

Clean Water 2020 Program

CONSENT DECREE QUARTERLY REPORT

October 1, 2014 – December 31, 2014

Corrected February 2018

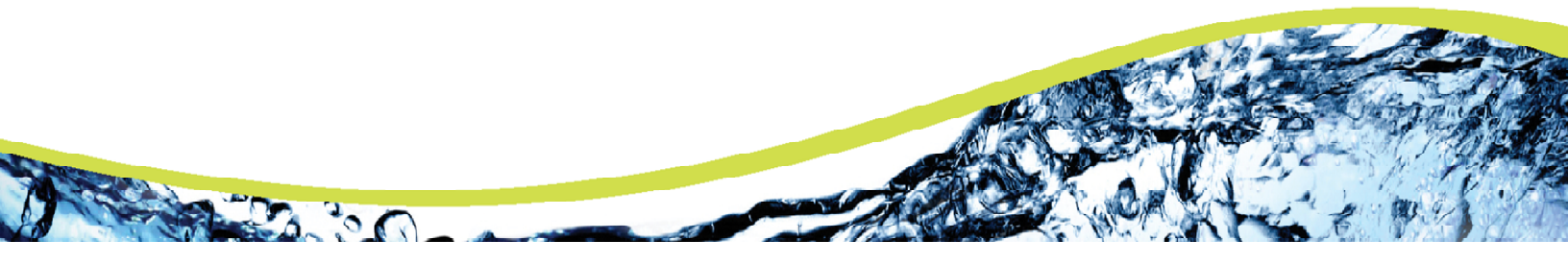


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Section 1 Introduction

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*, which 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; and
5. The results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I of the 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 conducting 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 the 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.

Section 2 Schedule of Projects and Activities

CITY OF COLUMBIA, S.C. - Clean Water 2020 Program 2014 QUARTERLY PROGRESS REPORT - 4th QUARTER		2015	2014
Activity Name		Q1	Q4
WWTP Training Programs			
Maintenance Management System			
WWTP Operations Program			
WWTP Training Pgm			
MOM Programs			
Contingency and Emergency Response Plan (CERP)			
WCTS Training Program			
Sewer Mapping Program			
Transmission System Operations and Maintenance Program			
Gravity Sewer System Operation and Maintenance Program			
Financial Analysis Plan			
Satellite Sewer System Agreements			
Continuing Sewer Assessment Program (CSAP) for the WCTS			
Continuing Sewer Assessment Program (CSAP) for the WCTS CD Plan			
SS7277 Major Sewer Study and Assessment, 3.6-60 Inch Gravity			
SS7278 Major Sewer Study and Assessment, 15-30 inch Gravity			
Infrastructure Rehabilitation Program (IRP) for the WCTS			
IR Report for the WCTS			
SS676402 30" Foremain from Mill Creek PS to WWTP			DES, 95%
SS6966 Annual Rehab on Manholes and Ines less than 15"			DES, 100%
SS695401 Crane Creek Phase I			DES, 100%
SS7262 Flow Study/Rehabilitation/Replacement of Three Rivers and Colonial Life PS			
SS7258 Greenlawn Dr to Burnside #1 PS (Hampion Forest)			
SS7261 Lake Katherine Sewer Line Capacity Enhancement			
SS6857 Olympia Subdivision (SSES Study)			
SS706012 Pump Station Improvements at 6 Sites			
SS7172 Rehabilitation/Replacement Harbison #2, Mallard Point and Dog Pound PS			
SS7280 Rocky Branch-01			
SS7279 Smith Branch-02			
SS6833 Upgrade Piney Grove Lift Station			DES, 100%
SS7289 Zoo Pump Station			
SS7199 Saluda River Basin SSES for SR-06 & 13			CON, 70%
SS7207 Saluda River Basin SSES for SR 07 & 8			
SS7208 Saluda River Basin SSES for SR-03, 10, & 12			
SS7218 West Columbia Basin SSES WC-02			CON, 81%
SS7259 Replacement of 24" Smith Branch Outfall underneath I-277			DES, 100%
SS7076-02 30in Gravity Sewer Burnside to Bluff & I-77			CON, 98%

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 this CD.

