



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

CSO Order on Consent
Quarterly Progress Report
Fourth Quarter 2019
(October 1st – December 30th)

January 30, 2020

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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 toward complying with the Order’s milestones between **October 1st, 2019** and **December 30th, 2019**. 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 11, 2019** for the **third** quarter of 2019 and is scheduled to hold a Quarterly Progress Meeting on **March 11, 2020** to discuss issues related to the Order and review milestones met during the **Fourth** quarter of **2019**.

Reportable Activity This Quarter

Date	Location	Event Description
September 17, 2019	Jamaica Bay	Appendix A, XII. Jamaica Bay CSO, B. 26 th Ward High Level Sewer Separation, 11. Phase 3 – Design Completion – DEC acknowledges receipt of update to a Modification Request dated August 14, 2019 for design completion for third phase of 26 th Ward High Level Sewer Separation project.
September 17, 2019	Wards Island	Appendix A, XIV. Wards Island WWTP A. Reconstruction of Main Sewage Pumps 2. Construction Completion – Dec approves extension of milestone from December 31, 2017 to August 14, 2019

Milestone Actions This Quarter

Location	Item Description	Milestone Date	Action Required	Status
Jamaica Bay	Bergen Basin Sanitary Sewer	Oct 2019	Initiate Construction	DEP certified on Jan 14, 2019

Milestone Actions Next Quarter

Location	Item Description	Milestone Date	Action Required	Status
Westchester Creek	Modifications to CSO-29 and CSO-29 A	Feb 24, 2020	Construction Completion	On Schedule
Jamaica Bay	HLSS Phase III	March 2020	NTP	Delays identified. DEP intends to request milestone modification

Pending Modification Requests (MR) and Open Force Majeure Event Claims (FM)

Location	Item Description	Action(s)	Reason for Action(s)	Milestone Date	Status
Jamaica Bay	26 th Ward HLSS Phase II	<ul style="list-style-type: none"> • DEP submitted FM 5/14/18 • DEP provided additional info on 3/11/19 • DEC acknowledged valid FM on 06/05/19 	<ul style="list-style-type: none"> • NYCHA Steam pipe interferences 	Dec 2020 (Construction Completion)	Full extent of the delay has not yet been identified and DEP will keep DEC apprised
Jamaica Bay	26 th Ward HLSS Phase III	<ul style="list-style-type: none"> • DEP submitted MR 3/1/19 • DEP provided additional info on 8/14/19 	<ul style="list-style-type: none"> • Buckeye Fuel Pipe Interferences, Cover Issues 	Mar 2019 (Design Completion)	Full extent of the delay has not yet been identified and DEP will keep DEC apprised
Bowery Bay/EROW	Area-wide ROW Green Infrastructure in BB-005 CSO Tributary Area	<ul style="list-style-type: none"> • DEP submitted FM 6/26/19 	No awardable bids received	December 2020 (NTP)	DEC denied FM claim. DEP and DEC are in negotiations

Location	Item Description	Action(s)	Reason for Action(s)	Milestone Date	Status
Jamaica Bay	Rockaway WPCP 2xDDWF	<ul style="list-style-type: none"> • DEP submitted NTP modification request 11/1/17 • DEC responded 11/10/17 • DEC issued NOV on 4/3/18 		Dec 2017	Discussions with DEC to resolve NOV ongoing
Jamaica Bay	26 th Ward PSTs 1-5	<ul style="list-style-type: none"> • DEP submitted FM on 12/20/19 	<ul style="list-style-type: none"> • Delays associated with deteriorated expansion joints in PST-4 	Jan 2021 (Construction Completion)	Under DEC review
Westchester Creek	Modifications to CSO-29 and CSO-29A	<ul style="list-style-type: none"> • DEP submitted FM on 3/11/19 on differing bedrock elevations at CSO-29 • DEC acknowledged valid FM 7/1/19 	<ul style="list-style-type: none"> • Delays associated with differing bedrock elevations 	June 2020 (Construction Completion)	DEP is currently evaluating delays associated with the jet grouting as well as the additional rock excavation



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 Milestone	Projected Completion	% of Time Elapsed	% of Construction Completed ⁽¹⁾
Flushing Bay	Flushing Bay Dredging	July 2016	March 2019	Sept 2018	100%	100%
Jamaica Bay Tributaries	Bergen Basin 18" Sanitary Sewer	Jan 2019	Oct 2021	Sep 2020	54%	17%
Westchester Creek	Modifications to CSO-29 & 29A	Dec 2015	Feb 24, 2020	Jun 2020	90%	81%
	Pugsley Creek Parallel Interceptor	Dec 2016	Jun 2020	April 2020	68%	79%
Jamaica Bay	26 th Ward HLSS Phase 1	Mar 2016	Dec 2018	Dec 2018	100%	100%
	26 th Ward HLSS Phase 2A	Sept 2017	Dec 2020	Sept 2020	64%	45
	26 th Ward HLSS Phase 2B	Sept 2017	Dec 2020	Sept 2020	76%	72%

Location	Item Description	Notice to Proceed	Construction Completion Milestone	Projected Completion	% of Time Elapsed	% of Construction Completed⁽¹⁾
	26th Ward HLSS Phase 3	Mar 2020	Dec 2022	Dec 2022	-	-
	26th Ward PSTs 1-5	Jan 2016 ⁽²⁾	Jan 1, 2021	Jan 2021	94%	82%
	Rockaway WWTP Conveyance		Dec 2017	Pending Mod Request	-	-
WI WWTP ⁽²⁾	MSP Replacement	Mar 2015	Dec 2017	Complete - Aug 2019	100%	100%

(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. Alley Creek CSO

Alley Creek LTCP Approved on March 7, 2017

Alley Creek CSO Schedule

Alley Creek CSO	DEC Approved Milestones⁽¹⁾	Status
1. Initiate Final Design	Sept 2018	Certified by DEP Oct 2, 2017
2. Design Completion	Sept 2021	Design in Progress 10% design
3. Notice to Proceed to Construction	Sept 2022	TBD Pending Design Completion
4. Construction Completion	Sept 2024	TBD Pending Design Completion

⁽¹⁾ Milestone dates may be subject to revision by DEC based on additional facility planning.



4. Inner Harbor CSO

Gowanus Canal LTCP Approved on March 29, 2017

- February 27, 2015 - DEP certified construction completion of the Flushing Tunnel Modernization and Pump Station Reconstruction as of December 24, 2014 and June 20, 2014 respectively.
- April 13, 2015 – DEC accepted DEP’s certification of construction completion in accordance with the CSO Order.
- DEP continues to operate the Flushing Tunnel in accordance with its operational plan.
- DEP has completed a project to mitigate foam from the Gowanus Canal Flushing tunnel as of 1/3/2020.



