expressway. One basin has the capacity to treat 1,280 gallons of runoff from a tributary area of 1,800 sq. ft., and the second basin has the capacity to treat 2,460 gallons of runoff from 3,465 sq. ft. impervious area. **Monitoring at this site is ending and site is being prepared for decommissioning.**

*Status:* Year 2 of monitoring period

*Invoiced-to-Date:* \$464,212



➤ **6<sup>th</sup> Street Green Corridor Project**

*Gowanus Canal Conservancy*

\$583,470 to build 11 curbside swales ranging from 400 to 1,200 sf along 6th Street from 2nd Avenue to 4<sup>th</sup> Avenue in Brooklyn. The project will capture one-inch storm runoff generated within the eleven-swale area, which is over 35,400 sf of street and sidewalk surfaces.

*Status:* Year 1 of three-year monitoring period

*Invoiced-to-Date:* **\$434,629**



➤ **Treatment Wetland and Rain Garden**

*City Parks Foundation*

\$504,340 for treatment wetlands and rain gardens for treating stormwater entering Meadow Lake. This project will construct a 10,000 sf treatment wetland that will receive runoff from two one-acre portions of a parking area in Flushing Meadows Corona Park. The treatment wetland is designed to capture over 76,000 gallons of water generated by each 1.2 -inch rainstorm.

*Status:* Year 1 of 3 year monitoring period

*Invoiced to Date:* \$436,327



➤ **Green Infrastructure**

*Drexel University*

\$893,493 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. Project construction completed at Bronx High School of Science and Flushing International High School.

*Status:* Construction Completed

*Invoiced to Date:* \$343,756





# 10. Green Infrastructure Program

*The 2012 CSO Consent Order sets forth schedule and stormwater capture targets, and other requirements for the program to reduce runoff and CSO through the use of green infrastructure.*

## Program Implementation

DEP has identified Priority Areas based on several criteria, such as annual CSO volume, frequency of CSO events, as well as projected benefits of projects constructed through DEP's Waterbody/Watershed Facility Plans or other system improvements planned for the future. DEP also notes outfalls in close proximity to existing and future public access locations. **DEP continues to review and expand the Priority Areas to ensure sufficient green infrastructure implementation to meet the 2030 goal set forth in the Order.**

The identification of Priority Areas has enabled DEP to focus resources on specific CSO tributary areas, to analyze all potential opportunities, to saturate these areas with green infrastructure as much as possible, and to achieve efficiencies in design and construction.

DEP has initially focused primarily on the Area-wide right-of-way contracts building Right-of-way Bioswales, Right-of-way Rain Gardens, Stormwater Greenstreets, and porous paving. DEP's standardized designs and procedures have been critical to supporting the systematic implementation of green infrastructure at a



Right-of-Way Bioswales



Right-of-Way Rain Gardens



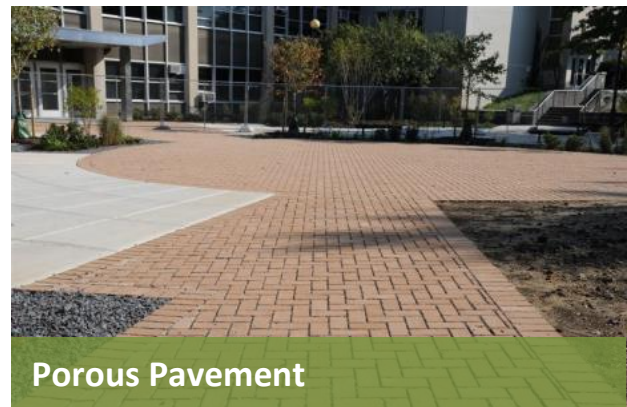
wide scale. DEP expects to continue green infrastructure implementation using an expanding array of tools. As right-of-way implementation continues and reaches its fullest extent over the long term, DEP will increasingly rely on other, more site-specific opportunities on public and private property. Over time, the proportion of program resources devoted to implementation will shift from right-of-way to public property retrofits and other types of green infrastructure tools.

