

# Clean Water 2020 Program

## CONSENT DECREE QUARTERLY REPORT

April 1, 2022 – June 30, 2022



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## 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 continuing sewer assessments under the CSAP and the subsequent 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.

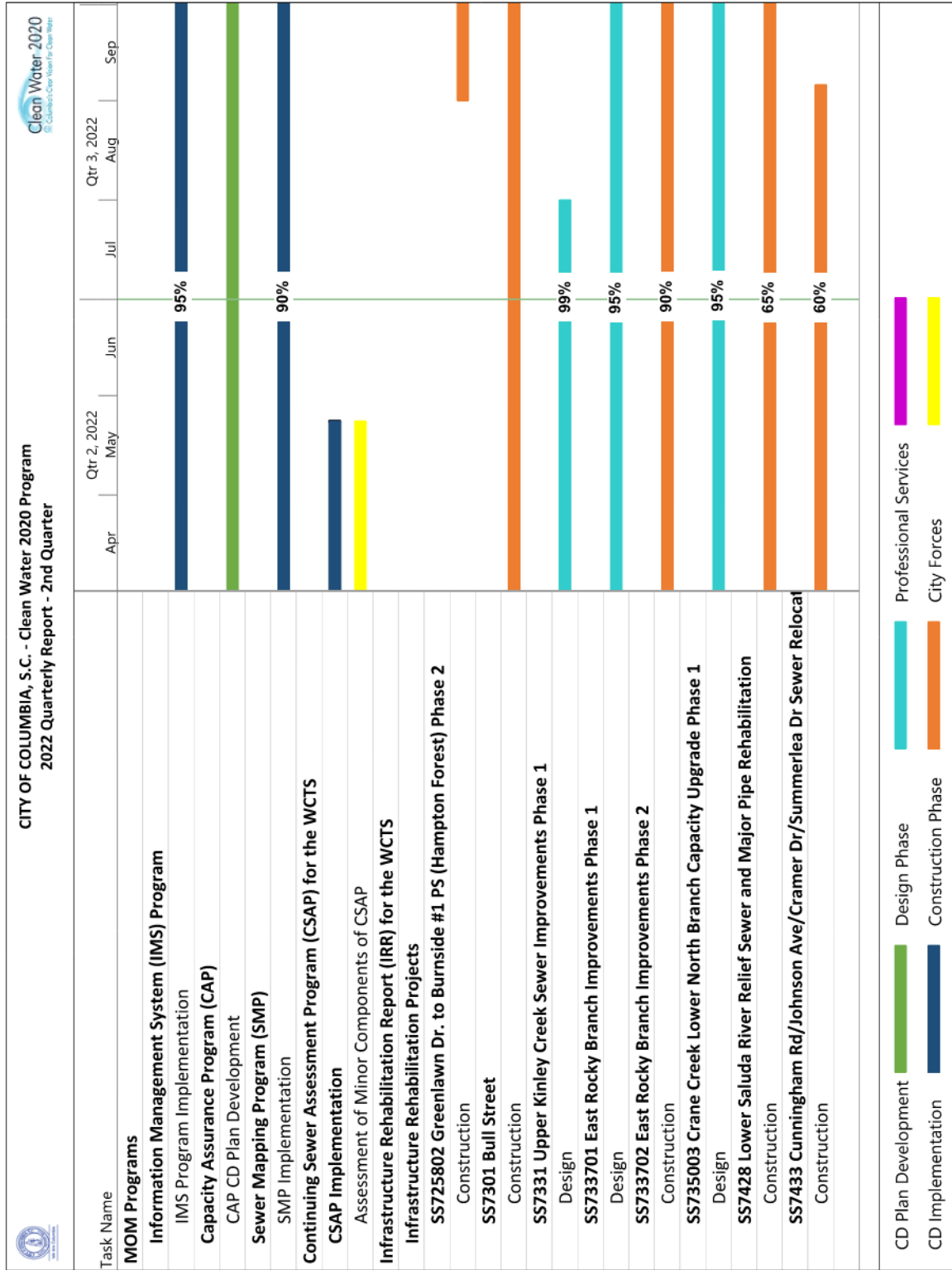