5. 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.

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>	Monitor Flushing Interceptor sag in Ulmer Street and address if periodic monitoring indicates necessity	Divert Low Lying sewers in vicinity of Bowery Bay WWTP. Raise weir at regulator BB-02	Bowery Bay High Level Interceptor regulator modifications at ten regulators	Environmental Dredging of Flushing Bay
<i>Location</i>	From MH 45 at Whitestone Expressway to MH 29 at Ulmer Street and 25 th Avenue	Regulator BB-02. Berrian Blvd and 19 th Ave between 43 rd St. and 45 th St.	Five of ten regulators along 108 th street, Ditmars Blvd and the LaGuardia Airport site	Proximate to CSO Outfalls BB-006 and BB-008
<i>Construction Cost</i>	TBD	\$5,610,000	\$28,959,345	\$37,560,000
<i>Status</i>	Next scheduled survey in 2022	Certified Complete on 9/11/2017	Certified Complete on 6/8/2018	Dredging Complete on 7/10/17 – Construction completed on 8/16/18. Currently in 2-year maintenance period.

Design Activity Summary

	This Quarter	Next Quarter
Divert Low-Lying Sewers / Raise Weir BB-R02	<ul style="list-style-type: none"> • Complete 	
Regulator Modifications	<ul style="list-style-type: none"> • Complete 	

Construction Activity Summary

	This Quarter	Next Quarter
Divert Low-Lying Sewers / Raise Weir BB-R02	<ul style="list-style-type: none"> • Certified completion on 9/11/2017 	
Regulator Modifications	<ul style="list-style-type: none"> • Certified completion on 6/8/2018 	
Environmental Dredging	<ul style="list-style-type: none"> • Certified completion on 8/16/2018. Continue with 2-year maintenance period • DEC accepted Certificate of Construction Completion on 10/29/2018 	

Flushing Bay LTCP Approved on March 7, 2017

Flushing Bay CSO Schedule

Flushing Bay CSO	DEC Approved Milestones ⁽¹⁾	Status
1. Initiate Final Design	Jul 2021	DEP released RFP
2. Design Completion	Jun 2025	TBD Pending Design Start
3. Notice to Proceed to Construction	Jul 2026	TBD Pending Design Completion
4. Construction Completion	June 2035	TBD Pending Design Completion

⁽¹⁾ Milestone dates may be subject to revision by DEC based on additional facility planning.

Flushing Creek CSO Schedule

Flushing Creek CSO	DEC Approved Milestones ⁽¹⁾	Status
1. Initiate Final Design	Dec 2018	Certified by DEP on Feb 8, 2019
2. Design Completion	Sept 2022	Design in progress 15% design
3. Notice to Proceed to Construction	Sept 2023	TBD Pending Design Completion
4. Construction Completion	Dec 2025	TBD Pending Design Completion

⁽¹⁾ Milestone dates may be subject to revision by DEC based on additional facility planning.



6. 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

	Parallel 48-inch Siphon / Interceptor	Bending Weirs	Bergen Basin 18" Sewer
<i>Contract ID</i>	CS-JA-BBS	CS-JA-BWR	SEQ002714
<i>Plan Elements</i>	Parallel 48-inch Sewer	Bending Weirs	18-inch Sanitary Sewer
<i>Location</i>	Belt Parkway Queens	Regulator J6 on the East Interceptor and regulators J3 and J14 on the West Interceptor	150 th Ave between 126 and 129 Streets
<i>Construction Cost</i>	\$20,256,909	\$6,853,955	\$4,990,000
<i>Status</i>	Completed	Completed	In-Construction
<i>Other Issues</i>	<p>The interceptor was activated on February 24, 2017, meeting the consent order milestone date. Due to Hydraulic Grade Line issues associated with an existing 10" sanitary sewer connected to the interceptor, the sluice gate at regulator JA-3 was lowered to limit flow and CSO capture. The interceptor will run at partial capacity temporarily until downstream sewer work associated with the new 18" sanitary sewer is completed.</p>		

Design Activity Summary

This Quarter		Next Quarter
Parallel 48-inch Siphon/Interceptor	<ul style="list-style-type: none"> Complete 	
Bergen Basin 18" Sewer	<ul style="list-style-type: none"> Complete 	

Construction Activity Summary

This Quarter		Next Quarter
Parallel 48-inch Siphon/Interceptor	<ul style="list-style-type: none"> Certified completion on 2/28/17 	
18-inch Sanitary Sewer in 150 th Avenue	<ul style="list-style-type: none"> Contractor completed setting up dewatering system Contractor completed installation of all water mains 	<ul style="list-style-type: none"> Contractor will begin dewatering operations Contractor will start sewer work in 150th Avenue



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.

Construction Contracts

	Enhanced Aeration 2	Bending Weirs / Floatables Control
<i>Contract ID</i>	CSO-NC-3	CS-NC-REG & FLO
<i>Plan Elements</i>	Enhanced Aeration	Floatables Controls and Overflow Reduction
<i>Location</i>	East Branch and Upper Newtown Creek	Dutch Kills, Maspeth Creek, English Kills and East Branch
<i>Construction Cost</i>	\$16,704,250 (G+E+H Contract amounts together)	\$43,763,292
<i>Status</i>	Certified Complete – 6/9/18	Certified Complete – 11/22/2017
<i>Other Issues</i>		

Design Activity Summary

	This Quarter	Next Quarter
Enhanced Aeration 2	<ul style="list-style-type: none">• Complete	
Bending Weirs / Floatables Control	<ul style="list-style-type: none">• Complete	

