

Clean Water 2020 Program

CONSENT DECREE QUARTERLY REPORT

April 1, 2023 – June 30, 2023



Table of Contents

Section 1	Introduction	3
1.1	Summary of Reporting Requirements	3
1.2	Report Organization.....	3
Section 2	Schedule of Projects and Activities	5
Section 3	Additional Information Demonstrating Implementation of Consent Decree Requirements ...	9
3.1	MOM Programs.....	9
3.1.1	Information Management System (IMS) Program.....	9
3.1.2	Sewer Mapping Program	9
3.2	Infrastructure Rehabilitation Report (IRR) for the WCTS.....	10
3.3	Sewer System Hydraulic Model	12
Section 4	Quarterly SSO Report.....	13
Appendix A	16
Final Report on Force Majeure Event	16

List of Tables

Table 1 – SSO Report, 2 nd Quarter 2023	13
Table 2 – Building Backup Report, 2 nd Quarter 2023	15

Section 1 Introduction

1.1 Summary of Reporting Requirements

On May 21, 2014, the City of Columbia (City) entered into a Consent Decree (CD) with the United States Environmental Protection Agency (EPA), the United States Department of Justice (DOJ) and the South Carolina Department of Health and Environmental Control (SCDHEC). To fulfill the reporting requirements as defined in Section IX.39.a of the CD, the City has prepared this *Quarterly Report* that includes the following information (as excerpted from the CD):

1. A description of all projects and activities conducted during the most recently completed calendar quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format. This description shall include completion percentages of early action capital improvement projects under Paragraph 10, continuing sewer assessments under the CSAP, and the subsequent remedial actions under the IR Report;
2. The date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise resolve the cause of all SSOs for the most recently completed quarter in a tabulated electronic format;
3. The anticipated projects and activities that will be performed in the next quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format;
4. Any additional information that demonstrates that Columbia is implementing the remedial measures required in this Consent Decree

1.2 Report Organization

This Quarterly Report is organized as follows:

Section 1 – Introduction

This section includes a summary of the reporting requirements and describes the report organization.

Section 2 – Schedule of Projects and Activities

This section addresses the requirements of Sections IX.39.a.(i) and IX.39.a.(iii) of the Consent Decree. The section includes the projects and activities conducted during the most recently completed calendar quarter to comply with the requirements of the CD as well as the anticipated projects and activities that will be performed in the next quarter to comply with the requirements of the CD. A Gantt chart schedule of these activities is provided and includes completion percentages of remedial actions under the IR Report, as applicable.

