

City of Baltimore
Department of Public Works

**Modified Consent Decree
Calendar Quarterly Report**

Sanitary Sewer Overflow Consent Decree
Civil Action No. JFM-02-1524

Calendar Quarterly Report No. 7
For Calendar Quarter ending June 30, 2019



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MAYOR



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** To be submitted later as an addendum to this Quarterly Report*

1.0 Executive Summary

This Calendar Quarterly Report (Quarterly Report) is submitted pursuant to the requirements of a Modified Consent Decree (MCD) entered on October 6, 2017 by the United States District Court for the District of Maryland. This Quarterly Report is intended to provide an update on the progress of remedial measures and programs required by the MCD. The primary requirements for the Quarterly Report are specified in Paragraph 21 of the MCD. Baltimore City (City) has maintained compliance with the MCD throughout the Calendar Quarter, and progress on key MCD paragraphs is provided below. This Quarterly Report details the City's efforts for the Calendar Quarter ending June 30, 2019.

In addition to the information provided throughout this Quarterly Report, the attachments that follow detail SSO events, and Sanitary Discharges of Unknown Origin (SDUO) that occurred during the Calendar Quarter. Due to access constraints on Baltimore City servers and enterprise systems, attachments supporting Building Backup occurrences will be submitted later as an addendum to this Calendar Quarterly Report. A compact disk with flow monitoring data, rain gauge data, SSO overflow tables, and SSO 5-Day Reports will accompany this report.

Paragraph 8: Elimination of Sanitary Sewer Overflow Discharges:

The City has identified 15 Sanitary Sewer Overflow (SSO) Structures, following the initial listing of SSO Structures in the 2002 Consent Decree, and five (5) of those Structures have been eliminated. The City has also submitted corrective action plans for the newly discovered SSO Structures. Flow monitoring is ongoing and rainfall data continues to be collected from nine (9) citywide gauges to inform the planning for timely elimination of the remaining SSO Structures. Post Construction Flow Monitoring for SSO 137 completed during the Calendar Quarter, SSO 137 is planned to be sealed and eliminated during the next Calendar Quarter.

Paragraph 9: Implementation of Sewershed Plans:

The City continues to progress with the design and construction of the Phase I projects during this Calendar Quarter. In total, the City has completed twenty-five (25) Phase I construction projects, with another four (4) projects in the pre-construction phase, and eleven (11) active Phase I construction projects. In addition, the Back River Wastewater Treatment Plant (WWTP) Headworks Project received Notice to Proceed (NTP) on June 29, 2017 and is progressing with concrete foundations and wall pours at the Influent Pumping Station, in conjunction with process mechanical installation.

Building Backups

The Expedited Reimbursement Pilot Program began on April 6, 2018. As of the one-year anniversary, the Expedited Reimbursement Pilot Program has a 24% approval rating for applications meeting all specified requirements for processing. Table 2-2 providing the current status of requests under the Expedited Reimbursement Pilot Program has been compiled for this Calendar Quarterly update as specified in Appendix E.

2.0 Sanitary Sewer Overflows

Sanitary Sewer Overflows (SSOs) are spills, releases, or discharges of wastewater from any portion of the Collection System. Unless discharged from an approved outfall in accordance with an NPDES permit, these discharges are violations of the Clean Water Act. The City reports SSOs per the requirements of the MCD and accrues stipulated civil penalties in accordance with Paragraph 33 of the MCD. Attachment 1 lists the SSOs that occurred during the Calendar Quarter.

2.1 SSO Structures

Historically, many utilities, including Baltimore City, managed high sewage flows by constructing SSO Structures that provided relief to interceptor sewers by discharging excessive flows to adjacent receiving waters through overflow pipes. As such, SSOs often occur during wet weather (rainfall or snow melt). The excess water from these wet weather events may enter the Collection System from public or private assets and cause overflows into rivers and streams before reaching the City's wastewater treatment plants. Prior to the Clean Water Act, the approach for designing sewer systems was to place these SSO Structures at various locations within the system for these discharges to occur. Under sub-paragraph 8.b of the MCD, the City must eliminate all SSO Structures. To date, the City has eliminated 60 out of 62 SSO Structures identified in the 2002 Consent Decree. The remaining SSO Structures identified in the 2002 Consent Decree (#67 and #72) cannot be eliminated until the Back River Wastewater Treatment Plant (WWTP) Headworks Project is constructed. Since 2002, the City has discovered an additional 15 SSO Structures, and eliminated five (5) of those newly identified structures. Under sub-paragraph 8.b (iii) of the MCD, when a new SSO Structure is discovered, the City must submit a plan and schedule to EPA and MDE within 90 days after discovery to eliminate the SSO Structure. SSO Structures are monitored remotely, and any discharges from the Structure are reported to EPA and MDE. The discharges from SSO Structures that occurred during the Calendar Quarter are provided in Attachment 2. Progress on the Back River WWTP Headworks Project is provided in Section 3.0 (Phase I Projects).

Table 2-1 lists the SSO Structures that must be eliminated under the MCD, along with the date of actual elimination for any SSO Structure(s) eliminated during the Calendar Quarter. After verification, newly discovered SSO Structures will be added to Table 2-1. The substantial completion and elimination dates will be assigned to each SSO Structure upon approval by EPA and MDE of the City's proposed corrective action plans. Once an SSO Structure is eliminated, the Structure will be removed from Table 2-1 in the following Calendar Quarterly Report.

Table 2-1. Current SSO Structure Status

SSO #	Manhole ID	Location ¹	Sewershed	Date of Substantial Completion of Construction	Date of Elimination
67	S31MM_013MH	Falls Road, approx. 1,100' northwest of US 1 bridge intersection	Jones Falls	Jan 1, 2021	July 1, 2022
72	S37GG_007MH	Rear of 428 East Preston St.	Jones Falls	Jan 1, 2021	July 1, 2022
135	S11UU_008MH	3104 Liberty Heights Ave.	High Level	Jan 1, 2021	July 1, 2022
137	S57UU_007MH	Shannon Dr. & Brehms La.	Herring Run	Jan 1, 2019	July 1, 2020
138	S07EE 1023MH	W. Cold Spring La. & Ayrdale Ave.	High Level	Jan 1, 2021	July 1, 2022
139	S11QQ 1002MH	W. Garrison Ave. & Queensberry Ave.	High Level	Jan 1, 2021	July 1, 2022
152	S33II_004MH	N. Charles St. & W. Lanvale St.	Jones Falls	Jan 1, 2019	July 1, 2020
154	S33KK_033MH	N. Charles St. & W. Lafayette Ave.	Jones Falls	Jan 1, 2019	July 1, 2020
155	S03WW1008MH	3404 Glen Avenue	Jones Falls	Jan. 1, 2023	July 1, 2024
156	S08G__001MH	Charing Cross Road & Greenwich Avenue	Gwynns Falls	Jan. 1, 2023	July 1, 2024
157	S35YY_036MH	East 32 nd Street & St. Paul/Hargrove Alley	Jones Falls	Jan. 1, 2023	July 1, 2024
158	S37GG_040MH	428 E. Preston St.	Jones Falls	Jan. 1, 2024	July 1, 2025

¹SSO Structure locations are shown on Figure 3-1 in the next section.

(A) - Actual date.