During the **Fourth** Quarter of **2016**, planning, design and construction work continued in three Green Infrastructure (GI) Program initiatives and are generally summarized below.

- Ongoing area-wide GI contracts design and build thousands of Right-of-way Bioswales, Right-of-way Rain Gardens and Stormwater Greenstreets. Design and construction contracts are being implemented in multiple phases.
- Ongoing siting, design and construction of public property retrofits in coordination with City agency and non-profit partners.
- Ongoing design and construction of GI Grant Program projects on private property.



**Stormwater Greenstreets**



**Porous Pavement**

## Status of Green Infrastructure Practices and Impervious Area Managed

CSO Tributary Drainage Area	Total Green Infrastructure Practices	Total Impervious Area Managed (acres)
<b>Bronx River</b>	89	25
<b>East River / Open Waters</b>	96	46
<b>Flushing Bay</b>	1,006	113
<b>Flushing Creek</b>	78	9
<b>Gowanus Canal</b>	111	9
<b>Hutchinson River</b>	205	26
<b>Jamaica Bay</b>	927	100
<b>Newtown Creek</b>	1,311	110
<b>Paerdegat Basin</b>	4	0
<b>Westchester Creek</b>	3	0
<b>Total</b>	<b>3,830</b>	<b>437*</b>

\* The 437 acres represent 0.6% of the total impervious are in combined sewer areas to be managed. This table is cumulative and updated each quarter.



# 11. 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 Plan provides a framework for communicating with and soliciting input from interested stakeholders on water quality and the challenges and opportunities for CSO controls.*

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.

## Green Infrastructure Meetings

Date	Community Member(s)	Type of Outreach	Attendees
<b>October</b>			
7	Civics Queens Community Board 11	Meeting	20
21	Council Member Brad Landers	Meeting	5
<b>December</b>			
1	NE Queens Civic Leaders – Update	Conference Call	15
7	Residents of Gowanus Houses and other NYCHA housing in S. Brooklyn	Presentation	45
7	Green Infrastructure Grant Workshop	Presentation	21
16	NYNJ Baykeeper, Newark DIG, City of Newark	Presentation	12

## LTCP Public Meetings

Date	CSO Watershed	Meeting Topic	Attendees
<b>October</b>			
26	Flushing Bay	LTCP Alternatives Review	40
<b>November</b>			
9	Jamaica Bay/Newtown Creek	Brooklyn Borough Service Cabinet Meeting Briefing	25
15	Newtown Creek	LTCP Kick-off	50
15	Jamaica Bay/Newtown Creek/Citywide GI	Queens Borough Service Cabinet Meeting	25
<b>December</b>			
6	East River/Open Waters	Manhattan CB3 LTCP Meeting Request	15

## Community Outreach Email Correspondence this Quarter

	October	November	December	Sub-Totals
RSVP to LTCP Meeting	70	65	0	135
Request to be Added	0	1	2	3
Request to be Deleted	0	0	0	0
Press Inquiries	0	0	0	0
Public Comment	0	0	9	9
General Information	0	0	2	2
<b>Sub-Totals</b>	<b>70</b>	<b>66</b>	<b>13</b>	<b>149</b>

## Other LTCP Education and Outreach Activities

- **October 19, 2016:** DEP met with the College Point Civic Association to discuss taking three CSO outfalls offline in connection with a sewer separation project.
- **October 28, 2016:** DEP participated in a City Council Hearing a green roof rules and expansion in the City.
- **November 7, 2016:** DEP hosted a meeting with representatives from Riverkeeper and the Newtown Creek Alliance to discuss the LTCP and Superfund Program coordination.