3.1 Early Action Capital Improvements Projects

In accordance with Section V.10. of the CD, the City addressed needed improvements by defining the following Early Action Capital Improvements Projects (EACIP) for the Columbia Metro Wastewater Treatment Plant (WWTP) and the Wastewater Collection and Transmission System (WCTS). All EACIP were completed prior to the start of the current reporting period.

3.2 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 WCTS.

3.2.1 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.

Projects and significant activities completed during the current reporting period:

- The City received final approval of the SMP from EPA and SCDHEC on December 9, 2014.

3.3 Infrastructure Rehabilitation Report (IRR) for the WCTS

In accordance with Section V.16. of the CD, the City is to submit an IRR summarizing the results of the CSAP of the major components of the WCTS and a description of proposed rehabilitation projects. The IRR is to be submitted within six months after the City has assessed the major components of the WCTS once pursuant to the CSAP. Completion percentages of projects to be considered part of the IRR and currently in progress are as follows:

- SS676402 30-inch Forcemain from Mill Creek PS to WWTP – Design 95% Complete
- SS6966 Annual Rehab on Manholes and Lines less than 15" – Construction 51% Complete
- SS695401 Crane Creek Phase I – Design 100% Complete
- SS7262 Flow Study/Rehabilitation/Replacement of Three Rivers and Colonial life PS – Design 71% Complete
- SS7258 Greenlawn Dr. to Burnside #1 PS (Hampton Forest) – Design 49% Complete
- SS7261 Lake Katherine Sewer Line Capacity Enhancement – Design 44% Complete

- SS6857 Olympia Subdivision Sewer System Evaluation Survey (SSES) and Rehabilitation Design – Design 31% Complete
- SS706012 Pump Station Improvements at 6 Sites – Design 92% Complete
- SS7172 Rehabilitation/Replacement Harbison #2, Mallard Point and Dog Pound PS – Design 75% Complete
- SS7280 Rocky Branch-01 SSES and Rehabilitation – Design 23% Complete
- SS7279 Smith Branch-02 SSES and Rehabilitation – Design 26% Complete
- SS6833 Upgrade Piney Gove Lift Station – Design 100% Complete
- SS7289 Zoo Pump Station – Design 2% Complete
- SS7199 Saluda River Basin SSES and Rehabilitation for SR-06 & 13 – Construction 70% Complete
- SS7207 Saluda River Basin SSES and Rehabilitation for SR07 & 8 – Construction 32% Complete
- SS7208 Saluda River Basin SSES and Rehabilitation for SR-03, 10, & 12 – Construction 22% Complete
- SS7218 West Columbia Basin SSES and Rehabilitation for WC-02 – Construction 81% Complete
- SS7259 Replacement of Smith Branch Outfall Underneath I-277 – Design 100% Complete
- SS7076-02 30-inch Gravity Sewer Burnside to Bluff & I-77 – Construction 98% Complete

Section 4 Quarterly SSO Report

In accordance with Section IX.39.a.(ii). of the CD, the following table lists 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, 4th Quarter 2014