Four (4) recently discovered SSO Structures (#155, #156, #157, and #158, identified on September 13, 2016, June 6, 2017, September 19, 2017, and November 9, 2017 respectively) were not included in Appendix A of the MCD. Flow meters are installed at SSO Structures #155, #156, and #157, and these locations are monitored for overflow activity. SSO Structure #158 is currently part of an active bypass system that prevents any SSOs from occurring until a new downstream pipe is constructed to re-route the existing mainline. In order to expedite this process, the City is moving forward with construction under an existing on-call contract. Once the new downstream pipe is constructed, the City will abandon the existing mainline, including SSO Structure #158. The City proposed corrective plans for SSO Structures #155, #156, #157, which were approved by EPA and MDE on July 25, 2018. The City also submitted a corrective plan for SSO Structure #158, the plan was approved by MDE on November 15, 2018.

Substantial construction work needed to eliminate SSO #137 was completed in January 2017, under sanitary contract SC 911. Post-construction flow monitoring (PCFM) at the subject SSO structure commenced on December 14, 2017, and will be concluded after 18 months, on June 14, 2019. There have been no activations at this SSO structure during the PCFM, therefore, PCFM has been terminated during the current quarter. SSO structure #137 will be permanently sealed and date of elimination will be reported during the next quarterly period.

The City will continue to monitor and evaluate activity at all SSO structures and will continue to keep EPA and MDE advised of progress in future Calendar Quarterly Reports.

2.2 Building Backups

The MCD includes enhanced measures to investigate and address Building Backups. Appendix E of the MCD requires an Expedited Reimbursement Program to reimburse City residents for verified cleanup/disinfection costs arising from Building Backups caused by wet weather surcharging in the Collection System. Data from the program will be reported on an annual basis beginning in the Quarterly Report due following the one-year anniversary of the program. Per Appendix E, the program will begin 6 months after Date of Entry and data will be available in Quarterly Report No.7 for the Calendar Quarter ending June 30, 2019. The City has developed an electronic system and supporting documentation to process applications and correspondence under the Expedited Reimbursement Program.

The Expedited Reimbursement Program will be advertised through various media, including the DPW website, community outreach events, billing inserts, and the guide distributed to customers when the City responds to sewage backups. In accordance with sub-paragraph 16.b, the City will begin distribution of the guide within 30 days after approval of the Emergency Response Plan.

The attachments following this Quarterly Report summarize the required information for Building Backups that occurred in the Calendar Quarter. The events noted in the attachments and Table 2-2 may have a variety of causes, including: roots; improper disposal of wipes, fats, oil, and grease (FOG), or other inappropriate items; infiltration and/or inflow; or issues in public or private infrastructure. Building Backups are addressed once they are reported to the City. DPW has several proactive programs to address Building Backups including targeted cleaning, FOG abatement, root control, and SSO root cause analysis. A rain event for the purposes of reporting in Table 2-2 is defined as 0.5 inches of rain.

- Attachment 3, Reported Building Backups during the Calendar Quarter, pursuant to sub-paragraph 21.i.
- Attachment 4, Map of Reported Building Backups during the Calendar Quarter, pursuant to sub-paragraph 21.i.

The Expedited Reimbursement Pilot Program began on April 6, 2018. Over 70 applications have been received since inception. As of the one-year anniversary of the program, April 6, 2019, almost all applications have been issued determinations and the Expedited Reimbursement Pilot Program has a 24% approval rating for applications meeting all specified requirements for processing. Table 2-2 provides the current status of requests under the Expedited Reimbursement Pilot Program beginning for this Calendar Quarter ending June 30, 2019 and to be updated annually.

Table 2-2. Expedited Reimbursement Program

Request No.	Date of Occurrence	Location of Incident	Amount Requested	Application Received Date	Request Determination	Amount Approved	Determination Rationale	Determination Date	Determination Time (in Days)
RP-2018-10001	4/14/2018	1600 NORTHWICK RD	\$2,500.00	4/17/2018	Denied		Investigator determination not caused by weather - House connection choke	4/20/2018	2
RP-2018-10006	5/15/2018	1200 WALKER AVE	\$2,500.00	5/16/2018	Denied		Investigator determination not caused by surcharging-Roots	5/30/2018	13
RP-2018-10008	4/20/2018	2300 MOUNT ROYAL TER	\$2,500.00	5/22/2018	Denied		No notice to City within 24 hours	5/25/2018	3
RP-2018-10009	4/14/2018	5200 MUTH AVE	\$2,500.00	6/4/2018	Denied		No notice to City within 24 hours	6/4/2018	0
RP-2018-10010	5/23/2018	900 NORTH HILL RD	\$1,615.00	6/6/2018	Denied		Investigator determination not caused by surcharging	6/7/2018	1
RP-2018-10011	5/28/2018	5100 FREDERICK AVE	\$2,500.00	6/9/2018	Approved	\$2,000.00	Surcharging proven	8/21/2018	27
RP-2018-10012	4/26/2018	1500 WADSWORTH WAY	\$1,925.75	6/11/2018	Denied		Investigator determination not caused by weather - House connection choke via roots	6/14/2018	3
RP-2018-10013	4/7/2018	300 LYNTHURST ST	\$2,500.00	6/12/2018	Denied		Investigator determination of no surcharging	6/14/2018	2
RP-2018-10014	1/10/2018	1100 W HAMBURG ST	\$500.00	6/13/2018	Denied		Incident prior to pilot start date (04/06/2018)	6/14/2018	1
RP-2018-10015	5/27/2018	5500 MEDWICK GARTH SOUTH	\$2,500.00	6/18/2018	Approved	\$2,500.00	Surcharging proven	6/19/2018	1
RP-2018-10016	5/27/2018	500 HILTON AVE	\$1,671.00	6/19/2018	Denied		Baltimore County	6/19/2018	0
RP-2018-10017	5/27/2018	5400 FREDERICK AVE	\$2,500.00	6/22/2018	Denied		No notice to City within 24 hours	6/26/2018	4
RP-2018-10018	4/8/2018	3800 HAYWARD AVE	\$2,500.00	6/25/2018	Denied		No notice to City within 24 hours	6/26/2018	1
RP-2018-10021	5/19/2018	5600 KEY AVE	\$2,900.00	6/26/2018	Denied		No notice to City within 24 hours	6/28/2018	2
RP-2018-10023	3/7/2018	2900 FLEETWOOD AVE	\$840.00	7/1/2018	Denied		Incident prior to pilot start date (04/06/2018)	7/2/2018	1
RP-2018-10024	5/27/2018	200 MEDWICK GARTH EAST	\$2,454.75	7/3/2018	Approved	\$500.00	Surcharging proven - Insurance Company Also Paid	8/14/2018	18
RP-2018-10025	5/16/2018	3400 CHESLEY AVE	\$2,500.00	7/6/2018	Denied		Investigator determination of no surcharging	7/16/2018	10