## 12. Key DEP Personnel

Planning Area	Project	DEP Responsible Personnel		
		Bureau	Chief	APM
Inner Harbor	CSO-DRDG: Gowanus Dredging	BEDC	Tysvaer	Chao
	CSO-GC: Flushing Tunnel	BEDC	Clarke	Joseph
	CSO-GC: Gowanus PS	BEDC	Clarke	Joseph
Flushing Bay	CSO-DRDG: Dredging	BEDC	Tysvaer	Chao
	PW-088 Assn. 2B: Flushing Interceptor	BWT	<b>TBD</b>	<b>TBD</b>
	CS-FB-LLD: Low-Lying Sewers	BWSO	DeLillo	<b>Gordon</b>
	CS-FB-LLD R2 Weir	BWT	<b>TBD</b>	<b>TBD</b>
	CS-FB-BWR: Regulators	BEDC	Tysvaer	Gordon
	TI-WW-1: Whitestone Interceptor	BEDC	Solimando	Sadat
Jamaica Tributaries	CS-JA-BWR: Bending Weirs	BEDC	Tysvaer	Novotny
	CS-JA-BBS: 48-Inch Sewer	BEDC	Tysvaer	Meshkati
Newtown Creek	CSO-NC-4: Dutch Kills, Lower Newtown	BEDC	Tysvaer	Meshkati
	CSO-NC-3: East Branch, Upper Newtown	BEDC	Tysvaer	Meshkati
	CSO-NC-2: Enhanced Aeration Lower English Kills	BEDC	Tysvaer	Adabi
	CS-NC-REG&FLO: Regulators / Floatables Control	BEDC	Tysvaer	Meshkati
Westchester Creek	CS-ER-WCM: Modifications to CSO-29 / 29A	BEDC	Tysvaer	Chao
	CS-ER-WCP: Pugsley Creek Parallel Interceptor	BWSO	DeLillo	Garin
Jamaica Bay	CSO-HC: Hendrix Creek Dredging	BEDC	Tysvaer	N. Shah
	CS-FB-SEW: 26th Ward / Fresh Creek HLSS	BWSO	DeLillo	<b>Gordon</b>
	CO 26W-128: Low Level Main Sewage Pumps	BEDC	Solimando	Kharivala
	26W-20: 26th Ward Wet Weather Stabilization	BEDC	Solimando	Heim
	26W-21: 26th Ward High Level Main Sewage Pumps	BEDC	Solimando	Heim
Wards Island	Reconstruction of Main Sewage Pumps (MSP)	BWT	Lochan	A. Parada
	Bar Screen Replacement	BEDC	Moriarty	N. Shah



# 13. Other Issues

## Action Items from December 12, 2016 CSO Quarterly Progress Meeting

Planning Area	Responsible Party	Required Action	Status
Flushing Bay	DEC	<ul style="list-style-type: none"> <li>DEC to submit force majeure on low lying sewers for groundwater issue, include CPM, boring logs, dewatering logs, and discussion of steps contractor took to characterize dewatering requirements</li> </ul>	Complete
	DEC DEP	<ul style="list-style-type: none"> <li>DEC to review force majeure on low-lying sewer diversion</li> <li>DEP to review letter on EBP in Flushing Meadows recently sent to DEC</li> </ul>	Complete In Progress
Newtown Creek	DEC	<ul style="list-style-type: none"> <li>DEC to consider inserting TBDs for the NC-4 NTPC and CC milestones in new CSO Order Appendix A</li> </ul>	In Progress
	DEC DEP	<ul style="list-style-type: none"> <li>DEC coordinating with EPA to set up workshop on NC LTCP</li> <li>DEP to submit data analysis got NC LTCP 2 weeks prior to public meeting</li> </ul>	Complete In Progress
Coney Island Creek	DEP	<ul style="list-style-type: none"> <li>DEP to submit report on lab interference for CIC water quality sampling</li> </ul>	In Progress
Westchester Creek	DEP	<ul style="list-style-type: none"> <li>DEP to respond to DEC's final comments on Pugsley Creek Interceptor Final Design</li> </ul>	Complete
	DEC	<ul style="list-style-type: none"> <li>DEC to provide clarification on comments on Pugsley Creek interceptor final design</li> </ul>	Complete
Wards Island	DEP	<ul style="list-style-type: none"> <li>DEP to confirm the CC date for Wards Island MSPs</li> </ul>	In Progress
Jamaica Bay / Tributaries	DEP	<ul style="list-style-type: none"> <li>DEP to submit revised schedule for 26W interim limits and update relevant sections of WWOP</li> </ul>	Complete
	DEP	<ul style="list-style-type: none"> <li>DEP confirm status of NTP for 26<sup>th</sup> Ward HLSS Phase 1</li> </ul>	In Progress
	DEP	<ul style="list-style-type: none"> <li>DEP to provide time impacts for 26<sup>th</sup> Ward WWTP sludge line rupture on PST work</li> </ul>	Complete
LTCPs	DEC	<ul style="list-style-type: none"> <li>DEC to have Gowanus Canal and Bronx River LTCPs undergo further review by their upper management</li> </ul>	In Progress
	DEP	<ul style="list-style-type: none"> <li>DEP and DEC legal/technical conduct a separate meeting on approvals of LTCPs</li> </ul>	In Progress