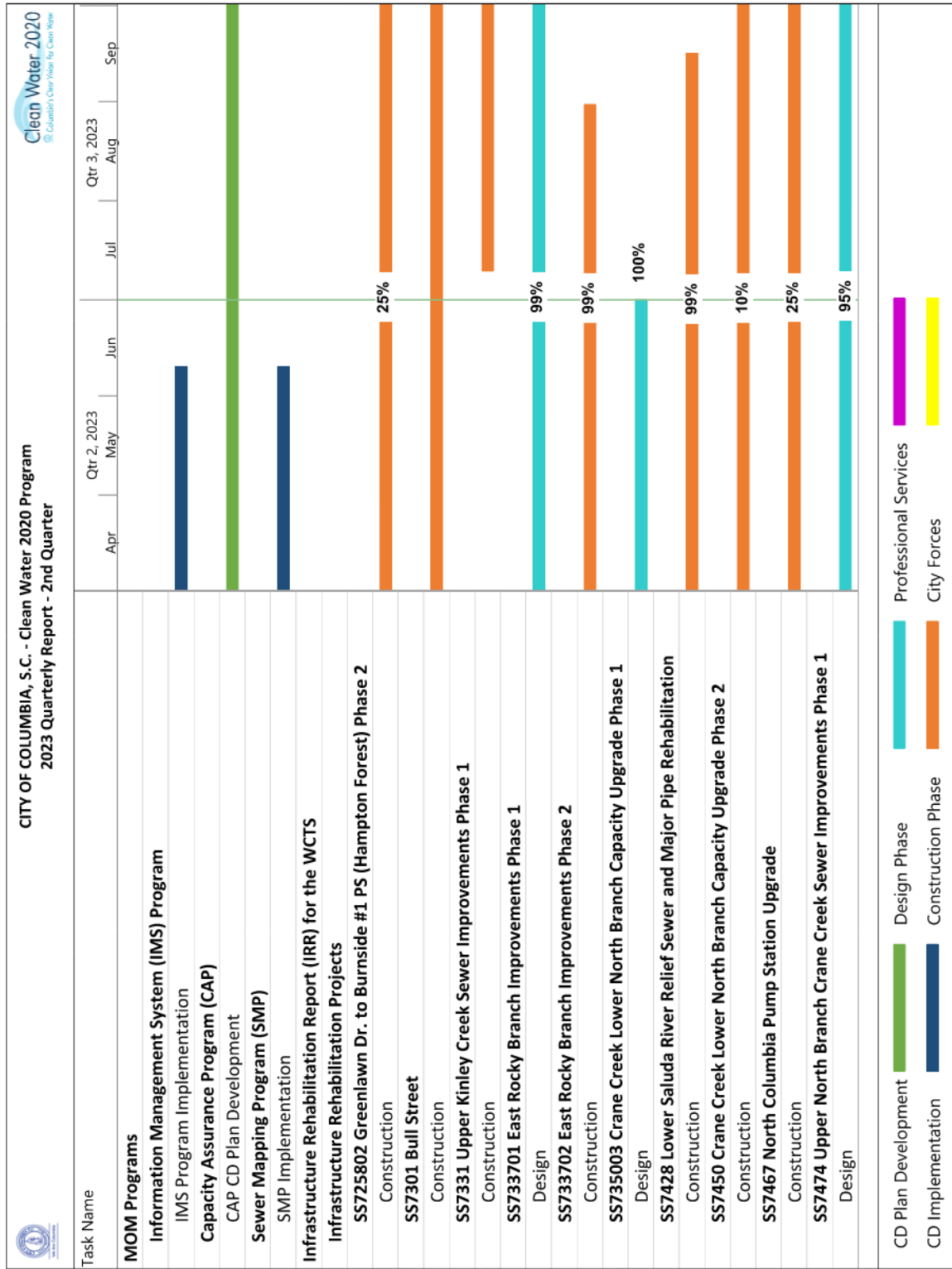
Section 3 – Additional Information Demonstrating Implementation of Consent Decree Requirements

This section addresses the requirements of Section IX.39.a.(iv) of the Consent Decree and includes additional information that demonstrates that Columbia is implementing the remedial measures required in the CD. Information supplemental to that which is provided in Section 2 is provided in this section.