Construction Activity Summary

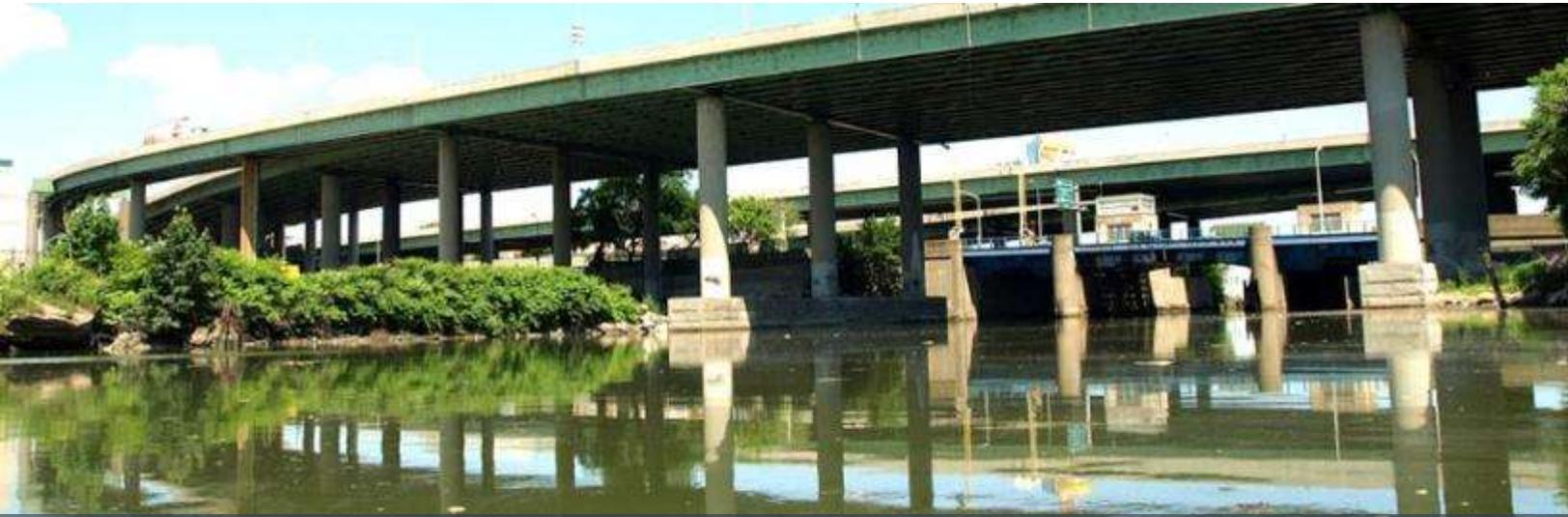
	This Quarter	Next Quarter
Enhanced Aeration 2	<ul style="list-style-type: none">• Complete	
Bending Weirs / Floatables Control	<ul style="list-style-type: none">• DEP submitted Post Construction Monitoring on 8/19/2019	

Newtown Creek LTCP Approved on June 27, 2018

Newtown Creek CSO Schedule

Borden Ave Pumping Station Expansion	DEC Approved Milestones	Status
1. Initiate Final Design	Jul 2021	DEP preparing RFP
2. Design Completion	Dec 2024	TBD Pending Design Start
3. Notice to Proceed to Construction	Sept 2025	TBD Pending Design Completion
4. Construction Completion	Sep 2029	TBD Pending Design Completion

CSO Storage Tunnel	DEC Approved Milestones	Status
1. Initiate Final Design	Jun 2025	DEP preparing RFP
2. Design Completion	May 2028	TBD Pending Design Start
3. Notice to Proceed to Construction	Aug 2030	TBD Pending Design Completion
4. Construction Completion	Jun 2042	TBD Pending Design Completion



8. 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

	Modifications to CSO-29 and CSO-29A	Pugsley Creek Parallel Interceptor Start from CSO-24
<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>	\$17.6 Million	\$85.1 Million
<i>Status</i>	In Construction	In Construction
<i>Other Issues</i>	DEP working to mitigate impact on project schedule due to higher than anticipated rock elevations at the CSO-29 overflow chamber.	DEP is working to mitigate impact on project schedule due to condition of existing diversion chamber at HP-06 regulator.

Design Activity Summary

	This Quarter	Next Quarter
Modifications to CSO-29 and CSO-29A	<ul style="list-style-type: none"> • Provide DSDC services 	<ul style="list-style-type: none"> • Continue to provide DSDC services.
Pugsley Creek Parallel Interceptor Start from CSO-24	<ul style="list-style-type: none"> • Provide DSDC services 	<ul style="list-style-type: none"> • Continue to provide DSDC services

Construction Activity Summary

	This Quarter	Next Quarter
Modifications to CSO-29 and CSO-29A	<ul style="list-style-type: none"> • Continuation of site restoration of Eastchester Road and Morris Park Ave at CSO-29A • Completion of excavation for overflow expansion at CSO-29 • Continuation of installation of reinforcing steel and concrete for overflow expansion at CSO-29. 	<ul style="list-style-type: none"> • Continuation of site restoration of Eastchester Road and Morris Park Ave. at CSO-29A. • Continuation of installation of reinforcing steel and concrete for overflow expansion and installation of FRP Weirs at CSO-29.
Pugsley Creek Parallel Interceptor Start from CSO-24	<ul style="list-style-type: none"> • Contractor submitted proposal for applying shotcrete to the existing diversion chamber walls • Work started in the diversion chamber: Contractor is removing the bench area and cutting windows into the east wall • Subcontractor completed 85% of the 12' x 8' box sewer rehabilitation in White Plains Road between Stanton Court and Cornell Avenue • Contractor plans to complete all sewer work 75 days ahead of construction completion milestone date. 	<ul style="list-style-type: none"> • Complete work in the diversion chamber • Rehabilitate the east and west walls of the diversion chamber by installing new reinforcing steel and shotcrete both walls. This is a critical step in completing the diversion chamber roof replacement • Start work on the existing diversion chamber roof. Start bend #7, the tie-in point to the CSO-24.



9. Bronx River CSO

Bronx River LTCP Approved on March 7, 2017

Bronx River CSO Schedule

Bronx River CSO	DEC Approved Milestones ⁽¹⁾	Status
1. Initiate Final Design	Sept 2018	Design Initiated 8/27/2018
2. Design Completion	Sept 2022	Design in progress <10% design
3. Notice to Proceed to Construction	Sept 2023	TBD Pending Design Completion
4. Construction Completion	Sept 2026	TBD Pending Design Completion

⁽¹⁾ Milestone dates may be subject to revision by DEC based on additional facility planning.



Hutchinson River LTCP Approved on March 7, 2017

Hutchinson River CSO Schedule

Hutchinson River CSO	DEC Approved Milestones ⁽¹⁾	Status
1. Initiate Final Design	Sept 2018	Design Initiated 8/15/2018
2. Design Completion	Sept 2022	Design in progress <5% design
3. Notice to Proceed to Construction	Sept 2023	TBD Pending Design Completion
4. Construction Completion	Mar 2026	TBD Pending Design Completion
1. Initiate Final Design	Sept 2022	Design Initiated 8/15/2018
2. Design Completion	Mar 2026	Design in progress <5% design
3. Notice to Proceed to Construction	Mar 2027	TBD Pending Design Completion
4. Construction Completion	Mar 2030	TBD Pending Design Completion

⁽¹⁾ Milestone dates may be subject to revision by DEC based on additional facility planning.