Misc	DEP	<ul style="list-style-type: none"> <li>• Provide flow monitoring and influent sampling data from LTCP sampling efforts (ongoing)</li> </ul>	In Progress
	DEP	<ul style="list-style-type: none"> <li>• <b>DEP to provide 12-month look ahead for LTCPs</b></li> </ul>	<b>In Progress</b>
	DEP	<ul style="list-style-type: none"> <li>• <b>DEP to discuss internally approach to meeting Rockaway WWTP conveyance improvements milestone</b></li> </ul>	<b>In Progress</b>



# 14. Overview of LTCP Program

*The goal of each Long-Term Control Plan (LTCP) is to identify appropriate CSO controls necessary to achieve waterbody-specific quality standards, consistent with EPA’s 1994 CSO Policy and subsequent guidance.*

## LTCP Milestones

	<b>CSO Watershed</b>	<b>LTCP Milestone</b>
<b>1</b>	Alley Creek	June 2013
<b>2</b>	Westchester Creek <sup>1</sup>	June 2014
<b>3</b>	Hutchinson River	September 2014
<b>4</b>	Flushing Creek	December 2014
<b>5</b>	Bronx River	June 2015
<b>6</b>	Gowanus Canal	June 2015
<b>7</b>	Coney Island Creek <sup>1</sup>	June 2016
<b>8</b>	Flushing Bay <sup>2,3</sup>	December 2016
<b>9</b>	Jamaica Tributaries & Bay <sup>2</sup>	June 2017
<b>10</b>	Newtown Creek	June 2017
<b>11</b>	Citywide <sup>4</sup>	December 2017

- 1) Final approval from DEC to swap Westchester Creek LTCP to June 30, 2014 and Coney Island Creek LTCP to June 30, 2016 received on April 11, 2014.
- 2) Final approval from DEC to swap Flushing Bay LTCP to June 30, 2016 and Jamaica Tributaries & Bay LTCP to June 30, 2017 received on February 23, 2015.
- 3) A Modification Request to extend Flushing Bay LTCP to December 31, 2016 was approved by DEC May 17, 2016.
- 4) Extension of Citywide LTCP Milestone to December 31, 2018 and the addition of the Harlem River LTCP due December 31, 2017 included in Draft Consent Order.