**Section 4 – Quarterly SSO Report**

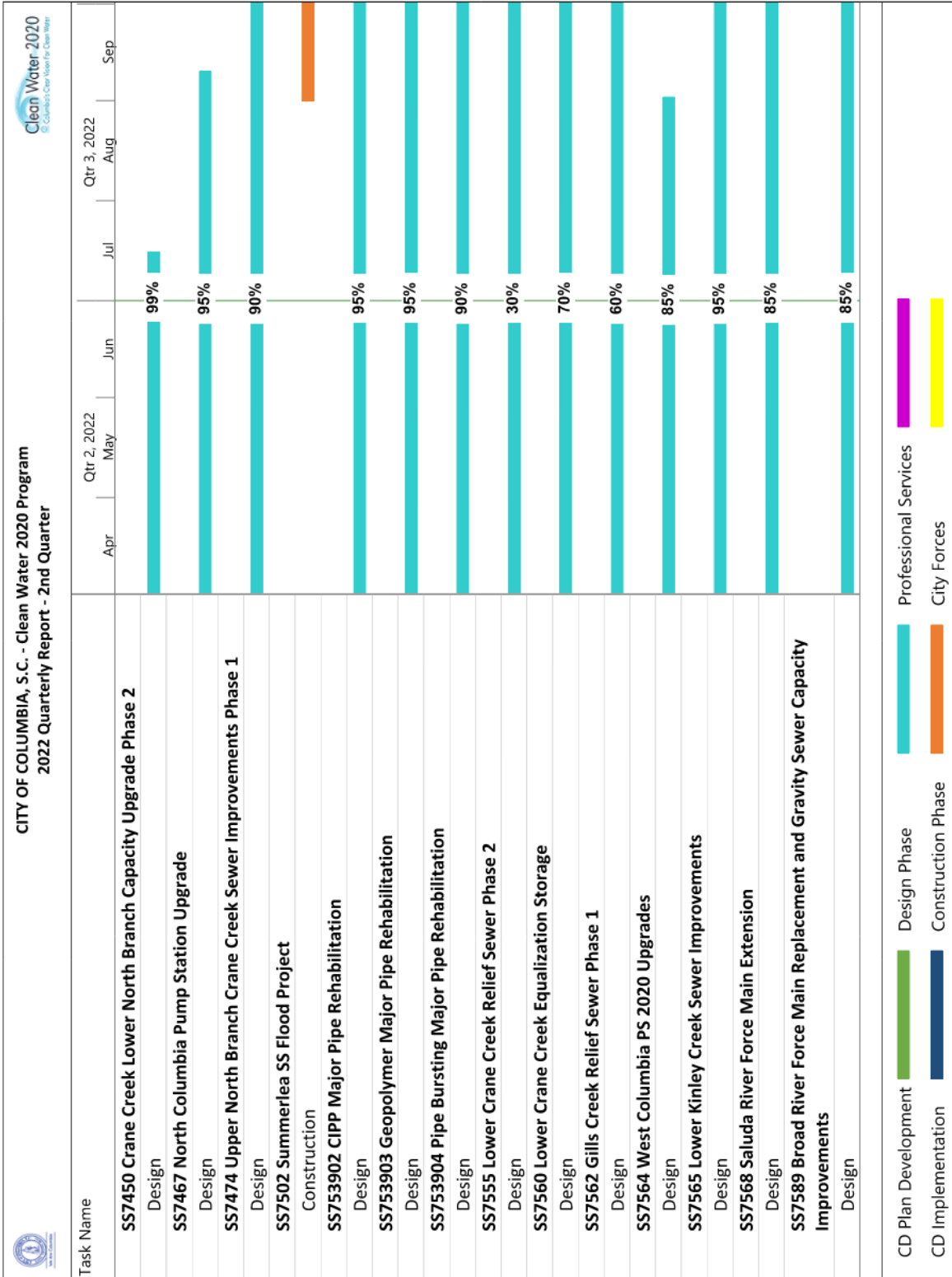
This section addresses the requirements of Section IX.39.a.(ii) of the Consent Decree and provides a tabular listing of sanitary sewer overflows (SSOs). The table includes the date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise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