11. Jamaica Bay CSO

The Jamaica Bay CSO Facility Planning area includes the drainage areas of the 26th 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 th Ward High Level Sewer Separation	26 th 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>	Achieve 2xDDWF at WWTP	Remove storm water contribution from 285 acres from the combined sewer system	Low Level MSPs High Level MSPs PST#5 PST1-4 Stabilization
<i>Location</i>	Rockaway WWTP, Queens	Fresh Creek, Brooklyn	26 th Ward WWTP, Brooklyn
<i>Construction Cost</i>	TBD	\$58 million for Phase 1A \$90.6 million for Phases 2A and 2B 235.5 million for Phases 3A and 3B (estimated)	LLMSP \$7.6 million 26W-21 \$17.9 million 26W-20 \$154 million
<i>Status</i>	Project not yet initiated. In discussions with DEC.	Phase 1A construction completed, with variance from approved design Phase 2 is in construction Phase 3 is in preliminary design	Completed (LLMSPs) Completed (26W-21) In Construction (26W-20)
<i>Other Issues</i>		For Phase 2B (SE855): NYCHA steam pipes were discovered during construction that interfere with storm/high level storm sewers in four locations.	

DEP and DDC hired consultant to perform design for NYCHA steam pipes offset. For Phase 3A (SE856): it was previously identified interferences with Buckeye Pipelines in four locations. Preliminary design around Buckeye Fuel Lines is prepared by DDC and submitted to Buckeye Partners, L.P. Buckeye requested that DDC include their existing utility locations on the design drawings. **DEP review of the preliminary design drawings is complete. DDC is incorporating DEP comments and will then submit revised drawings for Buckeye review.** For Phase 3B (SE857): low cover issues have been addressed and a preliminary design review has been completed by DEP.

Design Activity Summary

	This Quarter	Next Quarter
26 th Ward High Level Sewer Separation	<ul style="list-style-type: none"> Design support for Phase 2B to resolve NYCHA Steam Pipe Interferences Continue design of Phase 3 	<ul style="list-style-type: none"> Continue/Complete design for Phase 2B associated with NYCHA Steam Pipe Interferences Continue design of Phase 3
26 th Ward Preliminary Treatment Reliability Improvements	<ul style="list-style-type: none"> Continued DSDC 	<ul style="list-style-type: none"> Continuation of DSDC

Construction Activity Summary

	This Quarter	Next Quarter
26 th Ward High Level Sewer Separation	<ul style="list-style-type: none"> Phase 2A (SE853) Consultant confirmed that design changes from splash pad to the stilling basin does not require modifications to the ACOE permit. 	<ul style="list-style-type: none"> Phase 2A (SE853) Procure materials for the outfall work in Williams Avenue

	This Quarter	Next Quarter
	<p>Minor mod is required to the DEC permit.</p> <ul style="list-style-type: none"> • Completed work in Q4: <ul style="list-style-type: none"> - Installed Chamber #2 at the intersection of Flatlands Avenue and Louisiana Avenue - Installed 5'-6" x 2'-6" Double Barrel (DB) Storm Sewer at the intersection of Flatlands Avenue and Louisiana Avenue - Installed 8'-6" x 3'-6" Storm Sewer at the intersection of Flatlands Avenue and Georgia Avenue • Commenced work in Q4: <ul style="list-style-type: none"> - Installation of stelcor piles on Louisiana Avenue between Glenwood Road and Flatlands Avenue - Preparation for the installation of 5'-6" x 2'-6" DB Storm Sewer in Louisiana Avenue between Glenwood Road and Flatlands Avenue <p><u>Phase 2B (SE855)</u></p> <ul style="list-style-type: none"> • 01/10/20 Consultant's preliminary design options for NYCHA steam pipe offsets presented to DEP for comments • DEP and DDC are evaluating feasibility of NYCHA steam facilities relocation. The lack of records and age of the infrastructure makes this particularly challenging • Completed utility relocations in Snedicker Avenue between Stanley Avenue and Dewitt Avenue. 	<ul style="list-style-type: none"> • Install Chamber #3 at the intersection of Louisiana Avenue and Cozine Avenue • Complete installation of piles in Louisiana Avenue between Glenwood Road and Flatlands Avenue • Complete installation of piles in Louisiana Avenue between Cozine Avenue and Wortman Avenue • Complete trunk water main manifold fabrication and commence installation <p>• <u>Phase 2B (SE855)</u></p> <p>DEP and DDC to complete feasibility analysis of the NYCHA steam pipe relocations. Contractor plans to remobilize and commence work on the remaining storm/HLSS sewer work in E 108th Street, Stanley Avenue, and in Snedicker Avenue.</p>
<p>26th Ward Preliminary Treatment Reliability Improvements</p>	<p><u>PST work (26W-20):</u></p> <ul style="list-style-type: none"> • Completed rehabilitation of PST-4 and performed start-up testing. It was discovered during start-up testing that the existing expansion joints aren't holding water. Change 	<p><u>PST work (26W-20):</u></p> <ul style="list-style-type: none"> • Complete rehabilitation of PST-4 and PST-3 expansion joints- and bring back online.

This Quarter	Next Quarter
<p>Order #103 was identified to repair the expansion joints.</p> <ul style="list-style-type: none"> • Continued rehabilitation of PST-3 including installation of sludge collection equipment. • Completed installation of 36-inch GTO piping, meter vault, and valve vault and scum drain lines. • Continued work on installation of conduits and terminations associated with MCC-25 and the PST-3 & 4 collectors and scum troughs. Continued MCC-25 Bldg. masonry. • Continued work in PSG, installing electrical conduits and piping (raw sewage and sludge pumps) associated with PST-3. • Completed installation of sludge pumps 4, 5, and 6 in PSG. Started installation of the second flushing system. • Continued installing Locker Rooms (including HVAC controls), showers, and exterior curtain wall in Personnel areas of P&B House. • Continued work to install 78" Force Main pile cap. • Completed trench drain for the IGB. • 	<ul style="list-style-type: none"> • Install scum trough actuators associated with PST-3. • Complete the 36-inch GTO tie-in into the FDS. • Start-up IGB system. • Continue work on installation of conduits and terminations associated with MCC-25 and the PST-3 collectors and scum troughs. Complete MCC-25 Room masonry and glass canopy installation. • Complete start-up of sludge pumps 4, 5 and 6 (pending CO# 103 expansion joints repair). • Complete first floor Locker Rooms and Showers in Personnel areas of P&B House. • Continue 2nd floor Supervisor's Personnel Area work. • Install 48" Primary Effluent pipe. • Complete 78" FM pile cap. •



12. 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

	MSP Reconstruction	Bar Screen Replacement
<i>Contract ID</i>	WI - 288(R)	WI - 280
<i>Plan Elements</i>	Reconstruction of Six (6) MSPs	Replace Bar Screens at Bronx and Manhattan Grit Chambers
<i>Location</i>	Wards Island WWTP	Wards Island WWTP
<i>Status</i>	Completed	Completed
<i>Construction Cost</i>	\$5,292,653	\$13,715,000
<i>Other Issues</i>	None	None

Design Activity Summary

This Quarter		Next Quarter
MSP Replacement	<ul style="list-style-type: none"> Complete 	
Bar Screen Replacement	<ul style="list-style-type: none"> Complete 	

Construction Activity Summary

This Quarter		Next Quarter
MSP Replacement	<ul style="list-style-type: none"> Completed reconstruction of the 6th MSP (MSP#3 on July 24, 2019) 	DEC inspection of replacement work
Bar Screen Replacement		



13. Environmental Benefit Projects

DEP has undertaken these projects in connection with the settlement of a New York State and DEC enforcement action. The Environmental Benefit Projects (EBPs) are funded by DEP and 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 modifications to the CSO Consent Order require 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. That funding commitment was 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: Monitoring Complete

Invoiced to Date: \$555,161.