Request No.	Date of Occurrence	Location of Incident	Amount Requested	Application Received Date	Request Determination	Amount Approved	Determination Rationale	Determination Date	Determination Time (in Days)
RP-2018-10026	5/27/2018	5500 MEDWICK GARTH SOUTH	\$2,414.92	7/6/2018	Approved	\$2,325.00	Surcharging proven - Invoices used to determine amount granted	9/6/2018	6
RP-2018-10027	6/9/2018	2200 LINDEN AVE	\$2,500.00	7/12/2018	Denied		Investigator determination of no surcharging	7/16/2018	4
RP-2018-10028	6/3/2018	4500 CRADDOCK AVE	\$2,500.00	7/17/2018	Approved	\$500.00	Surcharging proven-Invoice and receipt used to determine amount granted	8/28/2018	13
RP-2018-10029	5/28/2018	2300 ALLENDALE RD	\$1,000.00	7/17/2018	Denied		Investigator determination of no surcharging	7/18/2018	1
RP-2018-10030	7/21/2018	800 WICKLOW RD	\$332.54	7/23/2018	Denied		No notice to City within 24 hours	7/23/2018	0
RP-2018-10031	5/28/2018	3000 VIRGINIA AVE	\$2,300.00	7/24/2018	Denied		Investigator determination no surcharging - roots in House Connection	7/25/2018	1
RP-2018-10032	7/21/2018	3800 GLENGYLE AVE	\$2,500.00	7/24/2018	Approved	\$2,500.00	Surcharging proven-Invoice and receipt used to determine amount granted	9/18/2018	13
RP-2018-10033	7/23/2018	3800 GLENGYLE AVE	\$2,500.00	7/24/2018	Approved	\$1,250.00	Surcharging proven-Invoice and receipt used to determine amount granted	9/18/2018	13
RP-2018-10034	6/5/2018	1500 PENROSE AVE	\$2,500.00	7/26/2018	Denied		No notice to City within 24 hours	7/27/2018	1
RP-2018-10035	7/23/2018	3700 FERNDALE AVE	\$2,500.00	7/30/2018	Denied		No notice to City within 24 hours	7/30/2018	0
RP-2018-10036	5/27/2018	5500 MEDWICK GARTH SOUTH	\$1,200.00	7/30/2018	Approved	\$1,200.00	Surcharging proven-Invoice and receipt used to determine amount granted	8/20/2018	20
RP-2018-10037	5/27/2018	5100 EDMONDSON AVE	\$2,500.00	7/30/2018	Awaiting Documentation - Final Insurance Determination				N/A
RP-2018-10038	6/5/2018	5100 EDMONDSON AVE	\$350.00	7/30/2018	Denied		No notice to City within 24 hours	8/2/2018	2
RP-2018-10043	3/20/2018	2800 SANTA FE AVE	\$2,500.00	8/2/2018	Denied		Incident prior to pilot start date (04/06/2018)	8/7/2018	5
RP-2018-10044	7/21/2018	4100 CREST HEIGHTS RD	\$1,537.50	8/3/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rocks and Debris	8/7/2018	4
RP-2018-10045	7/22/2018	4000 ELDERON AVE	\$160.95	8/7/2018	Denied		Investigator determination of no surcharging	8/8/2018	1
RP-2018-10046	5/29/2018	100 W NORTHERN PKWY	\$2,500.00	8/9/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rocks and Debris	8/9/2018	0

Request No.	Date of Occurrence	Location of Incident	Amount Requested	Application Received Date	Request Determination	Amount Approved	Determination Rationale	Determination Date	Determination Time (in Days)
RP-2018-10047	5/24/2018	2700 THE ALAMEDA	\$2,500.00	8/13/2018	Denied		No notice to City within 24 hours	8/14/2018	1
RP-2018-10048	7/27/2018	10 S MONASTERY AVE	\$1,000.00	8/15/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rocks and Debris	8/21/2018	6
RP-2018-10049	7/23/2018	3400 BATEMAN AVE	\$1,500.00	8/15/2018	Denied		No notice to City within 24 hours	8/21/2018	6
RP-2018-10050	5/27/2018	5100 EDMONDSON AVE	\$2,500.00	8/17/2018	Denied		No notice to City within 24 hours	8/21/2018	4
RP-2018-10051	7/21/2018	5000 WESTHILLS RD	\$2,272.24	8/17/2018	Denied		No notice to City within 24 hours	8/21/2018	4
RP-2018-10052	07/22/2018; 07/25/2018; 07/27/2018	3400 ORLANDO AVE	\$1,479.68	8/21/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rocks and Debris-House Connection broken on consumer side	8/22/2018	1
RP-2018-10053	8/13/2018	5600 GOVANE AVE	\$2,500.00	8/23/2018	Denied		No notice to City within 24 hours	8/27/2018	4
RP-2018-10054	7/24/2018	0 YORK CT	\$1,585.00	8/27/2018	Denied		Investigator determination not caused by surcharging-Roots in House Connection	8/28/2018	1
RP-2018-10055	7/27/2018	2800 SANTA FE AVE	\$2,500.00	8/2/2018	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	8/28/2018	22
RP-2018-10056	5/27/2018	5500 MEDWICK GARTH SOUTH	\$2,500.00	7/26/2018	Approved	\$1,000.00	Surcharging proven-Invoice and receipt used to determine amount granted	11/13/2018	5
RP-2018-10057	5/31/2018	800 GLEN ALLEN DR	\$2,500.00	8/28/2018	Denied		Investigator determination of no surcharging	8/29/2018	1
RP-2018-10058	5/27/2018	400 DRURY LN	\$2,500.00	8/28/2018	Approved	\$1,000.00	Surcharging proven - Insurance Company Also Paid	9/18/2018	18
RP-2018-10060	5/27/2018	3800 CALLAWAY AVE	\$2,500.00	9/11/2018	Denied		No notice to City within 24 hours and application not received within 90 days of discovery	9/12/2018	1
RP-2018-10061	8/31/2018	1000 ROCKHILL AVE	\$2,500.00	9/19/2018	Denied		No notice to City within 24 hours	9/19/2018	0
RP-2018-10062	1/15/2018	3400 HOLMES AVE	\$2,500.00	9/21/2018	Denied		Incident prior to pilot start date (04/06/2018)	9/21/2018	0
RP-2018-10063	8/10/2018	6300 WALLIS AVE	\$2,500.00	9/21/2018	Denied		No notice to City within 24 hours	9/25/2018	4
RP-2018-10064	8/31/2018	900 ROCKHILL AVE	\$2,500.00	9/24/2018	Denied		No notice to City within 24 hours	9/25/2018	1

Request No.	Date of Occurrence	Location of Incident	Amount Requested	Application Received Date	Request Determination	Amount Approved	Determination Rationale	Determination Date	Determination Time (in Days)
RP-2018-10065	5/27/2018	4200 ELDERON AVE	\$100.00	9/25/2018	Denied		Application not received within 90 days of date of incident discovery and investigator determined incident not due to surcharging	9/26/2018	1
RP-2018-10066	9/24/2018	900 N EDEN ST	\$446.00	9/26/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rags and Debris	9/26/2018	0
RP-2018-10067	7/25/2018	4300 BELVIEU AVE	\$2,500.00	9/27/2018	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	9/27/2018	0
RP-2018-10068	8/31/2018	3600 HINELINE RD	\$2,400.00	10/2/2018	Denied		No notice to City within 24 hours	10/3/2018	1
RP-2018-10069	5/20/2018	2200 CHELSEA TER	\$2,500.00	10/9/2018	Denied		No notice to City within 24 hours and application not received within 90 days of discovery	10/12/2018	3
RP-2018-10070	5/27/2018	2200 CHELSEA TER	\$2,500.00	10/9/2018	Denied		No notice to City within 24 hours and application not received within 90 days of discovery	10/12/2018	3
RP-2018-10071	6/10/2018	2200 CHELSEA TER	\$1,500.00	10/9/2018	Denied		No notice to City within 24 hours and application not received within 90 days of discovery	10/12/2018	3
RP-2018-10072	5/27/2018	3900 COLCHESTER RD	\$2,500.00	10/11/2018	Denied		No notice to City within 24 hours and application not received within 90 days of discovery	10/12/2018	1
RP-2018-10074	7/22/2018	4200 FALLSTAFF RD	\$7,356.00	10/16/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rags and Debris	10/17/2018	1
RP-2018-10075	9/10/2018	1200 HAVERHILL RD	\$536.34	10/16/2018	Denied		Investigator determination of no surcharging-Removal of Debris from Sewer Mainline and House Connection	10/18/2018	2
RP-2018-10076	7/22/2018	3800 MENLO DR	\$2,782.00	10/17/2018	Awaiting Documentation - Final Insurance Determination				N/A
RP-2018-10078	9/17/2018	2800 GWYNNIS FALLS PKWY	\$584.68	10/30/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rags and Debris	11/1/2018	1
RP-2018-10079	9/18/2018	2800 GWYNNIS FALLS PKWY	\$584.68	10/30/2018	Denied		Investigator determination of no surcharging-Removal of Grease, Rags and Debris	11/1/2018	1
RP-2018-10081	10/25/2018	2800 N HOWARD ST	\$350.00	11/5/2018	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	11/7/2018	2
RP-2018-10082	8/29/2018	1000 ROCKHILL AVE	\$28,000.00	10/12/2018	Denied		No notice to City within 24 hours	11/30/2018	0