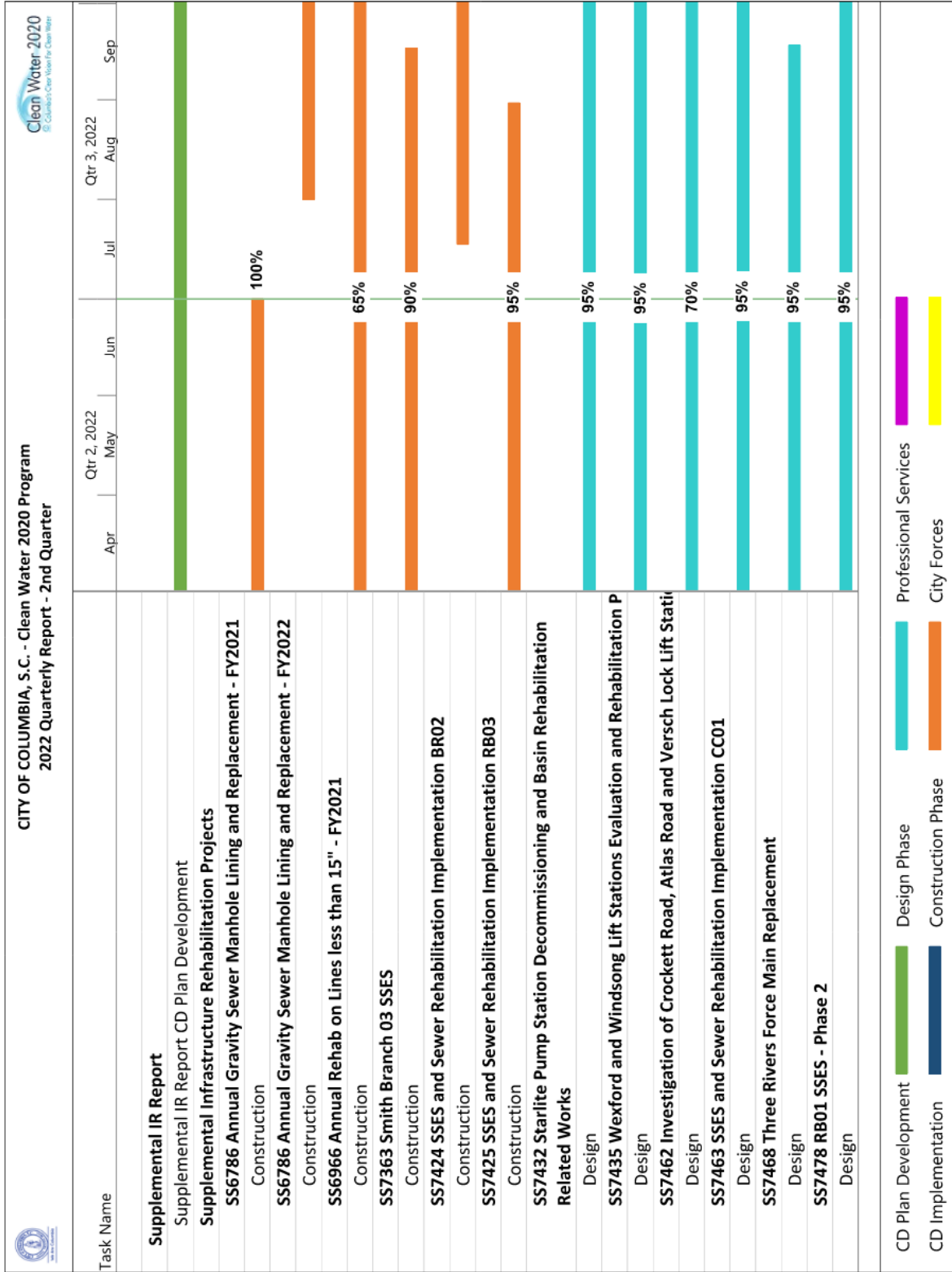
**Section 5 – SEP Water Quality Monitoring Results**