➤ **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: Monitoring Ongoing

Invoiced to Date: \$625,225



➤ **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, and the second basin has the capacity to treat 2,460 gallons of runoff. Monitoring at this site has ended, discussion with NYC Parks to take over maintenance.

Status: Monitoring Complete

Invoiced-to-Date: \$481,215



➤ **6th Street Green Corridor Project**

Gowanus Canal Conservancy

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

Status: Monitoring Complete

Invoiced-to-Date: \$528,631



➤ **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: Monitoring Complete

Invoiced to Date: \$497,263



➤ **Green Infrastructure**

Drexel University

\$893,493 to design, construct and monitor 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: Monitoring Complete

Invoiced to Date: \$814,599





14. 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, and projected benefits of projects constructed through DEP's Waterbody/Watershed Facility Plans or other system improvements planned. 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 curbside 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 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



Curbside Rain Garden (Bioswale)



Stormwater Greenstreet

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 **2019**, planning, design and construction work continued in three Green Infrastructure (GI) Program initiatives and are generally summarized below.

- Ongoing Area-wide GI contracts to design and build thousands of curbside 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.



Status of Green Infrastructure Assets and Greened Acres

Watershed	Total Green Infrastructure Assets	Total Greened Acres
Alley Creek	0	0
Bronx River	428	56
Coney Island Creek	2	1
East River / Open Waters	418	146
Flushing Bay	761	77
Flushing Creek	315	36
Gowanus Canal	116	13
Hutchinson River	213	42
Jamaica Bay & Tributaries	3632	390
Newtown Creek	1476	141
Westchester Creek	132	13
Total	7493	915

Status of Green Infrastructure 1.5% Contingency Plan Projects

Waterbodies	Area-Wide ROW Project	Status as of April 15, 2019		Reported Substantial Construction Completion Date [1]	Projected Substantial Construction Completion Date as of April 15, 2019
		Number of Bids	Issued/Anticipated NTP Date		
Flushing Creek	TI-011	Construction Bid 1	Jun-16	Dec-19	Jun-17
		Construction Bid 2	Sep-18		Dec-20
Newtown Creek	BB Cluster	Construction Bid 1	Jan-17	Dec-19	Mar-19
		Construction Bid 2	Aug-19		Dec-20
Jamaica Bay*	JAM-003	Construction Bid 1	Aug-16	Dec-19	Dec-17
		Construction Bid 2	Jun-19		Dec-20
		Construction Bid 3	Sep-19		Dec-20
		Construction Bid 4	Jan-19		Dec-20
		Construction Bid 5	Aug-19		Dec-20
EROW/Wallabout	NCB-014	Construction Bid 1	Sep-18	Dec-20	Dec-20
		Construction Bid 2	Sep-19		
EROW/Bowery Bay	BB-005	Construction Bid 1	Mar-21	Dec-20	Sept-22
		Construction Bid 2	Mar-21		
Westchester Creek	HP-014/033/016	Construction Bid 1	Apr-19	Dec-20	Dec-20
		Construction Bid 2	Apr-19		
Flushing Creek	TI-010	Construction Bid 1	Jul-19	Dec-20	Dec-20
		Construction Bid 2	Sep-19		
		Construction Bid 3	Nov-19		
		Construction Bid 4	Nov-19		
		Construction Bid 5	Nov-19		
Bronx River	HP-007/004/002	Construction Bid 1	Jun-19	Dec-20	Dec-20
		Construction Bid 2	Jul-19		
Jamaica Bay	26W-005/004	Construction Bid 1	Jun-19	Dec-20	Dec-20
		Construction Bid 2	Jul-19		
		Construction Bid 3	Jun-19		
		Construction Bid 4	Jul-19		
		Construction Bid 5	Jun-19		

[1] The Anticipated Construction Completion date as reported in the June 27, 2016 Contingency Plan



15. Community Relations

*DEP's Public Participation Plan was released to the public on **June 26, 2012** and describes the multi-pronged 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.