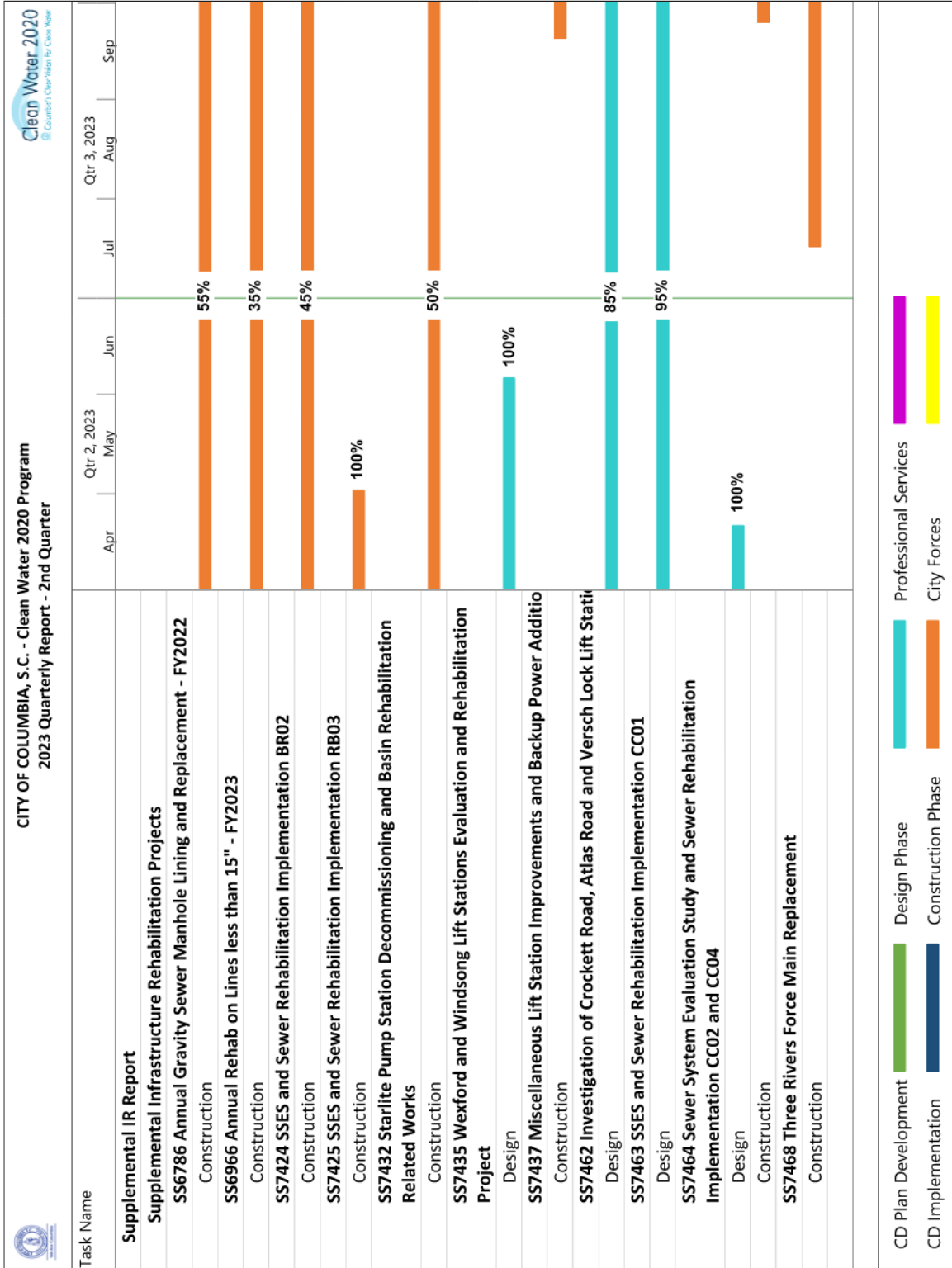
Section 4 – Quarterly SSO Report

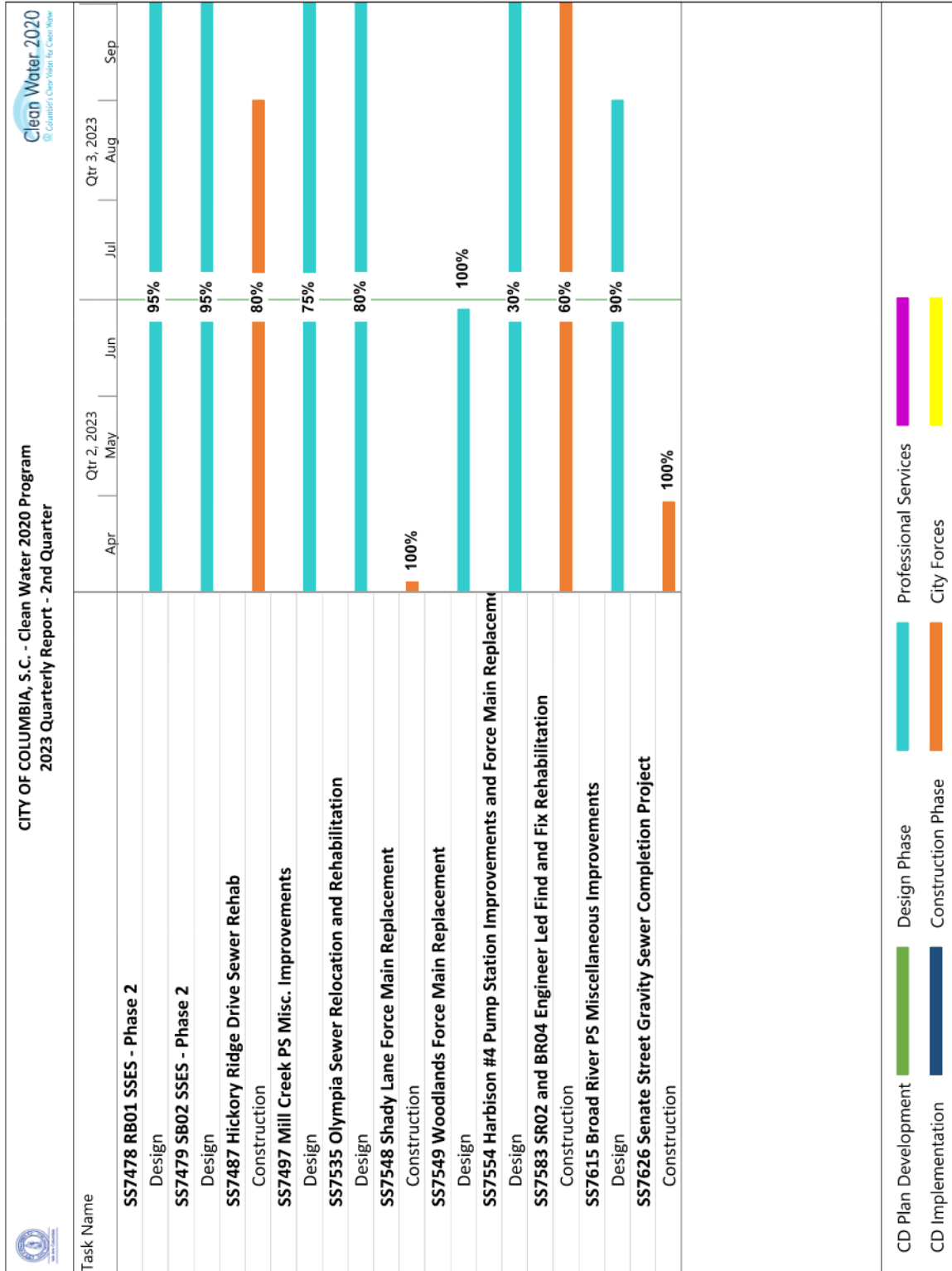
This section addresses the requirements of Section IX.39.a.(ii) of the Consent Decree and provides a tabular listing of sanitary sewer overflows (SSOs). The table includes the date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise resolve the cause of all SSOs that occurred during the most recently completed calendar quarter.