City of Columbia, SC Quarterly SSO Listing 4th Quarter 2014									
SSO Date	SSO Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
10/9/2014	10:00	2524 Rolling Pine Rd, Columbia, SC 29210	Force Main	10/9/2014	13:58	26,600		Force Main	Cut The Lift Station Off. Replaced With A New ARV
10/9/2014	15:00	1200 Simmon Tree Ln, Columbia, SC 29201	Treatment Plant	10/9/2014	15:05	1		Treatment Plant	Flushing Activities Ceased And Valve Was Closed. All Visible Liquid Was Vacuumed Up And Lime Was Spread
10/21/2014	09:09	225 Hamilton Dr, Columbia, SC 29203	Manhole	10/21/2014	11:05	2,900		Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 150 Feet To Clear Stoppage
10/25/2014	06:30	4211 River Dr, Columbia, SC 29201	Lift Station	10/25/2014	08:05	350,000	Columbia Canal	Pump Station Failure	Power Was Restored To Pump Control Panel. Washed Sidewalk, Vacuumed Up Visible Liquids, Excavated Contaminated Soils/Surface Debris, Spread Lime
10/29/2014	10:15	2800 Celtic Rd, Columbia, SC 29210	Leaking Joint At Storm Drain	10/29/2014	14:00	1	Unnamed Drainage Ditch	Grease	Washed Mainline 100 Ft. Removed Stoppage To Resume Normal Flow. Set Up Bypass Pump And Flushed For 12 Hours
11/2/2014	17:25	410 Columbiana Dr, Columbia, SC 29212	Manhole	11/2/2014	17:25	1	Storm Drain That Runs Into An Open Ditch	Collapsed Line	Mainline Was Washed To Resume To Normal Flow. Washed Mainline 400 Ft To Resume To Normal Flow. Point Repair To Be Made.
11/5/2014	10:30	109 Hickory Forest Dr, Columbia, SC 29209	Manhole	11/5/2014	11:30	201		Debris	Removed Debris And Washed Mainline. Washed Mainline Downstream 250 Ft To Resume To Normal Flow
11/7/2014	10:30	192 Bloxome Dr, Hopkins, SC 29061	Manhole	11/7/2014	11:30	206		Grease	Removed Stoppage. Washed Mainline 250 Ft To Resume To Normal Flow
11/15/2014	15:00	112 Rodborough Rd & 267 Danby Ct, Columbia, SC 29212	Manhole	11/7/2014	10:00	351	Rawls Creek	Grease	Washed Mainline 150 Feet To Resume Normal Flow. Placed Bypass Pump At Creek And Spread Lime
11/22/2014	09:00	610 Assembly St, Columbia, SC 29203	Manhole	11/22/2014	11:00	2,400	Storm Drain	Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 50 Feet To Clear Stoppage
11/25/2014	07:30	2350 Center St, Columbia, SC 29204	Cleanout	11/25/2014	09:00	1,350	Pen Branch	Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 325 Feet To Clear Stoppage
12/1/2014	09:00	1500 Benson Rd, Columbia, SC 29209	Manhole	12/1/2014	10:05	4,875		Roots	Removed Stoppage To Resume Normal Flow. Washed Mainline 350 Feet To Resume Normal Flow
12/1/2014	15:45	2100 Ervin St, Columbia, SC 29203	Line Segment	12/2/2014	08:00	1		Roots	Washed Mainline To Resume Normal Flow 350 Feet. Mainline Repair To Remove Roots
12/2/2014	17:42	2912 Dell Dr, Columbia, SC 29209	Manhole	12/3/2014	10:00	1		Collapsed Line	Washed Mainline 75 Ft To Resume To Normal Flow. Mainline Televised, Washed, And Degreased. Setup Bypass To Collect Spill In Creek.
12/6/2014	16:30	3403 Ragsdale Dr, Columbia, SC 29209	Manhole	12/9/2014	10:30	1,800	Storm Drain	Roots	Confirmed With CCTV Inspection. Washed Mainline 350 Ft To Resume To Normal Flow. Mainline Was Televised 394 Ft. Tap Renewal To Main And Mainline Repairs To Be Made.
12/19/2014	10:45	2425 Clark St, Columbia, SC 29201	Separated Joint Segment	12/23/2014	10:15	1	Storm Drain In Front Of 2425 Clark St	Grease	Washed Mainline 229 Ft And Vacuumed To Resume To Normal Flow. Mainline Was Televised 230 Ft Downstream. Grease Was Found In The Mainline, Setup Bypass To Collect Spill Creek.
12/19/2014	10:45	401 Burnside Dr, Columbia, SC 29209	Manhole	12/19/2014	16:00	750		Debris	Washed 45 Feet And Vacuumed Mainline To Resume Normal Flow. Mainline CCTV 27 Feet. Manhole Has No Bottom Causing Grease To Build Up And Caused A Blockage.
12/21/2014	08:00	7700 Teague Rd, Columbia, SC 29209	Manhole	12/21/2014	10:30	1,500	Sunview Lake, Most Of Spill Soaked Into Ground	Debris	Removed Blockage. Washed The Mainline 600 Ft And Replaced Casting To Resume To Normal Flow.
12/22/2014	10:45	1040 Gervals St, Columbia, SC 29201	Manhole	12/22/2014	10:45	2,100		Grease	Washed Mainline 200 Feet To Resume Normal Flow. Mainline CCTV 76 Feet, Grease Buildup At Manhole.
12/24/2014	10:52	5081 Brickyard Rd, Columbia, SC 29203	Manhole	12/24/2014	01:00	166,800	Crane Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line.
12/24/2014	11:30	1400 Peoples St, Columbia, SC 29203	Manhole	12/24/2014	01:00	166,500	Crane Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line Replacement
12/24/2014	11:30	1400 Peoples St, Columbia, SC 29203	Manhole	12/24/2014	01:00	61,500	Crane Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line.
12/24/2014	11:45	2621 Flamingo Dr, Columbia, SC 29209	Manhole	12/24/2014	11:45	6,750	Storm Drain Feed Into Unnamed Creek	Grease	Removed Stoppage. Washed Mainline 345 Ft And Televised 402 Ft Downstream To Resume To Normal Flow.
12/24/2014	11:48	1548 Kathwood Dr, Columbia, SC 29206	Manhole	12/24/2014	01:00	25,200	Gills Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line.
12/24/2014	11:48	4645 Pine Grove Ct, Columbia, SC 29206	Manhole	12/24/2014	01:00	6,300	Gills Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line.
12/25/2014	10:30	1023 Airport Blvd, Columbia, SC 29205	Manhole	12/25/2014	14:00	15,750		Debris	Removed Blockage. Washed Mainline 300 Ft And Televised Mainline Downstream 467 Ft.
12/25/2014	01:15	4500 Bluff Road, Columbia, SC 20209	Lift Station	12/25/2014	02:15	4,659	Tributary To Reader Point Branch	3rd Party Responsibility	Restored Power. Restored Power And Plugged Abandoned Line.