LTCP and Green Infrastructure Education & Outreach Meetings

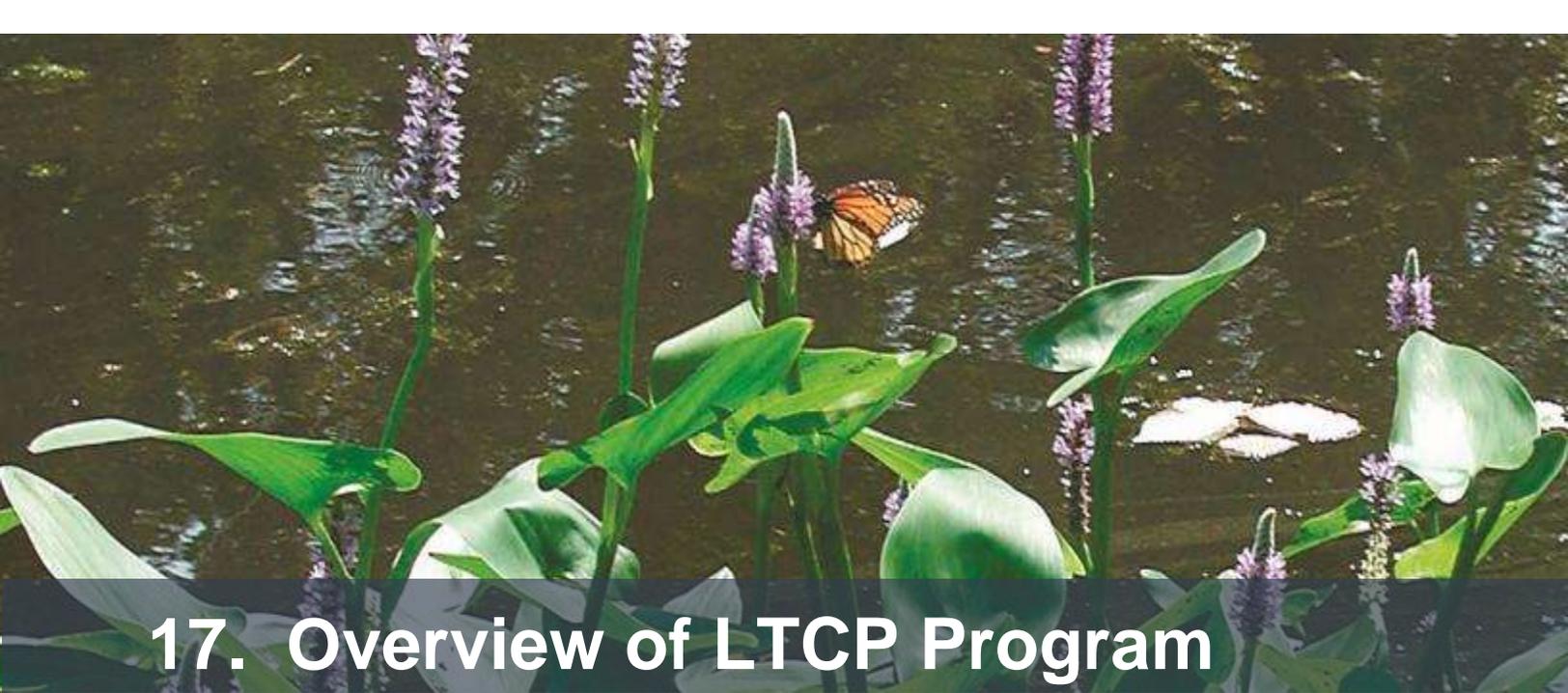
Date	Community Member(s)	Type of Outreach	Attendees
October			
1	Wayanda Civic Association – Rain Gardens Presentation	Community Meeting	30
2	Citywide & East River/Open Waters – Harlem River Retained Alternatives	LTCP Public Meeting	35
10	Holly Civic Association – Rain Gardens Presentation	Community Meeting	25
15	Citywide & East River/Open Waters Retained Alternatives	LTCP Public Meeting	56
22	Brooklyn Community Board 7 – Rain Garden Presentation	Community Board	15
November			
6	Citywide & East River Open Waters – Lower NY Bay Retained Alternatives	LTCP Public Meeting	15
12	Brooklyn Borough Service Cabinet – Rain Gardens Presentation	Community Boards/Elected Officials	25
12	AM Rozic and SS Liu – Rain Gardens Presentation	Elected Official Town Hall	Unknown

12	Brooklyn Community Board 5 – Rain Gardens Presentation	Community Board	10
20	Ozone Tudor Civic Assn – Rain Gardens Presentation	Community Meeting	45
21	Bronx Borough Service Cabinet – ER/OW LTCP and Rain Gardens Presentation	Community Boards/Elected Officials	25
December			
11	Green Infrastructure Grant Workshop	Community Workshop	12
18	Brooklyn Community Board 18 – Rain Gardens Presentation	Community Board	70



16. Key DEP Personnel

Planning Area	Project	DEP Responsible Personnel		
		Bureau	PM	AM
Alley Creek	CSO-AC-DF-DES: Alley Creek CSO Disinfection	BEDC	Osit	Romano
Inner Harbor	CSO-GC: Flushing Tunnel	BEDC	Clarke	Joseph
	CSO-GC: Gowanus PS	BEDC	Clarke	Joseph
Flushing Bay	CSO-DRDG: Dredging	BEDC	Tysvaer	Sewgobind
	CS-FB-LLD: Low-Lying Sewers	BWSO	Gordon	Dopson
	CS-FB-LLD R2 Weir	BWT	TBD	TBD
	CS-FB-BWR: Regulators	BEDC	Tysvaer	Gordon
	CSO-FC-FB-DES: Flushing CSO Floatables Control	BEDC	Tysvaer	Betemit
	CSO-FC-DF-DES: Flushing CSO Disinfection Facility	BEDC	Tysvaer	Betemit
	CSO-FB-TUN: Flushing Bay CSO Storage Tunnel	BEDC	Osit	Liu
Jamaica Tributaries	18" Sanitary Sewer in 150th Avenue	BWSO	Gordon	Dopson
Newtown Creek	CSO-NC-4: Dutch Kills, Lower Newtown	BEDC	Tysvaer	Ekhlas
	CSO-NC-3: East Branch, Upper Newtown	BEDC	Tysvaer	Ekhlas
	CSO-NC-2: Enhanced Aeration Lower English Kills	BEDC	Tysvaer	Adabi
	CS-NC-REG&FLO: Regulators / Floatables Control	BEDC	Tysvaer	Ekhlas
Westchester Creek	CS-ER-WCM: Modifications to CSO-29 / 29A	BEDC	Tysvaer	Betemit
	CS-ER-WCP: Pugsley Creek Parallel Interceptor	BWSO	Gordon	Dopson
Bronx River	CSO-BXR-DES: Bronx River LTCP	BEDC	Solimando	Lochner
Hutchinson River	CSO-HR-DF-DES: Hutchinson River Disinfection	BEDC	Tysvaer	Szeto
Jamaica Bay	CS-FB-SEW: 26th Ward / Fresh Creek HLSS	BWSO	Gordon	Dopson
	26W-20: 26th Ward Wet Weather Stabilization	BEDC	Solimando	Heim
	26W-21: 26th Ward High Level MSPs	BEDC	Solimando	Heim
Wards Island	Reconstruction of MSP	BWT	Anderson	Anderson
EBP	Environmental Benefit Projects	BEPA	McLaughlin	Chen
GI	Green Infrastructure	BEPA	Enoch	Kocovic



17. 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

	CSO Watershed	LTCP Milestone	Status
1	Alley Creek	June 2013	Approved 3/7/17
2	Westchester Creek	June 2014	Approved 8/1/17
3	Hutchinson River	September 2014	Approved 3/7/17
4	Flushing Creek	December 2014	Approved 3/7/17
5	Bronx River	June 2015	Approved 3/7/17
6	Gowanus Canal	June 2015	Approved 3/29/17
7	Coney Island Creek	June 2016	Approved 4/4/18
8	Flushing Bay	December 2016	Approved 3/7/17
9	Newtown Creek	June 2017	Approved 6/27/18
10	Jamaica Tributaries & Bay ¹	June 2018	DEC provided supplemental comments document 10/11/19
11	Citywide/Open Waters ²	March 2020	Underway

1) Citywide/Open Waters include Harlem River, Hudson River, East River, and Upper and Lower New York Bay. Modification Request for extension of Citywide/Open Waters LTCP to December 31, 2018 approved by DEC on June 27, 2017. Additional Modification Request for an extension of Citywide/Open Waters LTCP to March 31, 2020 approved by DEC on January 9, 2019.