Section 2 Schedule of Projects and Activities









Section 3 Additional Information Demonstrating Implementation of Consent Decree Requirements

In accordance with Section IX.39.a.(iv) of the CD, the following section provides additional information that demonstrates that the City is implementing the remedial measures required in the CD.

The City notified the U.S. Department of Justice, the U.S. Environmental Protection Agency, and the South Carolina Department of Health and Environmental Control of a *force majeure* event starting on March 13, 2020. On this date, the Governor of South Carolina declared a state of emergency based on a determination that COVID-19 posed an imminent public health emergency for the State, and on March 17, 2020 the Mayor and City Council declared a local state of emergency in the City. On April 7, 2020, the City submitted a written *force majeure* notice and requested to provide additional information required under Paragraph 56 of the Consent Decree once the COVID-19 pandemic is contained and the City is better able to fully assess the impacts on its performance of its Consent Decree obligations. On February 5, 2021, the City submitted an interim report on the impacts of the *force majeure* event. On April 18, 2023, the City submitted the Final Report for the City's notice of a *force majeure* event due to COVID-19. The Final Report is provided in Appendix A.

3.1 MOM Programs

In accordance with Section V.12 of the CD, the City is developing and implementing specific Management, Operations, and Maintenance (MOM) programs. The Program elements addressed in this section provide information regarding activities involving the Metro WWTP as well as the City's Wastewater Collection and Transmission System (WCTS).

3.1.1 Information Management System (IMS) Program

The IMS Program was submitted to EPA and SCDHEC on January 4, 2016. The City received final approval of the IMS Program from EPA and SCDHEC on May 23, 2016.

The activities completed or in progress during the current reporting period are as follows:

- Sewer Mapping Program – 100% Complete

As of June 9, 2023, all activities under the IMS Program have been completed.

3.1.2 Sewer Mapping Program

In accordance with the requirements of the CD, the City was to develop and submit a Sewer Mapping Program (SMP) to EPA and SCDHEC within 60 days of the date of entry of the CD. The City received final approval of the SMP from EPA and SCDHEC on December 9, 2014.