This section addresses the requirements of Section IX.39.a.(v) of the Consent Decree and provides the results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I of the CD. Water quality monitoring was completed on January 05, 2022, fulfilling the City's obligations under the SEP.

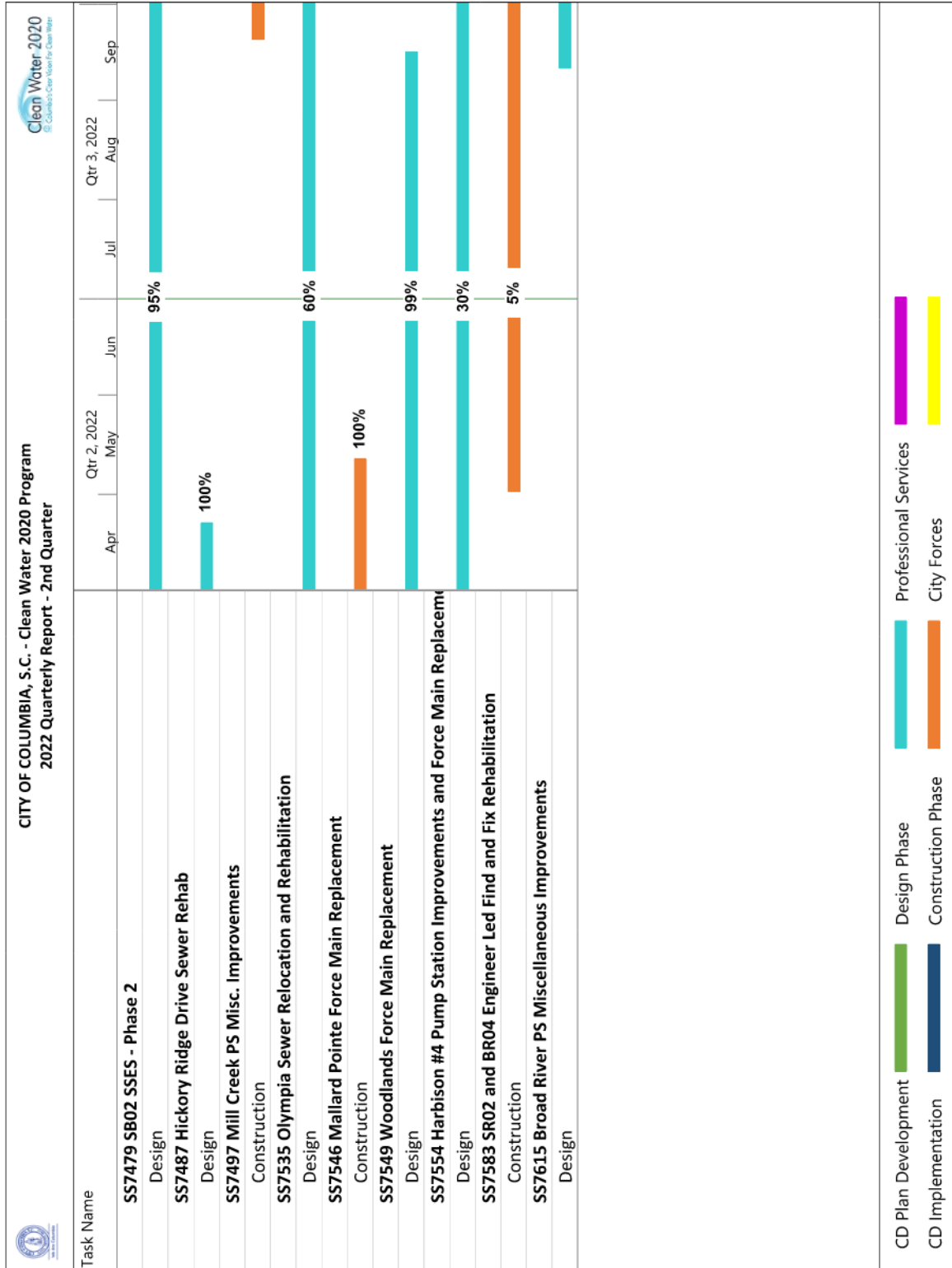
## Section 2 Schedule of Projects and Activities