New York City CSO Watersheds





18. Status of LTCP Development

*The status of all Long-Term Control Plan development is described below.
All Waterbody/Watershed Facility Plans (WWFPs) have been approved.*

LTCP Activity Status

CSO Watershed	Alley Creek ¹	Westchester Creek ²	Hutchinson River ³	Flushing Creek ⁴	Bronx River ⁵	Gowanus Canal ⁶	Coney Island ⁷	Flushing Bay ⁸	Newtown Creek ⁹	Jamaica Bay ¹⁰	Citywide/ Open Waters
LTCP Due Date	June 2013	Jun 2014	Sept 2014	Dec 2014	Jun 2015	Jun 2015	Jun 2016	Dec 2016	Jun 2017	Jun 2018	Mar 2020
Waterbody Startup											
Sampling											
Modeling											
Alternatives Development											
LTCP Development											
Public Participation											
Approval Date	Mar 2017	Aug 2017	Mar 2017	Mar 2017	Mar 2017	Mar 2017	Apr 2018	Mar 2017	Jun 2018	Pending	

LEGEND: = Completed = In Progress = Not Initiated

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

²Final Westchester Creek LTCP submitted to DEC in June 30, 2014. DEC Comments Letter received September 22, 2014. Response Letter submitted November 24, 2014. Additional DEC Comments Letter received January 14, 2015. Response Letter and Supplemental Documentation submitted April 14, 2015. DEC Comment Letter received June 6, 2017. Response Letter submitted July 11, 2017.

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

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

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

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

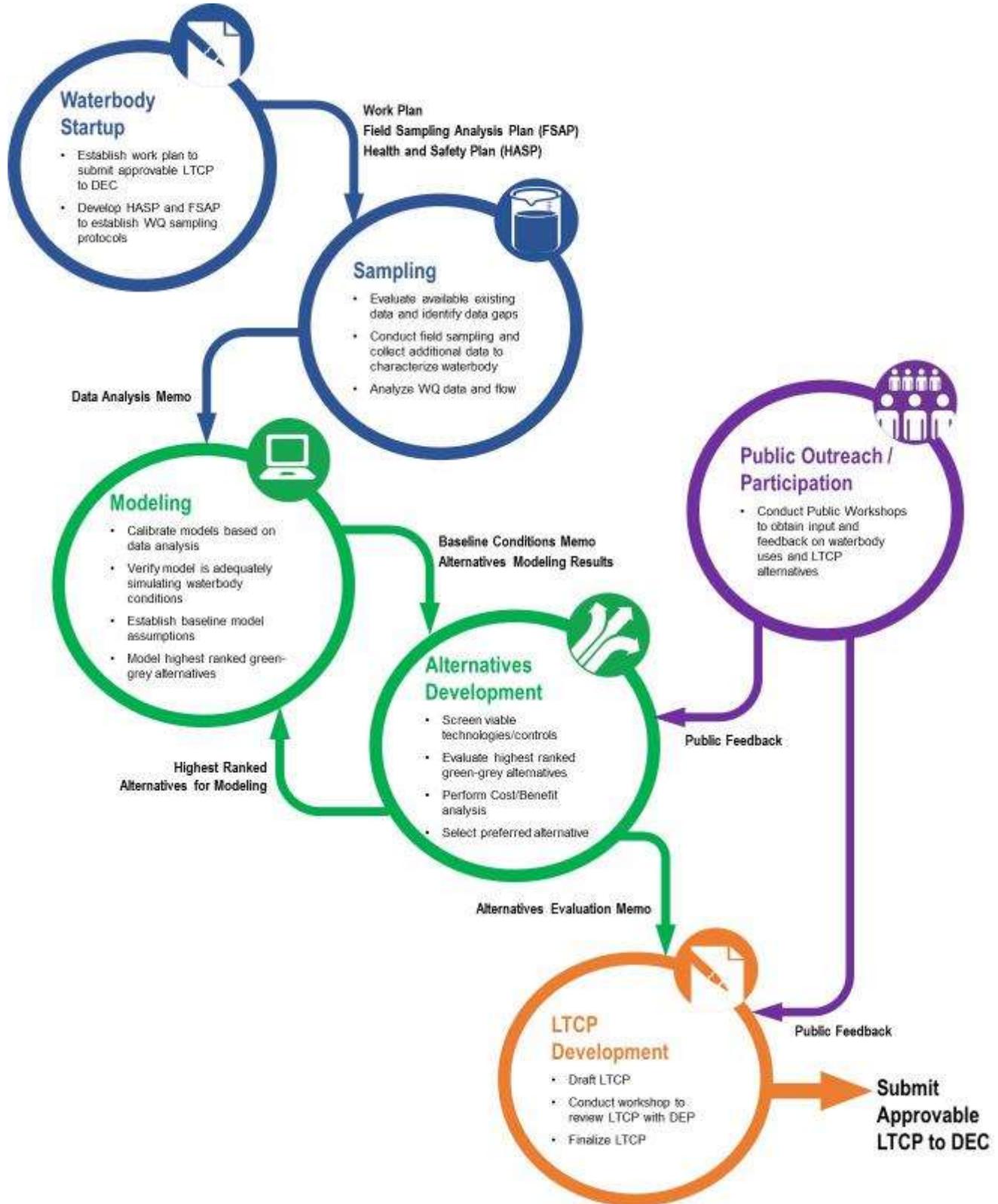
⁷Final Coney Island Creek LTCP submitted to DEC in June 30, 2016. DEC Comments Letter received August 17, 2016. Response Letter submitted September 16, 2016. DEC Comments Letter received April 6, 2017. Response Letter submitted October 2, 2017. DEP issued letter to DEC on December 5, 2017 based on discussions during October 18, 2017 DEC/DEP Technical Meeting. DEC Comments Letter received December 8, 2017. DEP submitted response letter on February 2, 2018.

⁸Final Flushing Bay LTCP submitted to DEC in December 31, 2016.

⁹Final Newtown Creek LTCP submitted to DEC in June 30, 2017. DEC Comments Letter received November 4, 2017. DEP submitted response letter January 8, 2018.

¹⁰Jamaica Bay and Tributaries LTCP submitted June 30, 2018. DEC Comment Letter dated December 21, 2018. Response Letter submitted March 1, 2019. Supplemental Documentation submitted August 14, 2019. DEC Comment Letter dated October 11, 2019.