# New York City CSO Watersheds







# 15. 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. All Waterbody/Watershed Facility Plans (WWFPs) have been approved

## LTCP Activity Status

CSO Watershed	Alley Creek <sup>1</sup>	Westchester Creek <sup>2</sup>	Hutchinson River <sup>3</sup>	Flushing Creek <sup>4</sup>	Bronx River <sup>5</sup>	Gowanus Canal <sup>6</sup>	Flushing Bay	Coney Island	Jamaica Bay	Newtown Creek	Citywide
LTCP Due Date	June 2013	Jun 2014	Sept 2014	Dec 2014	Jun 2015	Jun 2015	Dec 2016	Jun 2016	Jun 2017	Jun 2017	Dec 2017
Waterbody Startup	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sampling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	●
Modeling	✓	✓	✓	✓	✓	✓	✓	✓	●	●	■
Alternatives Development	✓	✓	✓	✓	✓	✓	✓	✓	●	●	■
LTCP Development	✓	✓	✓	✓	✓	✓	✓	✓	■	■	■
Public Participation <sup>7</sup>	✓	✓	✓	✓	✓	✓	✓	✓	●	●	●

**LEGEND:** = Completed = In Progress = Not Initiated

<sup>1</sup>Final Alley Creek LTCP previously submitted to DEC June 30, 2013. Received DEC Determination Letter in December 12, 2013. DEP submitted Article 78 to DEC on February 21, 2014. Resubmitted to DEC on June 30, 2014. DEC Comments Letter received January 23, 2015. Supplemental Documentation submitted May 6, 2015.

<sup>2</sup>Final Westchester Creek LTCP submitted to DEC in June 30, 2014. DEC Comments Letter received January 14, 2015. Supplemental Documentation submitted April 14, 2015.

<sup>3</sup>Final Hutchinson River LTCP submitted to DEC in September 30, 2014. DEC Comments Letter received January 14, 2015. Supplemental Documentation submitted April 14, 2015.

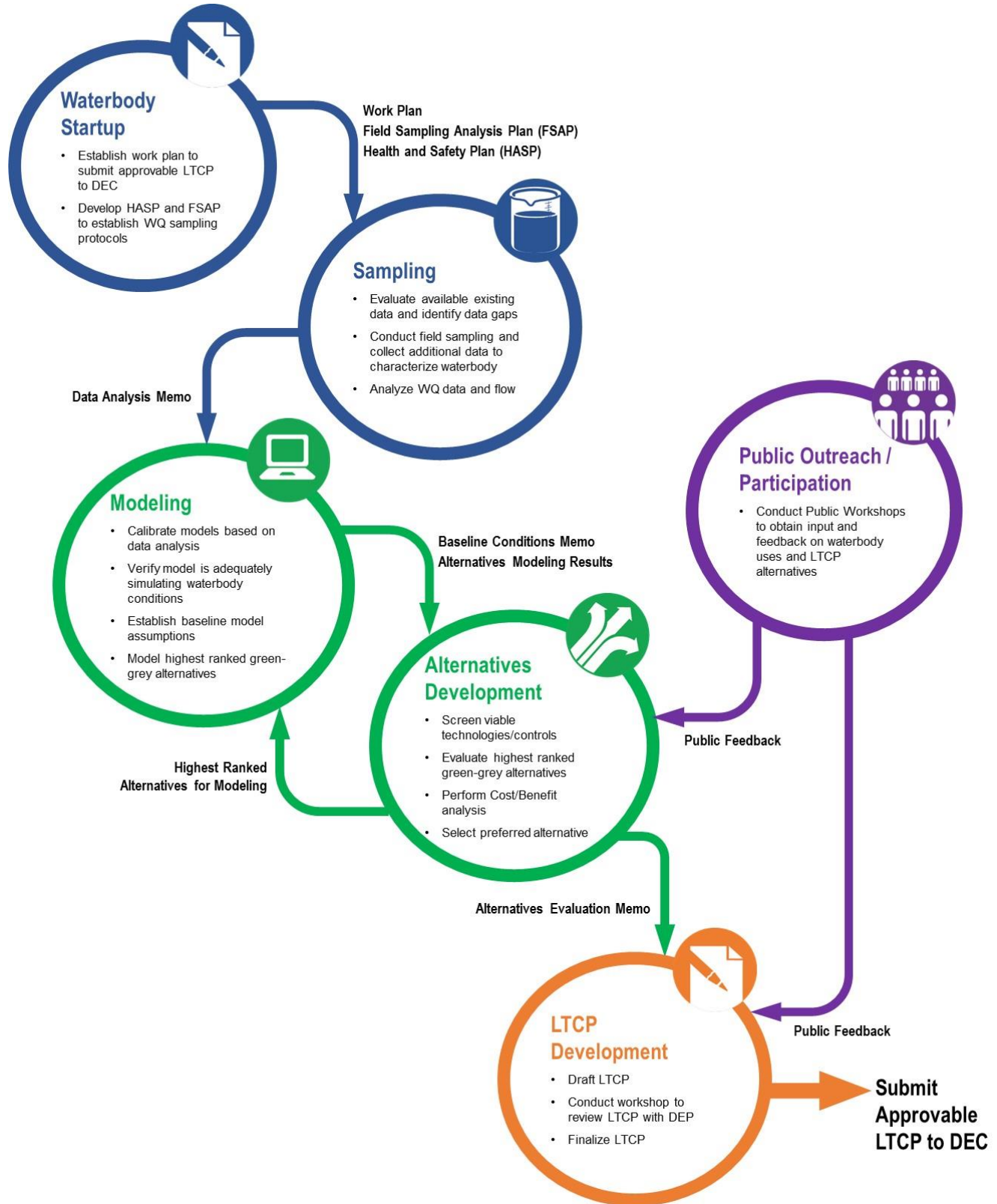
<sup>4</sup>Final Flushing Creek LTCP submitted to DEC in December 30, 2014. DEC Comments Letter received January 23, 2015. Supplemental Documentation submitted May 22, 2015.