Request No.	Date of Occurrence	Location of Incident	Amount Requested	Application Received Date	Request Determination	Amount Approved	Determination Rationale	Determination Date	Determination Time (in Days)
RP-2018-10083	11/20/2018	3300 BANCROFT RD	\$700.00	11/29/2018	Denied		Investigator determination not caused by surcharging-Roots in House Connection	11/30/2018	1
RP-2018-10086	11/24/2018	1300 GLENWOOD AVE	\$2,500.00	12/31/2018	Denied		Investigator determination of no surcharging-Removal of Rags and Roots	12/31/2018	0
RP-2019-10087	11/25/2018	2800 N HOWARD ST	\$1,522.84	1/29/2019	Denied		No notice to City within 24 hours	1/29/2019	0
RP-2019-10088	1/23/2019	600 E 35TH ST	\$934.00	1/29/2019	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	1/30/2019	1
RP-2019-10090	2/22/2019	6200 WOODCREST AVE	\$2,500.00	4/11/2019	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	4/11/2019	0
RP-2019-10091	2/24/2019	8 BELLEMORE RD	\$2,500.00	4/11/2019	Denied		Investigator determination of no surcharging-Removal of Roots, Dirt and Debris	4/16/2019	5
RP-2019-10092	3/4/2019	700 HUNTING PL	\$773.00	4/16/2019	Denied		Investigator determination not caused by surcharging-Roots in House Connection	4/17/2019	1
RP-2019-10093	2/22/2019	6200 WOODCREST AVE	\$1,654.00	4/18/2019	Denied		Investigator determination of no surcharging-Removal of Rags and Debris	4/22/2019	4

3.0 Phase I Projects

Phase I project work completed during this Calendar Quarter is categorized by work completed in each of the City's eight (8) sewersheds. The Phase I projects are shown in Appendix B of the MCD, which includes capital projects in the Collection System, as well as the Back River WWTP Headworks Project. In addition to the Phase I projects, the City performs sanitary sewer infrastructure work through various on-call contracts as part of its routine maintenance of the Collection System or to expedite certain needed work. The on-call work improves the Collection System by performing similar types of work (repairing existing assets or installing new infrastructure) to what is required in the Phase I projects but is done on an as-needed basis.

Percent complete graphs for the Phase I work accomplished in each sewershed through the end of this Calendar Quarter are shown as part of Figure 3-1. The percentage complete graphs are shown for:

- Sewer pipes rehabilitated by Cured-in-Place Pipe lining (LF, linear feet)
- Sewer pipes replaced (LF, linear feet)
- Manhole rehabilitations (number of)
- Sewer House Connection rehabilitations (number of)

Figure 3-1 also contains a table for Phase I project structural rehabilitation progress and a map with the sewershed boundaries and the locations for current SSO structures.

Progress with comprehensive rehabilitation continued for Phase I projects during this Calendar Quarter, including Sanitary Contract (SC) 964 Improvements to the Sanitary Sewers in the Northwest area of Baltimore City.



SC 964 non-structural grouting for sewer house connections



SC 964 adjusting manhole frame and raising to grade

The Back River Wastewater Treatment Plant (WWTP) Headworks Project is also a Phase I project included in Appendix B of the MCD. Progress photos for work completed throughout the Calendar Quarter are provided below. Table 3-1 defines the expected milestones and progress towards achieving the project milestones.



Back River WWTP Headworks Project progress photo April 2019



Back River WWTP Headworks Project progress photo May 2019

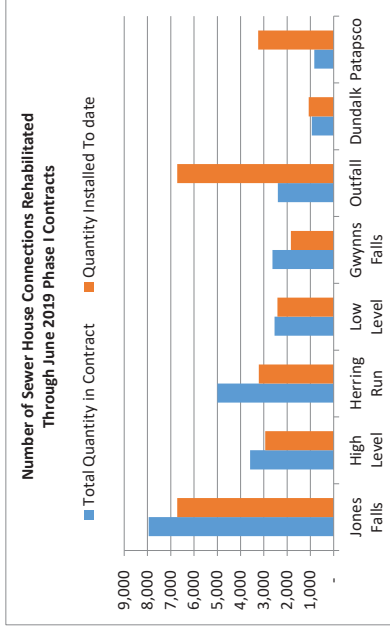
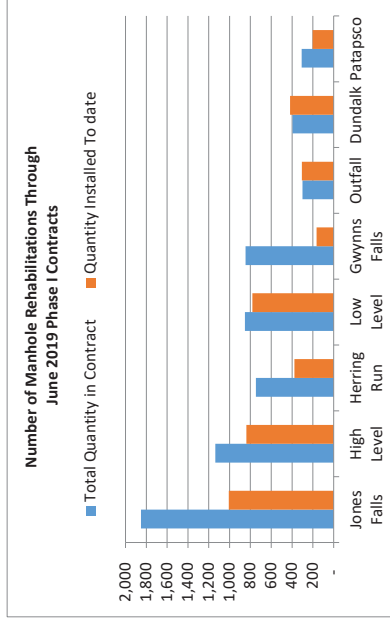
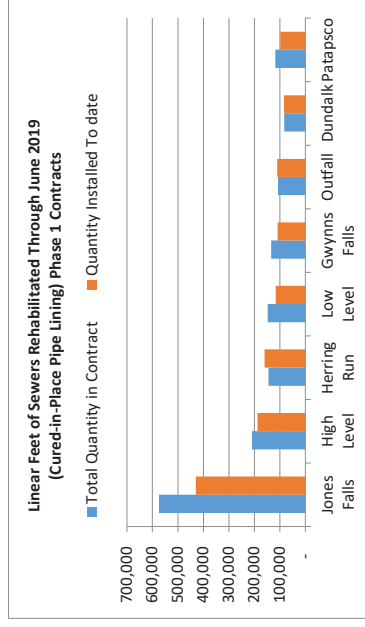
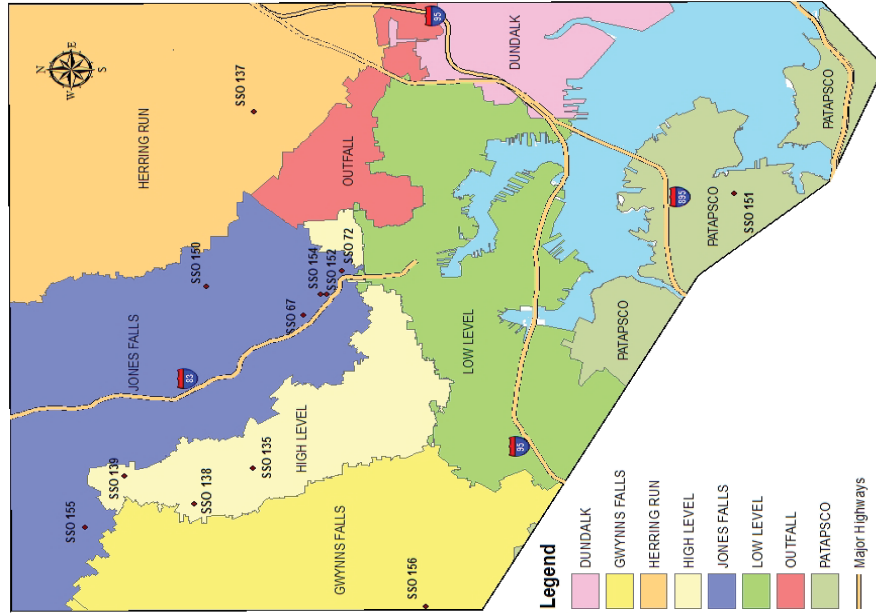


Back River WWTP Headworks Project progress photos June 2019



Table 3-3. Back River WWTP Headworks Milestones

Project Description	Notice to Proceed (NTP)	Substantial Completion Date	Status
36M Gal of storage (equalization facilities) Influent Pumping Station facility Fine screening and grit removal facilities	June 29, 2017	January 1, 2021	Concrete foundation and wall pours are now complete. Tank 1 walls are now complete. Progressing steadily with structural framing at the Influent Pumping Station, Fine Screen Facility, and Grit Removal Facility, and tie-in to Outfall Sewers.