Projects and significant activities completed during the current reporting period:

- The City completed the electronic mapping of each Sewer Basin in accordance with the approved SMP implementation plan. Progress for each WCTS Minor Gravity Mapping basin is as follows:
 - West Columbia Basin – 100% complete (Mapping complete as of June 9, 2020)
 - Smith Branch Basin – 100% complete (Mapping complete as of June 9, 2021)
 - Saluda River Basin – 100% complete (Mapping complete as of June 9, 2021)
 - Rocky Branch Basin – 100% complete (Mapping complete as of June 9, 2021)
 - Mill Creek Basin – 100% complete (Mapping complete as of June 9, 2023)
 - Gills Creek Basin – 100% complete (Mapping complete as of June 9, 2023)
 - Crane Creek Basin – 100% complete (Mapping complete as of June 9, 2023)
 - Broad River Basin – 100% complete (Mapping complete as of June 9, 2023)

As of June 9, 2023, all activities under the Sewer Mapping Program have been completed.

3.2 Infrastructure Rehabilitation Report (IRR) for the WCTS

In accordance with Section V.16 of the CD, the City shall submit an Infrastructure Rehabilitation Report (IRR) summarizing the results of the CSAP of the major components of the WCTS and a description of proposed rehabilitation projects. The IRR was submitted to EPA and SCDHEC on November 22, 2019. The City is awaiting EPA and SCDHEC review and approval of the IRR.

As rehabilitation projects are identified in the normal course of operations and maintenance, the City is proceeding with design and construction of those projects. Completion percentages of projects currently in progress are as follows:

- SS725802 Greenlawn Dr. to Burnside #1 PS (Hampton Forest) Phase 2 – Construction 25% Complete
- SS7301 Bull Street – Construction in Progress; a completion percentage cannot be provided due to a varying scope of work and timeline for this project.
- SS7331 Upper Kinley Creek Sewer Improvements Phase 1 – Construction 0% Complete
- SS733701 East Rocky Branch Improvements Phase 1 – Design 99% Complete
- SS733702 East Rocky Branch Improvements Phase 2 – Construction 99% Complete
- SS735003 Crane Creek Lower North Branch Capacity Upgrade Phase 1 – Design 100% Complete
- SS7428 Lower Saluda River Relief Sewer and Major Pipe Rehabilitation – Construction 99% Complete
- SS7450 Crane Creek Lower North Branch Capacity Upgrade Phase 2 – Construction 10% Complete
- SS7467 North Columbia Pump Station Upgrade – Construction 25% Complete
- SS7474 Upper North Branch Crane Creek Sewer Improvements Phase 1 – Design 95% Complete
- SS7502 Summerlea SS Flood Project – Construction 75% Complete
- SS753902 CIPP Major Pipe Rehabilitation – Design 95% Complete

- SS753903 Geopolymer Major Pipe Rehabilitation – Design 95% Complete
- SS753904 Pipe Bursting Major Pipe Rehabilitation – Design 95% Complete
- SS7555 Lower Crane Creek Relief Sewer Phase 2 – Design 30% Complete
- SS7560 Lower Crane Creek Equalization Storage – Design 95% Complete
- SS7562 Gills Creek Relief Sewer Phase 1 – Design 70% Complete
- SS7564 West Columbia Pump Station Improvements – Construction 20% Complete
- SS7565 Lower Kinley Creek Sewer Improvements – Design 98% Complete
- SS7568 Saluda River Force Main Extension Phase 1 – Design 100% Complete, Construction 0% Complete
- SS7568 Saluda River Force Main Extension Phase 2 – Design 30% Complete
- SS7589 Broad River Force Main Replacement and Gravity Sewer Capacity Improvements – Design 90% Complete

In accordance with Section V.16.c of the CD, the City shall submit a Supplemental Infrastructure Rehabilitation Report (SIRR) which shall update all portions of the IRR to reflect additional information developed by the City through completion of the CSAP of the minor components of the WCTS. The SIRR was submitted to EPA and SCDHEC on November 22, 2022. The City is awaiting EPA and SCHEC review and approval of the SIRR.

As rehabilitation projects are identified in the normal course of operations and maintenance, the City is proceeding with design and construction of those projects. Completion percentages of projects currently in progress are as follows:

- SS6786 Annual Gravity Sewer Manhole Lining and Replacement – FY2022 Construction 55% Complete
- SS6966 Annual Rehab on Lines less than 15” – FY2023 Construction 35% Complete
- SS7424 Sewer System Evaluation Study and Sewer Rehabilitation Implementation BR02 – Construction 45% Complete
- SS7425 SSES and Sewer Rehabilitation Implementation RB03 – Construction 100% Complete
- SS7432 Starlite PS Decommissioning and Basin Rehabilitation Related Works – Construction 50% Complete
- SS7435 Wexford and Windsong Lift Stations Evaluation and Rehabilitation Project – Design 100% Complete
- SS7437 Miscellaneous Lift Station Improvements and Backup Power Addition – Construction 0% Complete
- SS7462 Investigation of Crockett Road, Atlas Road and Versch Lock Lift Stations – Design 85% Complete
- SS7463 SSES and Sewer Rehabilitation Implementation CC01 – Design 95% Complete
- SS7464 Sewer System Evaluation Study and Sewer Rehabilitation Implementation CC02 and CC04 – Design 100% Complete, Construction 0% Complete
- SS7468 Three Rivers Force Main Replacement – Construction 0% Complete
- SS7478 Rocky Branch 01 SSES Phase 2 – Design 95% Complete

- SS7479 Smith Branch 02 SSES Phase 2 – Design 95% Complete
- SS7487 Hickory Ridge Drive Sewer Rehab – Construction 80% Complete
- SS7497 Mill Creek PS Miscellaneous Improvements – Design 75% Complete (Decrease in Design Completion % from Previous Reports due to Need to Redesign Portions of Project)
- SS7535 Olympia Sanitary Sewer Relocation and Rehabilitation – Design 80% Complete
- SS7548 Shady Lane Force Main Replacement – Construction 100% Complete
- SS7549 Woodlands Force Main Replacement – Design 100% Complete
- SS7554 Harbison #4 Pump Station Improvements and Force Main Replacement – Design 30% Complete
- SS7583 SR02 and BR04 Engineer Led Find and Fix Rehabilitation – Construction 60% Complete
- SS7615 Broad River PS Miscellaneous Improvements – Design 90% Complete
- SS7626 Senate Street Gravity Sewer Completion Project – Construction 100% Complete

3.3 Sewer System Hydraulic Model

The Hydraulic Model Report was submitted to EPA and SCDHEC on August 21, 2020. The City is awaiting EPA and SCDHEC review and approval of the Hydraulic Model Report.

Section 4 Quarterly SSO Report

In accordance with Section IX.39.a.(ii) of the CD, the City is to provide a list of all SSOs that occurred during the reporting period in a tabular format along with information on the date, time, location, source, duration, estimated volume, receiving water, cause, and actions taken to resolve the SSO.