## 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.

### 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 – 90% Complete

#### 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 continues to complete 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 – 28% complete
  - Gills Creek Basin – 90% complete
  - Crane Creek Basin – 91% complete
  - Broad River Basin – 58% complete

## 3.2 Continuing Sewer Assessment Program (CSAP) for the WCTS

The CSAP was submitted to EPA and SCDHEC on June 9, 2015. The City received final approval of the CSAP from EPA and SCDHEC on May 23, 2016. The CSAP was revised and resubmitted to EPA and SCDHEC on October 3, 2018. The City received approval of the revised CSAP from EPA and SCDHEC on February 6, 2019.

The activities under the Minor Components of the CSAP completed or in progress during the current reporting period are as follows:

- Minor Gravity Sewer and Manholes Condition Assessment – 100% Complete
- Minor Pump Stations Condition Assessment – 100% Complete
- Minor Force Mains Field Assessment – 100% Complete

As of May 23, 2022, all activities under the Minor Components of the CSAP have been completed.

## 3.3 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 through the assessments described in Section 3.2 and 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 0% 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 – Design 99% Complete
- SS733701 East Rocky Branch Improvements Phase 1 – Design 95% Complete
- SS733702 East Rocky Branch Improvements Phase 2 – Construction 90% Complete
- SS735003 Crane Creek Lower North Branch Capacity Upgrade Phase 1 – Design 95% Complete
- SS7428 Lower Saluda River Relief Sewer and Major Pipe Rehabilitation – Construction 65% Complete
- SS7433 Cunningham Rd/Johnson Ave/Cramer Dr/Summerlea Dr Sewer Relocation – Construction 60% Complete
- SS7450 Crane Creek Lower North Branch Capacity Upgrade Phase 2 – Design 99% Complete
- SS7467 North Columbia Pump Station Upgrade – Design 95% Complete