Phase I Project Total Rehabilitation Details Through June 2019

CIPP (LF)	Point Repair (EA)	Point Repair (LF)	Manhole Rehab (EA)	SHC Rehab (EA)	Cleaning (LF)	New Pipe (LF)
1,295,859	2,194	7,052	4,096	28,166	425,865	6,252

Figure 3-1. Phase I Project Work Completed during Calendar Quarter

4.0 Phase II Projects

The City is implementing an adaptive management approach for the Modified Consent Decree. Upon completion of the Phase I projects as addressed in Section 3, the City will perform post-construction flow and rainfall monitoring to determine the effectiveness of the Phase I projects. At that point, the City will be able to develop the Phase II projects and/or corrective actions. The Phase II Plan must be submitted to EPA and MDE by December 31, 2022. Specifically, the Phase II Plan must address any remaining deficiencies identified during the sewershed studies performed under the 2002 Consent Decree that are necessary to achieve the required five-year Level of Protection (LOP), with additional measures to achieve a ten-year LOP in identified sensitive areas.

Although no specific Phase II activities were conducted during this Calendar Quarter, the City is planning to perform post-construction flow monitoring (PCFM) at select basins and evaluate data to enable accurate planning for Phase II. Accordingly, a PCFM strategic plan has been prepared to validate assumptions regarding the effectiveness of sewer rehabilitation projects following Phase I construction completion. An early installation of PCFM meters have been deployed in the Dundalk sewershed where comprehensive rehabilitation work under Phase I has been completed.

5.0 Flow Monitoring and Information Management

Under sub-paragraph 9.h., the City is required to report on rainfall and flow monitoring up to two (2) years following completion of all Phase I and Phase II Projects.

Table 5-1 summarizes rainfall and flow monitoring data for the three (3) month period ending 30 days before the end of the Calendar Quarter. An electronic data table provided as an attachment via compact disk to this Quarterly Report contains this information.

Table 5-1. Rainfall and Flow Monitoring

Flow Monitoring Location	Average Daily Flow (MGD)	Peak Flow (MGD)	Rain Gauge Location	Average Hourly Rainfall Amounts (in)	Peak Hourly Rainfall Intensity (in/hr)
P8_04_67S	0.095	4.600	JF12	0.006	1.050
P8_07_72S	0.165	5.152	JF12	0.006	1.050
P8_10_135S	0.000	0.000	GF09	0.007	1.190
P8_22_137S	0.000	0.000	HR15	0.006	0.840
P8_HL_SW01	0.000	0.000	GF07	0.005	0.920
P8_HL_SW02	0.000	0.002	GF07	0.005	0.920
SSO_152_CHARLES	0.000	0.033	JF12	0.010	1.050
SSO_154_CHARLES	0.000	0.000	JF12	0.010	1.050
SSO_155_GLEN	0.000	0.000	GF09	0.007	1.190
P8_05_SRPS	3.373	6.484	JF12	0.006	1.050
SSO_156_CHARING_CROSS	0.000	0.003	JF12	0.006	1.050
SSO_157_32ND_STREET	0.000	0.001	GF07	0.005	0.920

Updates to the City's hydraulic model of the Collection System have been performed based on improvements to the collection and transmission system. The hydraulic model is a mathematical representation of the sewer system (pipes 10" or larger) that can be used to perform detailed hydraulic calculations necessary to accurately represent a wastewater collection system. The model enables the City to consider a wide array of system conditions and alternative solutions. It is used by the City to get an overall picture of system behavior and more accurately predict how the system will respond under various loading scenarios. The Collection System improvements incorporated this Calendar Quarter include Phase I MCD projects, other City Capital Improvement Projects, and projects implemented by Baltimore County.

6.0 Pumping Station Inspection and Repair

Paragraph 11, Pumping Station Inspection, Rehabilitation and Repair, requires inspection of each Pumping Station within the Collection System on a daily basis and continuous monitoring through a Supervisory Control and Data Acquisition (SCADA) system. Additionally, a preventive maintenance program is required to ensure proper operation and maintenance of the stations. Potential disruptions of Pumping Station operations require a failure analysis with the results reported as part of the Calendar Quarterly Report.

The City of Baltimore remains in compliance with the inspection, monitoring, preventive maintenance, and failure analysis requirements of the MCD. The Wastewater Facilities Division (WWF Division) maintains a computerized maintenance management system (CMMS) for tracking work order information. The WWF Division will submit copies of files and failure report analyses to EPA and MDE upon failure occurrence.

Table 6-1 summarizes the status of the Progress Report requirements as stated in MCD subparagraph 11.d (i) through (v).

Table 6-1. Pumping Station Progress Report for Calendar Quarter

Pumping Station	Number of Inspections	Date of Completion of Inspections	Number of Repair Work Orders ¹	Number of PS-Related SSO Events and Failure Analyses	Failure Analyses Result Summary
Eastern Avenue	180	6/30/19	0	0	N/A
Brooklyn ²	180	6/30/19	0	0	N/A
Dundalk	180	6/30/19	0	0	N/A
Jones Falls	180	6/30/19	1	0	N/A
Locust Point	180	6/30/19	0	0	N/A
Quad Avenue	180	6/30/19	0	0	N/A
McComas Street	180	6/30/19	0	0	N/A
Westport	180	6/30/19	0	0	N/A
Stony Run ³	13	6/30/19	0	0	N/A

¹ Number of Repair Work Orders reported represents maintenance classified by priority 1 & 2 job codes. See MCD Appendix D for the Pumping Station Repair Priority Ranking System.

² Brooklyn Pumping Station is in full by-pass pumping mode as of June 5, 2019 for the next 6 months as a part of Wastewater Facilities contract SC 948.

³ Pumping station is currently under limited operation and inspected weekly.

7.0 Illegal Connections to the Collection System

Paragraph 10 of the MCD mandates the City to identify and address illegal connections to the Collection System as required by the City's approved Illegal Sewer Connection Detection and Enforcement Plan. Article 25, Section 2-3 of the Baltimore City Code prohibits the discharge of "any stormwater, ground water, roof run-off, subsurface drainage, uncontaminated cooling water, or unpolluted water in any sanitary sewer." Connections that discharge these flows are illegal unless authorized by the Department of Public Works. During the sewershed studies performed under the 2002 Consent Decree, the City identified and abated a number of illegal connections to the Collection System. The City continues to enforce these requirements. If the City verifies an illegal connection, the City will mandate the abatement of the connection or issue a permit as appropriate under the circumstances. The City may discover illegal connections while performing inspections, maintenance, or construction activity.