Table 1 – SSO Report, 2nd Quarter 2023

City of Columbia, SC Quarterly SSO Listing 2nd Quarter 2023									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
4/2/2023	17:00	410 Finwood Ct, Columbia, SC 29212	Manhole	4/12/23	12:00	128	Storm Drain	Roots	Removed Blockage To Resume Normal Flow. Sealed Areas In Manhole Where Roots Were Coming In.
4/4/2023	16:44	3016 Two Notch Rd, Columbia, SC 29204	Manhole	4/5/2023	19:00	152	Storm Drain	3rd Party Responsibility	Vacuumed Out Manhole. Main Line Repair.
4/3/2023	15:13	1000 S Holly St, Columbia, SC 29205	Cleanout	4/6/2023	10:00	90		Roots	Removed Blockage To Resume Normal Flow. Main Line Root Cut.
4/6/2023	12:00	10 Crown Point Ct, Irmo, SC 29063	Cleanout	TBD		20		Debris	Removed Blockage To Resume Normal Flow. Service Lateral Top Hat Liner To Be Done.
4/8/2023	19:30	200 Candi Ln, Columbia, SC 29210	Manhole	OBSERVATION ONLY		1803	Saluda River	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently In Design.
4/9/2023	04:00	1200 Simmon Tree Ln, Columbia, SC 29201	Other	4/9/2023	07:30	113146	Storm Drain	Treatment Plant	Switched Screens To Manual And Reset The Operator Interface Terminal.
4/9/2023	11:55	1200 Simmon Tree Ln, Columbia, SC 29201	Manhole	4/9/2023	17:50	3435100	Various Waterbodies	Treatment Plant	Restored Three Phase Power To Influent Pump Station Via Electrical Contractor.
4/10/2023	14:00	770 Delverton Rd, Columbia, SC 29203	Cleanout	4/27/23	12:00	16	Storm Drain	Roots	Washed Service Line To Resume Normal Flow. Service Lateral CIPP.
4/10/2023	15:50	2800 N Beltline Blvd, Columbia, SC 29204	Cleanout	TBD		28		Roots	Removed Blockage To Resume Normal Flow. Service Lateral Top Hat Liner To Be Done.
4/10/2023	17:30	2639 Midland Dr, Columbia, SC 29204	Line Segment	5/6/23	12:14	187	Storm Drain	Grease	Removed Blockage To Resume Normal Flow. Main Line Wash And Tap Repair.
4/12/2023	19:46	344 Emory Ln, Columbia, SC 29212	Manhole	4/12/2023	20:06	2405	Storm Drain	Equipment Failure	Replaced Bypass Pump.
4/15/2023	12:30	212 Ts Martin Dr, Columbia, SC 29204	Manhole	4/17/2023	12:00	1650	Storm Ditch	Collapsed Line	Removed Blockage To Resume Normal Flow. Main Line Washed.
4/17/2023	14:29	906 Bailey St, Columbia, SC 29203	Manhole	4/18/2023	09:30	725	Retention Pond	Collapsed Line	Removed Blockage To Resume Normal Flow. Main Line Washed.
4/17/2023	16:55	2330 Legrand Rd, Columbia, SC 29223	Cleanout, Manhole	4/20/2023	09:00	224	Storm Drain	Debris	Washed Main Line To Resume Normal Flow.
4/18/2023	13:30	1601 Assembly St, Columbia, SC 29201	Manhole	TBD		5	Storm Drain	Collapsed Line	Washed Main Line To Resume Normal Flow. Main Line Rehab And Manhole Rehab To Be Done By Contractor.
4/18/2023	13:18	1810 Allen Benedict Ct, Columbia, SC 29204	Manhole	4/18/2023	15:00	3000		Debris	Washed Main Line To Resume Normal Flow. Manhole Replace Casting And Lids To Prevent Debris Entering In From Manholes.
4/18/2023	10:37	3839 Gibson St, Columbia, SC 29203	Line Segment	TBD		7603	Storm Water Ditch	Roots	Removed Blockage To Resume Normal Flow. Main Line CIPP Point Repair To Be Done.
4/23/2023	12:16	2717 Wheat St, Columbia, SC 29205	Cleanout	6/5/23	12:00	3		Roots	Washed Service Line With Terminator To Cut Out Roots. Service Lateral CIPP.
4/24/2023	10:35	1541 Kathleen Dr, Columbia, SC 29210	Cleanout	5/6/23	12:00	17		Roots	Washed Service Line To Remove Blockage. Replaced MH Cast/Lid And Service Lateral Top Hat Liner.
4/24/2023	15:50	3041 Sigmund Cir, Columbia, SC 29204	Manhole	4/28/2023	08:00	500	Creek	Debris	Washed Main Line To Resume Normal Flow.
4/27/2023	10:37	3045 Sigmund Cir, Columbia, SC 29204	Manhole	4/27/2023	11:14	2510	Trib To Eightmile Branch	Debris	Washed Main Line To Resume Normal Flow.
4/28/2023	12:23	5006 Brickyard Rd, Columbia, SC 29203	Manhole	TBD		160	Trib To Crane Creek	Roots	Removed Blockage To Resume Normal Flow. Main Line Root Cut And Main Line CIPP Point Repair To Be Done.
5/1/2023	16:40	2751 The Blvd, Columbia, SC 29209	Manhole	5/17/23	14:00	187	Storm Drain	Debris	Washed Main Line To Resume Normal Flow. Main Line Repair.