- SS7474 Upper North Branch Crane Creek Sewer Improvements Phase 1 – Design 90% Complete
- SS7502 Summerlea SS Flood Project – Construction 0% Complete
- SS753902 CIPP Major Pipe Rehabilitation – Design 95% Complete
- SS753903 Geopolymer Major Pipe Rehabilitation – Design 95% Complete
- SS753904 Pipe Bursting Major Pipe Rehabilitation – Design 90% Complete
- SS7555 Lower Crane Creek Relief Sewer Phase 2 – Design 30% Complete
- SS7560 Lower Crane Creek Equalization Storage – Design 70% Complete
- SS7562 Gills Creek Relief Sewer Phase 1 – Design 60% Complete
- SS7564 West Columbia Pump Station Improvements – Design 85% Complete
- SS7565 Lower Kinley Creek Sewer Improvements – Design 95% Complete
- SS7568 Saluda River Force Main Extension – Design 85% Complete
- SS7589 Broad River Force Main Replacement and Gravity Sewer Capacity Improvements – Design 85% 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 is to be submitted within six months after the City has assessed the remainder of the entire WCTS pursuant to the CSAP. As rehabilitation projects are identified through the assessments described in Section 3.2 and 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 – FY2021 Construction 100% Complete
- SS6786 Annual Gravity Sewer Manhole Lining and Replacement – FY2022 Construction 0% Complete
- SS6966 Annual Rehab on Lines less than 15” – FY2021 Construction 65% Complete
- SS7363 Smith Branch 03 SSES – Construction 90% Complete
- SS7424 Sewer System Evaluation Study and Sewer Rehabilitation Implementation BR02 – Construction 0% Complete
- SS7425 SSES and Sewer Rehabilitation Implementation RB03 – Construction 95% Complete
- SS7432 Starlite PS Decommissioning and Basin Rehabilitation Related Works – Design 95% Complete
- SS7435 Wexford and Windsong Lift Stations Evaluation and Rehabilitation Project – Design 95% Complete
- SS7462 Investigation of Crockett Road, Atlas Road and Versch Lock Lift Stations – Design 70% Complete
- SS7463 SSES and Sewer Rehabilitation Implementation CC01 – Design 95% Complete
- SS7468 Three Rivers Force Main Replacement – Design 95% 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 – Design 100% Complete
- SS7497 Mill Creek PS Miscellaneous Improvements – Construction 0% Complete
- SS7535 Olympia Sanitary Sewer Relocation and Rehabilitation – Design 60% Complete
- SS7546 Mallard Pointe Force Main Replacement – Construction 100% Complete
- SS7549 Woodlands Force Main Replacement – Design 99% 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 5% Complete
- SS7615 Broad River PS Miscellaneous Improvements – Design 0% Complete

### 3.4 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 2022

City of Columbia, SC Quarterly SSO Listing 2nd Quarter 2022									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
4/7/2022	11:00	212 Belgrave Dr, Blythewood, SC 29016	Cleanout	4/8/2022	13:12	180		Debris	Removed Blockage To Resume Normal Flow. Washed Service Line To Remove Debris.
4/8/2022	17:45	4335 Colonial Dr, Columbia, SC 29203	Manhole	4/13/2022	11:00	1881	Storm Drain	Debris	Removed Blockage To Resume Normal Flow. Washed Service Line To Remove Debris.
4/13/2022	15:39	719 Delverton Rd, Columbia, SC 29203	Manhole	4/18/2022	11:30	20409	Trib To Crane Creek	Debris	Removed Blockage To Resume Normal Flow. Washed Mainline To Remove Debris.
4/15/2022	09:50	7643 Burdell Dr, Columbia, SC 29209	Cleanout	TBD		350		Roots	Removed Blockage To Resume Normal Flow. Cut Roots. Tap Repair Needed, Waiting on Access to Backyard.
4/20/2022	20:30	2000 Rolling Hills Rd, Columbia, SC 29210	Cleanout	4/22/2022	13:46	2484		Grease	Main Line Wash To Remove Blockage To Resume Normal Flow. Increasing PM Washing From Yearly To 3 Months.
4/19/2022	10:50	110 Rusty Barn Rd, Columbia, SC 29212	Cleanout	5/5/2022	12:00	15		Roots	Removed Blockage To Resume Normal Flow. Service Line Repair.
4/21/2022	15:00	1010 Brandon Ave, Columbia, SC 29209	Cleanout	4/22/2022	01:00	47		3rd Party Responsibility	Tap Repair/Reinstate Tap.
4/22/2022	03:00	1200 Simmon Tree Ln, Columbia, SC 29201	Manhole	4/22/2022	03:00	117		Equipment Failure	Turned Back On Godwin Pump @ T1Daf Replaced Faulty Godwin Pump With A Different One.
4/24/2022	21:30	1200 Simmon Tree Ln, Columbia, SC 29201	Other	4/24/2022	22:00	1	Storm Drain	Equipment Failure	Discharge Hose Was Inserted Back Into Wet Well And Secured With Sandbags.
4/27/2022	11:10	1714 Nursery Hill Rd, Columbia, SC 29212	Manhole	4/27/2022	12:26	380	Storm Drain	Debris	Washed Main Line To Resume Normal Flow. Washed Main Line 50 Feet, Removed Blockage.
4/29/2022	12:08	227 Brookshire Dr, Columbia, SC 29210	Cleanout	5/2/2022	10:00	395	Trib To Kinley Creek	Debris	Washed Main Line To Resume Normal Flow. Cleaned Manhole To Remove Debris.
5/11/2022	09:46	2300 Mercer St, Columbia, SC 29204	Line Segment	5/11/2022	22:00	795	Storm Drain	Collapsed Line	Main Line Repair.
5/11/2022	20:10	2408 Cypress St, Columbia, SC 29205	Manhole	5/15/2022	08:00	824		Collapsed Line	Washed Main Line 5 Feet To Remove Blockage. Emergency Main Line And Manhole Repair.
5/13/2022	15:15	314 Longbow Ct, Columbia, SC 29212	Manhole	6/6/2022	12:00	5670	Kinley Creek	Roots	Removed Blockage To Resume Normal Flow. Main Line Repair.
5/19/2022	15:56	319 Linsbury Cir, Columbia, SC 29210	Cleanout	5/19/2022	18:00	2		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Line Repair.
5/21/2022	14:30	3144 Grace Hill Rd, Columbia, SC 29204	Manhole	OBSERVATION ONLY		2250	Orphanage Branch	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Design Phase.
5/21/2022	15:00	714 Santee Ave, Columbia, SC 29205	Manhole	OBSERVATION ONLY		900	Storm Drain	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Design Phase.
5/21/2022	15:30	1806 Blossom St, Columbia, SC 29201	Manhole	OBSERVATION ONLY		6900	Rocky Branch	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Design Phase.
5/21/2022	14:30	220 Sapling Dr, Columbia, SC 29210	Manhole	TBD		210	Stormwater Ditch	Roots	Removed Blockage To Resume Normal Flow. Main Line Replacement is Being Evaluated.
5/21/2022	17:12	1200 Simmon Tree Ln, Columbia, SC 29201	PTF	5/21/2022	17:12	4860	Storm Drain	Treatment Plant	Put All 3 Mechanical Screens Into Manual. Update Operating Procedures To Maintain 2 Screens In Auto At All Times For Redundancy.
5/23/2022	14:23	109 Wise Ct, Columbia, SC 29209	Cleanout	TBD		300		Collapsed Line	Removed Blockage To Resume Normal Flow. Main Line Repair is Being Evaluated.
6/6/2022	16:30	137 Aberdeen Ave, Columbia, SC 29203	Cleanout	6/8/2022	10:10	3		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Line Repair.