LTCP Work Plan Flow Chart





19. LTCP Progress Update

CSO Watershed	LTCP Milestone	Progress Update
Coney Island Creek	June 2016	<ul style="list-style-type: none"> ➤ In accordance with Condition Nos. 3 and 4 from DEC's April 4, 2018 LTCP Approval Letter and the PCM Plan, DEP submitted the results of the additional flow metering performed at Regulator OH-11 for CSO Outfall OH-021 and the telemetered influent pump station data for the A venue V pump station.
Jamaica Tributaries and Bay	June 2018	<ul style="list-style-type: none"> ➤ DEP submitted Jamaica Bay and Tributaries LTCP Supplemental Documentation on August 14, 2019. ➤ DEC Comment Letter was received on October 11, 2019. DEP and DEC held a Technical Meeting on October 30, 2019 to discuss the comments. ➤ DEP is currently preparing a DEC Comment Response Letter.
Citywide/ Open Waters	March 2020	<ul style="list-style-type: none"> ➤ Selected the Citywide/Open Waters LTCP Retained Alternatives and released the Citywide/Open Waters LTCP Retained Alternatives Summary. ➤ Conducted the October 2nd Citywide/Open Waters LTCP Harlem River Public Meeting and the October 15th Citywide/Open Waters LTCP Retained Alternatives Public Meeting. ➤ Continued the development and evaluation of Citywide/Open Waters LTCP Retained Alternatives



20. Citywide/Open Waters LTCP Update

Consent Order Milestone for Citywide/Open Waters LTCP is March 31, 2020.

Last 30-Day Progress Highlights

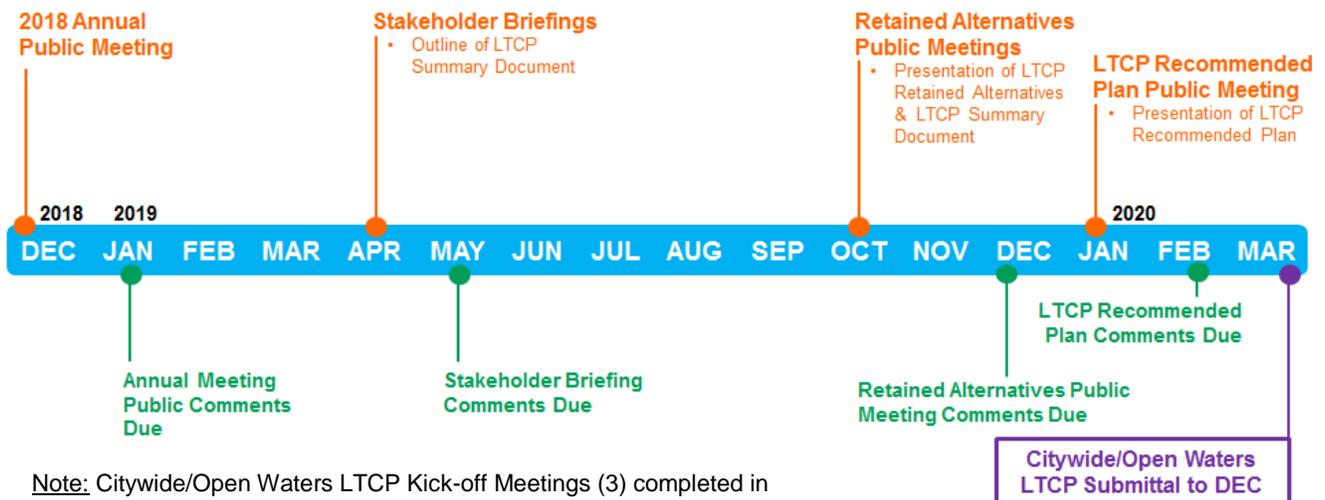
Activity	October – December 2019 Progress Highlights
Waterbody Management	<ul style="list-style-type: none"> Continued to manage schedule for March 2020 Citywide/Open Waters LTCP Submittal Continued coordination with New Jersey (PVSC) LTCP Program
Data Collection	<ul style="list-style-type: none"> Activity complete
Modeling	<ul style="list-style-type: none"> Completed the Basis of Modeling Memo for Citywide/Open Waters LTCP Continued to evaluate water quality bacteria and dissolved oxygen performance gap for Citywide/Open Waters LTCP Continued modeling evaluations for Citywide/Open Waters LTCP retained alternatives
Alternatives Development	<ul style="list-style-type: none"> Continued the development and evaluation of Citywide/Open Waters LTCP Retained Alternatives Began the process for selecting the Citywide/Open Waters LTCP Recommended Plan
LTCP Preparation	<ul style="list-style-type: none"> Completed the Citywide/Open Waters LTCP Retained Alternatives Summary Continued to draft the Citywide/Open Waters LTCP Summary
Public Participation	<ul style="list-style-type: none"> Conducted the October 2nd Citywide/Open Waters LTCP Harlem River Public Meeting and October 15th Citywide/Open Waters LTCP Retained Alternatives Public Meeting Completed responses to public comments received following the Citywide/Open Water LTCP Retained Alternatives Public Meetings Drafted the Meeting Summaries for the October 2nd Citywide/Open Waters LTCP Harlem River Public Meeting and the October 15th Citywide/Open Waters LTCP Retained Alternatives Public Meeting

LTCP Development

Look Ahead

Activity	Near Term Look Ahead
Waterbody Management	<ul style="list-style-type: none"> • Continue to manage schedule for March 2020 Citywide/Open Waters LTCP Submittal • Continue coordination with New Jersey (PVSC) LTCP Program
Data Collection	<ul style="list-style-type: none"> • Activity completed
Modeling	<ul style="list-style-type: none"> • Complete water quality bacteria and dissolved oxygen performance gap for Citywide/Open Waters LTCP • Continue modeling evaluations for Citywide/Open Waters LTCP retained alternatives and recommended plan
Alternatives Development	<ul style="list-style-type: none"> • Continue refinement of Citywide/Open Waters LTCP retained alternatives • Select the Citywide/Open Waters LTCP Recommended Plan
LTCP Preparation	<ul style="list-style-type: none"> • Continue to draft the Citywide/Open Waters LTCP Summary
Public Participation	<ul style="list-style-type: none"> • Complete Meeting Summary for Citywide/Open Waters LTCP Harlem River Public Meeting and Citywide/Open Waters LTCP Retained Alternatives Public Meeting • Prepare for the Recommended Plan Public Meeting

Public Outreach Schedule



Note: Citywide/Open Waters LTCP Kick-off Meetings (3) completed in 2018. Presentations including sampling results, baseline conditions and preliminary gap analysis are available on the DEP website.

Schedule Milestone Status

	Sampling Program	Sampling Data to DEC	Baseline Conditions Established	Flow Monitoring	BMP Regulator Analysis	Retained Alternatives Selected	Recommended Plan Selected
Target Date	Dec 2017	Mar 2018	Apr 2018	Apr 2019	Jun 2019	Sept 2019	Jan 2020
Status							

LEGEND:  = Completed  = Under DEP Review  = In Progress  = Not Initiate