City of Columbia, SC Quarterly SSO Listing 2nd Quarter 2023									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (If any)	Cause	Actions Taken
5/8/2023	13:57	401 Byron Rd, Columbia, SC 29209	Cleanout	5/9/23	12:00	22		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Lateral Point Repair.
5/10/2023	16:30	696 Amberley Rd, Columbia, SC 29203	Manhole	5/11/2023	09:30	63		Debris	Removed Blockage To Resume Normal Flow. Main Line Washed.
5/11/2023	16:00	1411 Mcarthur Ave, Columbia, SC 29204	Cleanout	5/24/23	11:54	1		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Lateral Point Repair.
5/16/2023	08:51	1351 Jim Hamilton Blvd, Columbia, SC 29205	Manhole	5/16/2023	09:11	200		Debris	Removed Blockage To Resume Normal Flow. Manhole Cleaned.
5/17/2023	16:00	3422 Elmhurst Rd, Columbia, SC 29203	Cleanout	6/7/23	12:00	15		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Lateral Point Repair.
5/23/2023	11:48	4312 Ridgewood Ave, Columbia, SC 29203	Cleanout	TBD		21		Roots	Removed Blockage To Resume Normal Flow. Service Lateral CIPP To Be Done.
5/25/2023	08:59	105 New Holland Dr, Columbia, SC 29203	Manhole	TBD		495	Storm Drain	Roots	Removed Blockage To Resume Normal Flow. Main Line Rehabilitation - Lining To Be Done By Contractor.
5/26/2023	17:50	129 Woodvale Cir, Columbia, SC 29203	Cleanout	6/16/23	12:00	44	Storm Drain	Roots	Removed Blockage To Resume Normal Flow. Service Lateral Point Repair.
5/29/2023	08:00	1200 Simmon Tree Ln, Columbia, SC 29201	Other	5/29/2023	08:00	3		Treatment Plant	Bypass Hose To DAF2 Was Pushed Down Further Into The Wet Well And Covered.
5/29/2023	15:12	425 Sulgrave Dr, Columbia, SC 29210	Cleanout	6/9/23	17:00	20		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Lateral Replaced.
5/31/2023	14:19	2511 Center St, Columbia, SC 29204	Cleanout	6/1/2023	13:00	5		Debris	Washed Service Line To Resume Normal Flow. Emergency Service Line Repair.
6/3/2023	10:20	405 Harbison Blvd, Columbia, SC 29212	Manhole	6/5/2023	08:00	1774	Trib To Kinley Creek	Grease	Washed Main Line To Resume Normal Flow. Washed Main Line Multiple Times To Remove Grease.
6/5/2023	11:00	3617 Gill St, Columbia, SC 29205	Cleanout	6/5/2023	11:00	10		Debris	Washed Main Line To Resume Normal Flow. Washed Main Line, Removed Bricks From Main Line.
6/14/2023	11:52	144 Harbison Blvd, Columbia, SC 29212	Manhole	6/14/2023	11:52	375		Debris	Washed Main Line To Resume Normal Flow. Washed Main Line, Removed Bricks And Debris.
6/15/2023	10:55	1000 Garden Valley Ln, Columbia, SC 29210	Manhole	6/15/2023	10:55	15		Force Main	Vacuumed Out Manhole. ARV Repair.
6/21/2023	20:20	113 Finsbury Ct, Columbia, SC 29212	Manhole	OBSERVATION ONLY		248	Koon Branch	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Construction Phase.
6/22/2023	16:30	1504 Murraywood Ct, Columbia, SC 29212	Manhole	6/26/2023	08:00	1491	Koon Branch	Debris	Washed Main Line To Resume Normal Flow. Washed Main Line And Removed Debris.
6/24/2023	14:06	1504 Murraywood Ct, Columbia, SC 29212	Manhole	6/26/2023	08:00	6144	Koon Branch	Debris	Washed Main Line To Resume Normal Flow. Washed Main Line And Removed Debris.
6/28/2023	15:30	3150 Harden St Ext, Columbia, SC 29203	Manhole	6/29/2023	12:00	637	Storm Drain	Debris	Removed Blockage To Resume Normal Flow. Manhole Cleaned To Remove Debris.

As noted in Section IV.8.a of the CD, a Building Backup is defined as a release of wastewater into a building or onto private property that is caused by blockages, flow conditions, or other malfunctions in the WCTS.

Separate from the SSO listing provided in Table 1 above, the following table identifies building backups within the City’s system for the current reporting period.

Table 2 – Building Backup Report, 2nd Quarter 2023

City of Columbia, SC Quarterly Building Backup Listing 2nd Quarter 2023									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
5/12/2023	22:30	3718 Tomaka Rd, Columbia, SC 29205	City	TBD		1		Roots	No Access, Observation Only. Service Lateral CIPP To Be Done.
5/30/2023	14:10	10 Townpark Cir, Columbia, SC 29201	City	5/30/2023	16:30	263		Debris	Removed Blockage To Resume Normal Flow. Service Line Washed.
6/1/2023	15:30	2422 Stark St, Columbia, SC 29205	Other	6/2/2023	08:00	1		Collapsed Line	Washed Service Line 60 Ft Into Main Line. Given To Contractor For Emergency Main Line Repair.

Appendix A

Final Report on Force Majeure Event