City of Columbia, SC Quarterly SSO Listing 2nd Quarter 2022									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
6/6/2022	11:20	4431 Bluff Rd, Columbia, SC 29209	Cleanout	6/6/2022	16:00	6		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Line Repair.
6/13/2022	13:48	232 Wood Moor Pl, Columbia, SC 29212	Manhole	TBD	TBD	415	Trib To Koon Branch	Roots	Removed Blockage To Resume Normal Flow. Main Line CIPP To Prevent Root Regrowth.
6/16/2022	19:23	1806 Blossom St, Columbia, SC 29201	Manhole	OBSERVATION ONLY		6998	Rocky Branch	Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Design Phase.
6/16/2022	10:50	4824 Dale Dr, Columbia, SC 29203	Other	7/5/2022	12:35	104		Roots	Removed Blockage To Resume Normal Flow. Washed Main Line To Remove Grease.
6/17/2022	18:36	1200 Simmon Tree Ln, Columbia, SC 29201	Manhole	6/17/2022	18:45	810	Storm Drain	Treatment Plant	Skimmer Was Returned To Normal Position, VFD Reset. Changed The High Wet Well Level Alarm In SCADA.
6/20/2022	0.7708	932 Old Oak Dr, Columbia, SC 29203	Manhole	6/28/2022	10:00	180		Debris	Removed Blockage To Resume Normal Flow. Washed Main Line To Remove Blockage From Trough.
6/21/2022	09:57	323 Regatta Rd, Columbia, SC 29212	Force Main	6/21/2022	20:00	600		Collapsed Line	Turned Lift Station Pumps Off. Repaired Force Main.
6/21/2022	22:23	1875 Bentley Dr, Columbia, SC 29210	Other	6/21/2022	23:00	37	Storm Drain	Equipment Failure	Put Down Oil Dry And Oil Pans Under Leaking Cam-Lock Fitting. Fully Engaged 2nd Lever On Cam-Lock Fitting.
6/21/2022	11:18	3011 Beechaven Rd, Columbia, SC 29204	Manhole	6/21/2022	12:00	198		Debris	Removed Blockage To Resume Normal Flow. Washed M/L To Remove Blockage of Debris.
6/23/2022	10:15	5501 Broad River Rd, Columbia, SC 29212	Manhole	6/28/2022	10:30	90		Debris	Removed Blockage To Resume Normal Flow. Washed Main Line To Remove Debris.
6/23/2022	10:15	1721 Shivers Rd, Columbia, SC 29210	Manhole	6/24/2022	10:00	5036	Storm Water Ditch	Debris	Removed Blockage To Resume Normal Flow. Removed Asphalt From Manhole.
6/23/2022	13:00	1700 Saint Andrews Ter, Columbia, SC 20210	Manhole	TBD		1150	Storm Water Ditch	Roots	Removed Blockage To Resume Normal Flow. Main Line Root Cut And Kits To Cover Root Locations.
6/29/2022	10:20	4440 Bluff Rd, Columbia, SC 29209	Pump Station, Manhole	OBSERVATION ONLY		8488		Wet Weather	Wet Weather; Observation Only. CIP Engineering Project Currently in Design Phase.
6/28/2022	12:33	1745 Shivers Rd, Columbia, SC 29210	Manhole	7/1/2022	14:00	10234	Storm Water Ditch	Collapsed Line	Pump At Construction Site Turned Off. Main Line Repair.
6/28/2022	15:40	1705 Shivers Rd, Columbia, SC 29210	Other	TBD		5001	Onsite Retention Pond	3rd Party Responsibility	Illicit Connection With Pump To City Sewer By Construction Crew After Grade Work Damaged Manhole And Allowed Debris In Lines. Exact Volume Unknown as the Construction Crew was Slow to Notify City of Damage. Construction Crew Removed Debris From Manhole. Capped Laterals And Cleaned Line Segments (Performed By Construction Crew).