Table 7-1 summarizes the Illegal Connection Status for this Calendar Quarter. All illegal connections identified to date have been abated, no activity to report for the Calendar Quarter.

Table 7-1. Illegal Connection Status for Calendar Quarter

This table not applicable to this Calendar Quarter.

8.0 Sanitary Discharges of Unknown Origin

Paragraph 15 of the MCD requires the City to investigate and eliminate Sanitary Discharges of Unknown Origin (SDUOs). SDUOs may be composed of numerous public or private sources that contribute to a combined discharge through the storm sewer system. Any discharge source that is verified as a Collection System asset must be reported as an SSO pursuant to sub-paragraph 17.e of the MCD, and is subject to stipulated penalties.

Under sub-paragraph 15.a, the City must submit a SDUO Plan for approval within 120 days of Date of Entry and will implement the SDUO Plan upon receipt of approval from EPA and MDE. If a discharge is confirmed as a cross-connection (i.e., a direct, piped connection between the Collection System and storm sewer system), the City must submit a schedule within 60 days to eliminate the cross-connection.

The SDUO Plan was submitted to EPA and MDE on February 2, 2018. The table in the following attachment to this Quarterly Report summarizes the required information for SDUOs that occurred or were identified in the Calendar Quarter, including previously reported SDUOs confirmed during the Calendar Quarter as SSOs.

- Attachment 5, Sanitary Discharges of Unknown Origin, pursuant to sub-paragraph 15.f, sub-paragraph 21.g., and sub-paragraph 21.h.

9.0 MCD Compliance Issues

Sub-paragraphs 21.c and 21.d require the City to describe any problems anticipated with respect to meeting the requirements of Section VI, of the MCD (Remedial Measures), and to bring any additional matters that the City believes should be brought to the attention of EPA and MDE. This section highlights the City's concerns.

The City remains concerned that the Baltimore County Consent Decree implementation schedule requires the City to make planning and design assumptions based on the anticipated amount of future flow from the County. The amount of flow entering the City's Collection System is affected by the County's Consent Decree schedule and the effectiveness of County projects in reducing extraneous flow and SSOs from the County's Collection System. Since the County's flow accounts for approximately 50 percent of the flow entering the City's wastewater treatment plants, the success (or failure) of the County's Consent Decree projects has the potential to require significant design or construction changes late in the City's project implementation cycle. The City has used reasonable, conservative assumptions to project the County's future flows based on best engineering practices, but the impact of potential changes based on actual results late in the City's project implementation schedule would be significant.

The City continues to be challenged by a lack of contractor capacity to meet the demand for wastewater utility contracts. There are a significant number of Collection System Consent Decrees in Maryland and the nearby region, including Baltimore City, Baltimore County, the Washington Suburban Sanitary Commission (WSSC), DC Water, and a number of other large jurisdictions. Each of these entities is issuing a significant amount of wastewater utility contracts, and the local contracting community has limited resources available to meet these escalating demands. In particular, the City has experienced the following adverse impacts associated with contracting capacity:

- Unbalanced project bids;
- Fewer prospective bidders;
- Insufficient numbers of crews assigned to projects;
- Untrained or inexperienced crews assigned to projects; and
- Increased need for re-work due to poor quality installation.

These issues potentially create significant project completion delays and much higher costs associated with both initial project bidding and on-going project re-work. The City continues to utilize best practices to mitigate the aforementioned challenges and is currently on track to meet the January 1, 2021 deadline for completion of Phase 1 projects.

10.0 Annual Costs for Appendix B Projects

This section was updated after the fourth quarter following the October 6, 2017 Date of Entry of the MCD and will be updated annually thereafter. Reported costs incurred reflect capital expenditures, i.e., funds disbursed by the City of Baltimore Finance Department, for the Calendar Quarter ending September 30, 2018.

Table 10-1. Costs Incurred to Date

ID #	Project	Baltimore City Contract Number (for reference)	Construction Completion Date	Costs incurred as of 09/30/2018 (millions)
WWTP Improvement Project				
1	Back River WWTP Headworks Modifications and Flow Equalization Project	SC 918	1/1/2021	\$143.4
Heavy Cleaning Projects				
2	Lower Jones Falls Cleaning - Large diameter pipe cleaning of the Lower Jones Falls Sewer	SC 876	Completed October 2011	\$1.7
3	Outfall Interceptor Cleaning - Large diameter pipe cleaning of the Outfall Interceptor – Phase I	SC 894	Completed April 2014	\$11.0
4	Low Level Interceptor Cleaning - Large diameter pipe cleaning of the Low Level Interceptor	SC 922R	Completed November 2016	\$1.6
5	High Level Interceptor Cleaning - Large diameter pipe cleaning of the High Level Interceptor	SC 933	Completed December 2016	\$4.5
6	Outfall Interceptor Cleaning – City and County Portions - Large diameter pipe cleaning of the Outfall Interceptor – Phase II	SC 934	1/1/2019	\$9.3
Structural Improvement Projects				
7	Gwynns Run D-Branch Sewer Improvements - Improvements to the Gwynns Run D-branch interceptor in the high level sewershed by means of replacement of pipe	SC 879	Completed January 2016	\$4.8
8	Maryland Avenue Sewer Rehab in Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by cured-in-place pipe (CIPP) lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 895	Completed January 2016	\$3.7
9	Sewer Rehab in Greenmount & Bolton Hill Areas of Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 897R	Completed August 2016	\$16.9
10	Stony Run Sewer Rehab in Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 898	Completed August 2016	\$10.0
11	Sewer Rehab in Western Run Area of Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 899	Completed August 2016	\$14.0

ID #	Project	Baltimore City Contract Number (for reference)	Construction Completion Date	Costs incurred as of 09/30/2018 (millions)
Structural Improvement Projects (continued)				
12	Upper Jones Falls and Maryland Avenue Sewer Rehab in Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 900	Completed August 2016	\$15.3
13	Sewer Rehab in Upper Gwynns Run Area of High Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 905	Completed January 2016	\$11.2
14	Sewer Rehab in Northern Portion of High Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 906	Completed July 2016	\$22.8
15	Sewer Rehab in Eastern Portion High Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 907	Completed January 2017	\$7.5
16	Sewer Rehab in Herring Run Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 908	Completed January 2017	\$14.1
17	Sewer Rehab in Eastern Portion of Herring Run Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 909	Completed July 2016	\$14.2
18	Sewer Rehab in Central Portion of Herring Run Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 911	Completed January 2017	\$7.5
19	Sewer Rehab in Western Portion of Low Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 912	Completed August 2016	\$6.5
20	Sewer Rehab in Eastern Portion of Low Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 913	Completed October 2016	\$7.1
21	Sewer Rehab in Southern Portion of Gwynns Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 920	1/1/2019	\$21.0
22	Gwynns Run Interceptor Phase II - Improvements to Lower Gwynns Run Interceptor – Phase II	SC 932	Completed November 2016	\$13.5