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. Building backup claims are investigated by the City in order to determine whether the cause of the building backup is a condition within the City’s system. If so, the City corrects the problem in the City’s WCTS. Issues on private property are documented for the City by a third-party administrator. At this time, neither the City nor the third-party administrator have maintained records on volume, duration, or specific root causes of building backups.

Table 2 - Building Backup Report, 4th Quarter 2014

City of Columbia, SC Quarterly Building Backup Listing 4th Quarter 2014		
Date	Location	Claim Description
10/4/2014	130 Tyborne Cir	Sewer Back Up
10/5/2014	405 Harbison Blvd	Sewer Back Up
10/21/2014	415 Harden St	Sewer Back Up
11/3/2014	3082 Lindenwood	Sewer Back Up
11/3/2014	900 Gregg St #1A	Sewer Back Up
11/12/2014	2224 Manse St	Sewer Back Up
11/28/2014	124 Aldbury Rd	Sewer Back Up
12/2/2014	2730 Chestnut St	Sewer Back Up
12/19/2014	4320 Converse St	Sewer Back Up
12/25/2014	109 Arrow Ct	Sewer Back Up

Section 5 SEP Water Quality Monitoring Results

In accordance with Section IX.39.a.(v). of the CD, the following section provides a summary of the results of water quality monitoring conducted during the previous calendar quarter as part of the Supplemental Environmental Project (SEP) described in Appendix I of the CD.

5.1 Sampling Conducted and Results

As a part of the SEP requirements established in Section VIII and Appendix I of the CD, the City is to conduct water quality monitoring at three locations to assist in evaluation of the environmental benefits of the SEP in improving water quality in Smith Branch and Gill's Creek. The City is to implement a program for ambient monitoring of dissolved oxygen (DO), total suspended solids (TSS), temperature, and E. coli at the following monitoring sites:

- Gill's Creek at Garner's Ferry Road
- Smith Branch at North Main Street
- Gill's Creek at Bluff Road

In accordance with the requirements of the CD, the City was required to submit a Quality Assurance Project Plan to SCDHEC within 60 days of the date of entry of the CD. Upon approval of the QAPP by SCDHEC the City will begin monitoring within 30 days. The City will monitor quarterly for the first three years under the CD and monthly (or every other month at the Gills Creek at Bluff Road site) from years four through six under the CD.

The City originally submitted the QAPP to SCDHEC on July 18, 2014 in advance of the deliverable deadline. The City subsequently received comments from SCDHEC and resubmitted the QAPP to SCDHEC on January 13, 2015. Upon approval of the QAPP, the City will begin monitoring within 30 days in accordance with the requirements of the CD.