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 2022**

City of Columbia, SC									
Quarterly Building Backup Listing									
2nd Quarter 2022									
Date	Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
5/12/2022	14:30	3221 Amherst Ave, Columbia, SC 29205	City	5/13/2022	08:00	10		Collapsed Line	3rd Party Cleaned Up Emergency Service and Main Line Repair.
5/16/2022	19:00	227 Vincenne Rd, Columbia, SC 29212	City	Corrective Action Completed by Contractor		39		Collapsed Line	Sincerely Yours Was Called. Service Line Repair.
6/8/2022	16:20	113 Forest Fern Rd, Columbia, SC 29212	City	6/25/2022	10:00	60		Collapsed Line	Removed Blockage To Resume Normal Flow. Service Line Repair.
6/14/2022	19:00	9 Copperfield Ct, Columbia, SC 29209	City	6/17/2022	12:00	1		Collapsed Line	Attempted To Remove Blockage. Service Line Repair.



## Section 5 SEP Water Quality Monitoring Results

Following receipt of the final approval of the Quality Assurance Project Plan (QAPP) from EPA and SCDHEC on January 15, 2016, the City conducted water quality monitoring on a quarterly basis for the first three years under the CD (through January 15, 2019) and monthly for years four through six under the CD (through January 15, 2022). The water quality monitoring completed on January 05, 2022 fulfilled the City's obligations under the SEP; a supplement to the previously approved SEP Completion Report was provided to EPA on June 13, 2022 with a summary of the Water Quality Monitoring results.