ID #	Project	Baltimore City Contract Number (for reference)	Construction Completion Date	Costs incurred as of 09/30/2018 (millions)
Structural and Priority Meter Basin Rehabilitation Projects				
23	Sewer Rehab in Dundalk Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 902	Completed November 2017	\$19.7
24	Sewer Rehab in Patapsco Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 903	1/1/2021	\$23.9
25A	Improvements to the Sanitary Sewer Collection System in the Herring Run Sewershed, Part 2 Chinquapin Run	SC 910	1/1/2021	\$7.4
25B	Improvements to the Sanitary Sewer Collection System in the Herring Run Sewershed, Part 1 Sanitary Sewers	SC 956 ^a	1/1/2021	\$ -
26	Sewer Rehab in Western Portion of Low Level Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to laterals and manholes	SC 914	1/1/2021	\$13.9
27	Sewer Rehab in Outfall Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to point repairs, laterals, and manholes	SC 919	1/1/2021	\$16.3
28A	Improvements to the Gwynns Falls Sewershed Collection System - Area B	SC 921	1/1/2021	\$2.4
28B	Powder Mill Interceptor Improvements and Stream Restoration in the Gwynns Falls Sewershed.	SC 955 ^b	1/1/2021	\$ -
29	Sewer Rehab in Herring Run Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to laterals	SC 937	Completed December 2017	\$6.4
30A	Hydraulic Improvements to the High Level Sewershed Collection System	SC 940	1/1/2021	\$1.4
30B	Sanitary Sewer Collection System Improvements in the High Level Sewershed	SC 953 ^c	1/1/2021	\$5.0
31	Sewer Rehab in Western Run, Greenmount, Hampden & Bolton Hill Areas of Jones Falls Sewershed - Rehabilitation and replacement of sanitary sewer lines by CIPP lining and open cut methods of pipe in addition to manholes	SC 941	1/1/2021	\$0.9

^a Design costs incurred reported under SC 910.

^b Design costs incurred reported under SC 921.

^c Design costs incurred reported under SC 940.

ID #	Project	Baltimore City Contract Number (for reference)	Construction Completion Date	Costs incurred as of 09/30/2018 (millions)
Structural and Priority Meter Basin Rehabilitation Projects (continued)				
32	Improvements to the Sanitary Sewers in the Southeast area of Baltimore City A4	SC 962 ^d	1/1/2020	\$ -
33	Improvements to the Sanitary Sewers in the Southwest area of Baltimore City, Maidens Choice Pressure Sewer Assessment, and Uplands Sewer Replacement	SC 963 ^d	1/1/2020	\$0.8
34	Improvements to the Sanitary Sewers in the Northwest area of Baltimore City	SC 964 ^d	1/1/2020	\$0.6
35	Improvements to the Sanitary Sewers in the Northeast area of Baltimore City	SC 965 ^d	1/1/2020	\$ -
36	Sewer Collection System Improvements in the Greenmount, Hampden, and Bolton Hill areas of the Jones Falls Sewershed	SC 976 ^e	1/1/2020	\$1.9
Phase I Total Costs incurred as of September 30, 2018				\$462.2

^d Project re-scoped, costs incurred for repackaging reported under select original contracts (SC 897R, 898, SC 909, and 912).

^e Project re-scoped, costs incurred for repackaging reported under SC 897R.

Attachment 1. Collection System SSO Events during the Calendar Quarter

Date	Location	Zip	Cause (Wet or Dry Weather)	Volume (gallons)
4/1/2019	Edmondson Ave & Upper Ellicott Dr	212168	Dry	9,000
4/3/2019	228 S Monastery Ave	21229	Dry	20
4/3/2019	1819 Appleton St	21217	Dry	10
4/3/2019	5211 Putney Way	21212	Dry	5
4/4/2019	3623 Milford Ave	21207	Dry	3
4/6/2019	3408 W Belvedere Ave	21215	Dry	15
4/6/2019	4417 Kathland Ave	21207	Dry	7
4/7/2019	503 E 23rd St	21218	Dry	35
4/8/2019	5618 Frankford Ave	21206	Dry	6
4/9/2019	1401 Constellation Plaza - Private	21230	Dry	425
4/9/2019	1822 N Payson St	21217	Dry	5
4/9/2019	801 Spedden St	21217	Dry	1
4/10/2019	101 Cotswold Rd	21210	Dry	82
4/10/2019	5621 Belair Rd	21206	Dry	3
4/11/2019	3330 Reisterstown Rd	21215	Dry	5
4/11/2019 / 5/28/2019	Greenspring Ave & DuPont Ave	21209	Dry	207
4/12/2019	1002 Darley Ave	21218	Dry	45
4/12/2019	5701 Chinquapin Pkwy	21239	Dry	10
4/13/2019	313 S Augusta Ave	21229	Dry	5
4/13/2019	1525 Edmondson Ave	21223	Wet	7

Date	Location	Zip	Cause (Wet or Dry Weather)	Volume (gallons)
4/15/2019	313 S Augusta Ave - Private	21229	Wet	1
4/15/2019	637 N Kenwood Ave	21205	Wet	4
4/16/2019	4029 N Rogers Ave	21207	Wet	3
4/18/2019	3507 Geiston Dr	21229	Wet	127,800
4/20/2019	2628 Huron St	21230	Wet	2,970
4/21/2019	508 S Streeper St	21224	Wet	6
4/21/2019	3714 Elkader Rd	21218	Wet	10
4/22/2019	1905 Cedric Rd	21216	Wet	25
4/23/2019	1703 S Clinton St	21224	Dry	5
4/27/2019	2435 Harriet Ave	21230	Wet	10
4/27/2019	5802 Eastern Ave	21224	Wet	8
4/27/2019	1101 E Fort Ave	21230	Wet	9
4/28/2019	3025 Westfield Ave	21214	Wet	10
4/29/2019	6200 Shipview Way - Private	21224	Wet	25
4/30/2019	1512 Aisquith St	21202	Dry	15
5/3/2019	623 N Grantley St	21229	Dry	2
5/3/2019	607 S Beechfield Ave	21229	Dry	5
5/3/2019	1822 N Payson St	21217	Dry	140
5/6/2019	4500 O'Donnell St	21224	Wet	4,460
5/6/2019	800 S Caton Ave	21229	Wet	10
5/7/2019	4200 Falls Rd	21210	Wet	120

Date	Location	Zip	Cause (Wet or Dry Weather)	Volume (gallons)
5/9/2019	2600 Oswego Ave	21215	Dry	1,838
5/9/2019	2501 Shirley Ave	21215	Dry	7,349
5/10/2019	3900 Bel Air Rd	21206	Wet	867,000
5/12/2019	1900 Falls Rd	21120	Wet	11,000
5/12/2019	1800 E Eager St	21205	Wet	1,450
5/12/2019	1731 E Chase St	21205	Wet	30,600
5/12/2019	Wilkins Ave & Brunswick St	21223	Wet	6,490,000
5/17/2019	1016 N Central Ave	21202	Dry	10
5/18/2019	5802 Eastern Ave	21224	Dry	7
5/19/2019	522 W Preston St	21201	Wet	1,230
5/20/2019	1313 Southview Rd	21218	Wet	1,800
5/20/2019	Cylburn Ave & Greenspring Ave	21215	Wet	3,750
5/22/2019	935 Montpelier St	21218	Dry	3
5/24/2019	5518 Fernpark Ave	21207	Wet	5
5/25/2019	1147 Monroe Cir	21225	Wet	3
5/27/2019	4908 Chalgrove Ave	21215	Dry	10
5/29/2019	1248 N Gay St	21213	Wet	570
5/30/2019	2208 Fleet St	21231	Dry	2
5/31/2019	4823 Keswick Rd	21210	Wet	970
6/3/2019	1215 Cooksie St	21230	Dry	5
6/4/2019	W Northern Pkwy & Cylburn Ave	21209	Dry	11,144

Date	Location	Zip	Cause (Wet or Dry Weather)	Volume (gallons)
6/4/2019	3700 Gough St	21224	Dry	7
6/7/2019	131 W Lanvale St	21217	Dry	1
6/9/2019	3016 Parkside Dr	21214	Dry	3
6/12/2019	2432 Fait Ave	21224	Wet	20
6/15/2019	1631 Gwynns Falls Pkwy	21216	Wet	3
6/19/2019	1439 Haubert St	21230	Wet	4
6/21/2019	1248 N Gay St	21213	Wet	5
6/24/2019	2513 Edmondson Ave	21223	Dry	3
6/24/2019	2611 Manhattan Ave	21215	Dry	4
6/26/2019	E Cold Spring Ln & York Rd	21212	Wet	625
6/27/2019	2021 S Clinton St	21224	Wet	190
6/28/2019	2217 Cross Country Blvd	21209	Wet	3
6/28/2019	3500 Beech Ave	21211	Wet	6
6/29/2019	3902 Maine Ave	21207	Dry	4
6/28/2019	1905 E 31st St	21218	Wet	5
6/30/2019	2000 Mount Royal Ter	21211	Dry	20
Total				7,574,732

Per sub-paragraph 21.f of the MCD, the five-day reports required under sub-paragraph 17.a are submitted to EPA and MDE as an electronic attachment, via compact disk.