<sup>5</sup>Final Bronx River LTCP submitted to DEC in June 30, 2015. DEC Comments Letter received August 24, 2015. Supplemental Documentation submitted September 23, 2015.

<sup>6</sup>Final Gowanus Canal LTCP submitted to DEC in June 30, 2015. DEC Comments Letter received August 5, 2015. Supplemental Documentation submitted September 8, 2015.

<sup>7</sup>Considered complete after second meeting. Third meeting to be held upon DEC Acceptance of LTCP.

# LTCP Work Plan Flow Chart





# 16. LTCP Progress Update

	<b>CSO Watershed</b>	<b>LTCP Milestone</b>	<b>Progress Update</b>
<b>1</b>	<b>Alley Creek</b>	June 2013	<ul style="list-style-type: none"> <li>➤ DEP submitted LTCP on 7/2/2013. DEC provided comments on 9/12/13.</li> <li>➤ A revised LTCP was submitted on 11/12/13. DEC disapproved LTCP on 12/12/13.</li> <li>➤ DEP resubmitted the LTCP 6/30/14.</li> <li>➤ DEC comments on LTCP received on 1/23/15. DEP submitted Supplemental Documentation &amp; Responses to Comments on 5/6/15.</li> <li>➤ 6/4/15 DEC sent comments regarding Spring Creek demo. DEP replied on 8/4/15. DEP submitted follow-up responses on 10/14/15.</li> </ul>
<b>2</b>	<b>Westchester Creek</b>	June 2014	<ul style="list-style-type: none"> <li>➤ LTCP was submitted on 6/30/14.</li> <li>➤ DEC comments received on 9/22/14. DEP responded on 11/24/14.</li> <li>➤ Additional DEC comments received on 1/14/15. DEP submitted Supplemental Documentation &amp; Response to Comments on 4/14/15.</li> </ul>
<b>3</b>	<b>Hutchinson River</b>	September 2014	<ul style="list-style-type: none"> <li>➤ LTCP was submitted on 9/30/14.</li> <li>➤ DEC comments received on 1/14/15. DEP submitted Supplemental Documentation &amp; Response to Comments on 4/14/15.</li> <li>➤ DEC sent additional comments on 6/10/15. DEP responded on 8/7/15.</li> </ul>
<b>4</b>	<b>Flushing Creek</b>	December 2014	<ul style="list-style-type: none"> <li>➤ LTCP was submitted on 12/30/14.</li> <li>➤ DEC comments received on 3/23/15. DEP submitted Supplemental Documentation &amp; Response to Comments on 5/22/15.</li> <li>➤ DEC sent additional comments on 6/10/15. DEP responded on 8/7/15.</li> </ul>
<b>5</b>	<b>Bronx River</b>	June 2015	<ul style="list-style-type: none"> <li>➤ LTCP was submitted on 6/30/15.</li> <li>➤ DEC comments received on 8/24/15. DEP responded on 9/23/15.</li> </ul>
<b>6</b>	<b>Gowanus Canal</b>	June 2015	<ul style="list-style-type: none"> <li>➤ LTCP was submitted on 6/30/15.</li> <li>➤ DEC comments received on 8/5/15. DEP submitted Supplemental Documentation &amp; Response to Comments on 9/8/15.</li> <li>➤ 1/6/16 DEP submitted Gowanus Canal LTCP and Superfund Modeling Peer Review Report.</li> </ul>

	CSO Watershed	LTCP Milestone	Progress Update
7	Coney Island Creek	June 2016	<ul style="list-style-type: none"> <li>➤ DEP submitted LTCP on June 30, 2016.</li> <li>➤ Comments from DEC was received on August 17, 2016 and responded to on September 16, 2016.</li> </ul>
8	Flushing Bay	December 2016	<ul style="list-style-type: none"> <li>➤ DEP requested a modification for additional 6 months extension to December 2016. DEC approved on May 14, 2016.</li> <li>➤ <b>LTCP was submitted on 12/30/16.</b></li> <li>➤ Field Sampling Program and Data Analysis completed.</li> <li>➤ 2016 IW model calibration, baseline and control runs completed; revising LTCP model runs for 2012 version.</li> <li>➤ WQ and DO model calibration, baseline conditions and performance gap analysis completed; updating results per 2012 IW runs.</li> <li>➤ Completed site-scale field investigations and model sensitivity analysis.</li> <li>➤ Further development, model runs and siting analysis for retained alternatives is ongoing.</li> <li>➤ Continued technical meetings with DEC.</li> <li>➤ Conducted kick-off and alternatives public meetings.</li> </ul>
9	Jamaica Tributaries and Bay	June 2017	<ul style="list-style-type: none"> <li>➤ <b>Field sampling program completed.</b></li> <li>➤ <b>IW model calibration, baseline conditions and control runs underway.</b></li> <li>➤ <b>WQ and DO model calibration, baseline conditions, and performance gap analysis underway.</b></li> <li>➤ <b>Continued development of potential alternatives.</b></li> <li>➤ Public kick-off meeting conducted on September 22, 2016.</li> </ul>
10	Newtown Creek	June 2017	<ul style="list-style-type: none"> <li>➤ <b>Field sampling program completed.</b></li> <li>➤ <b>IW model calibration completed; baseline conditions and control runs underway.</b></li> <li>➤ <b>WQ and DO model calibration, baseline conditions and performance gap analysis initiated; continued WQ modeling Peer Review.</b></li> <li>➤ <b>Continued development of potential alternatives; supporting model runs and siting analysis are ongoing.</b></li> <li>➤ <b>Public kick-off meeting held November 15, 2016.</b></li> </ul>
11	Citywide	December 2017	<ul style="list-style-type: none"> <li>➤ Includes Open Waters and East River LTCPs.</li> <li>➤ DEP requested a modification for additional 12 months extension to December 2018; Draft Consent Order indicates Milestone date of December 2018.</li> <li>➤ <b>Completed Phase I (Hudson River) Sampling Programs (continuous flow monitoring; field sampling).</b> Phase II and III sampling Program to be initiated in March 2017.</li> </ul>