Attachment 2. SSO Structure Overflows during the Calendar Quarter

Date	Location	Zip	Cause (Wet or Dry Weather)	Volume (gallons)
5/10/2019	428 E Preston St - SSO Site #72	21202	Wet	11,636,000
5/10/2019	Queensbury Ave & W Garrison Ave - SSO Site #139	21215	Wet	2,000
5/10/2019	N Charles St & W Lanvale St - SSO Site #152	21202	Wet	12,000
5/10/2019	1901 Falls Rd - SSO Site #67	21211	Wet	1,845,000
Total				13,495,000

Attachment 5. Sanitary Discharges of Unknown Origin

SDUO#	Date Occurrence Recorded	Location	Zip Code	Date of 5-day Report ²	Water Body Affected	Source Investigation Measures	Planned Future Work	Resolution ² Date	Duration (days)	Estimated Volume ³ (gallons)
18JF02	4/6/2018	3316 Bancroft Rd	21215	4/18/2018	Jones Falls	Sewage leaking into the storm drain from adjacent storm drain pipe. Water infiltration, CCTV confirmed multiple infiltration. Grout and lining is completed on 9/4. Followup on 9/5/18 to verify abatement, CCTV of storm pipe show additional sewage discharge into the storm drain. Tracked upstream manholes no visible leaks was found. Investigation continued, the upstream section of the sewer pipe leaks in small amount, dye deployed in upstream manhole was verified in the storm drain. Lining request sent to OAM. Lining completed on 1/17/19, dye test confirm SSO is abated. Upstream pipes are leaking, faint dye present in the downstream storm pipe. New SSO was created. Lining request sent to OAM. Working with OAM.	CIPP installation by contractor. Investigation will continue to locate the source of the sewage. Follow up to abate. Still working with OAM to line and stop the infiltration.	Not Resolved	on-going	467,743
18GF05	12/11/2018	813 Spedden St	21216		Gwynns Falls	The bathroom within a trailer/office at 813 Spedden St (Auto Barn) produced a positive dye test into the storm drain. Direct connection to the storm at the manhole. CCTV request sent to UMD to inspect the line. Letter of concern sent to the property owner. CCTV shows a blockage. On 2/13/2019 case sent to legal department (Paul). City utility map showing where the illicit connection is, and list of city certified/bonded plumbers sent to the owner. Letter of correction sent to property owner. OAM is planning to remove the blockage. OAM is planning to a point repair to remove the blockage and give a stub to the 813 spedden. 4/17 Owner notified to negotiate the cost with sub-contractor to connect his lateral to the stub.	Review the CCTV video and continue the investigation. OAM is planning to dig at the last house connection where the blockage is and remove the blockage and give a stub to 813 Spedden. At the same day contractor will cap the illegal connection. Will work with OAM and property owner to do the repair work	Not Resolved	on-going	29,289
19GF02	3/13/2019	3000 Presbury St	21216		Gwynns Falls	Dye test and CCTV shows lateral connects to the storm drain. Transmittal with utility map and old drawing/plot from on base sent to OAM. Met with OAM. Transmittal with pipe connections marked on the ground showing where the connection is sent to OAM. SDUO is abated.	Follow up with OAM SDUO is abated	6/20/2019	99	7,841
19GF03	3/13/2019	1705 N Longwood St	21216		Gwynns Falls	Dye test and CCTV shows lateral connects to the storm drain. Transmittal with utility map and old drawing/plot from on base sent to OAM. Met with OAM. Transmittal with pipe connections marked on the ground showing where the connection is sent to OAM. SDUO is abated.	Follow up with OAM SDUO is abated	6/20/2019	99	38,206

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19JF01	3/28/2019	4 Elmwood Rd	21210		Jones Falls	<i>Dye was deployed from inside 4 Elmwood and it showed in storm pipe. Sanitary CCTV does not show any house connection for 4 Elmwood. On 4/22 push camera of lateral line and truck camera (CCTV) of the main storm pipe confirmed that the house is connected to the storm pipe. Letter of correction, old plan of the sewer and storm and map of utility view are sent to the property owner. Property owner hire a plumber and trying to get a permit from city, plumber said couldn't get a permit because of the computer system down.</i>	<i>Further investigation is needed. To continue communicating with the property owner to get it fix.</i>	Not Resolved	on-going	27,497
19JF02	4/4/2019	211 Longwood Rd	21210		Jones Falls	CCTV of storm pipe and sanitary shows the storm pipe collapse in the sanitary pipe behind 215 Longwood. Met with OAM on site. OAM did open cut and inspect the sewer pipes. On 5/2 The contractor opened the pipe by hand digging. CCTV of sewer line shows the pipe is in bad shape (roots and crack) home owners notified the city to cut the tree down before any repair work. On 06/28 on site meeting OAM, OCAL and the contractor planning to clean, pipe bursting and install a new manhole.	Follow up with OAM	Not Resolved	on-going	16,347
19GF04	4/9/2019	1701 N Longwood St	21216		Gwynns Falls	Dye test and CCTV shows lateral connects to the storm drain. Transmittal was sent to OAM. Transmittal sent to OAM. SDUO is abated	SDUO is abated	6/20/2019	72	207
19JF03	4/11/2019	Green spring Ave & Dupont Ave	21215	4/11/2019	Jones Falls	Dye test of lowest cleanout from Sinai Ridge Apts. was positive in the storm drain. During the dye test some defects were identified with the push camera. On 4/11/2019 a repeat dye test was performed and determined the leak to be at or outside of the property line. SSO report was created and UMD performed point repair from the property line to the sidewalk. Dye test confirmed abatement.	SDUO is abated	5/29/2019	48	207
19BR01	4/26/2019	4505 Lasalle Ave	21206		Back River	On 4/26/19 a dye test from 4505 Lasalle Ave kitchen sink confirmed that the connection to the storm drain was active connection for the house. Also, push camera was inserted into the cleanout on the property line and it reached the storm drain. 5/7/19 Lateral lunch of the lateral connection for this house did show where the end is. Prime plumbing did the repair and dye tested confirm that SDUO is abated	SDUO is abated	6/18/2019	53	4,075

¹ Grey/italicized text in the table represents information from the previous Calendar Quarterly Report, updates for this Calendar Quarter are provided in black text.

² For sites that have not yet been resolved, "Estimated Volume (Gal)" is readjusted each quarter to reflect the elapse of time and any recent field information (flow, NH3, TKN) that may have been collected for a given site.

³ For all active sites, the City ultimately, plans on calculating flows using TKN - per guidelines of the approved protocol by EPA; flows calculated utilizing TKN or Ammonia concentrations

⁴ Volume is calculated based on the Sewer Discharges of Unknown Origin Quantification Protocol dated November 12, 2010, and submitted by the City to the U.S. Environmental Protection Agency (EPA) on November 18, 2010.