

Clean Water 2020 Program

CONSENT DECREE QUARTERLY REPORT

January 1, 2015 – March 31, 2015



We Are Columbia

As submitted to EPA for review and approval.

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Initials

4/29/15
Date



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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 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.

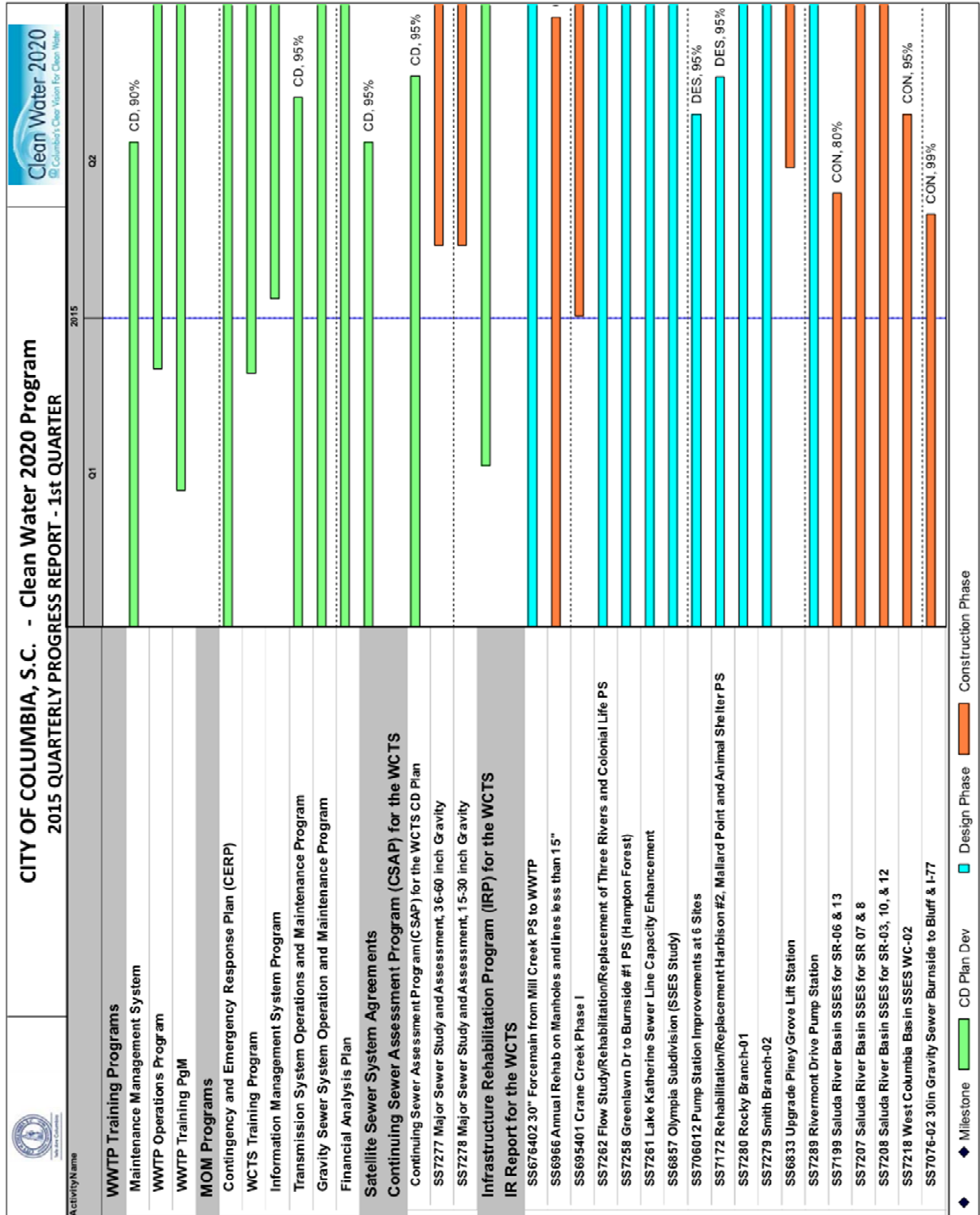
Section 4 – Quarterly SSO Report

This section addresses the requirements of Section IX.39.a(ii) of the Consent Decree and provides a tabular listing of 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



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 WWTP Programs

In accordance with Section V.11 of the CD, the City is developing and implementing specific Wastewater Treatment Plant (WWTP) programs. The Program elements addressed in this section provide information regarding activities involving the Metro WWTP.

3.1.1 Maintenance Management System (MMS)

In accordance with the requirements of the CD, the City shall submit a MMS to EPA and SCDHEC for review, comment, and approval. The MMS is to be submitted within one year of the date of entry of the CD. The deadline for submittal of the MMS to EPA and SCDHEC is May 21, 2015.

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 Transmission System Operations and Maintenance Program (TSOMP)

In accordance with the requirements of the CD, the City shall submit a TSOMP to EPA and SCDHEC for review, comment, and approval. The TSOMP is to be submitted within one year of the date of entry of the CD. The deadline for submittal of the TSOMP to EPA and SCDHEC is May 21, 2015.

Projects and significant activities completed during the current reporting period:

- The 30 day EPA mandated public comment period for the TSOMP began on March 2, 2015.

3.3 Satellite Sewer System Agreements (SSSA)

In accordance with Section V.13 of the CD, the City is to submit to EPA and SCDHEC for review, comment, and approval a proposed form of SSSA for new or the removal of existing agreements that cover the collection, conveyance and treatment of sewage by Columbia from satellite sewer systems. The SSSA is to be submitted within one year of the date of entry of the CD. The deadline for submittal of the SSSA to EPA and SCDHEC is May 21, 2015.

3.4 Continuing Sewer Assessment Program (CSAP) for the WCTS

In accordance with Section V.14 of the CD, the City is to submit to EPA and SCDHEC for review, comment, and approval a CSAP that provides for an analysis of Columbia's WCTS infrastructure. The CSAP is to be submitted within six months after the date of EPA and SCDHEC approval of the Sewer Mapping Program. By letter dated December 9, 2014, EPA approved the Sewer Mapping Program. Therefore, the deadline for submittal of the CSAP to EPA and SCDHEC is June 9, 2015.

Projects and significant activities completed during the current reporting period:

- The 30 day EPA mandated public comment period for the CSAP began on March 2, 2015.

3.5 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 95% Complete
- SS695401 Crane Creek Phase I – Construction 0% Complete
- SS7262 Flow Study/Rehabilitation/Replacement of Three Rivers and Colonial life PS – Design 90% Complete
- SS7258 Greenlawn Dr. to Burnside #1 PS (Hampton Forest) – Design 90% Complete
- SS7261 Lake Katherine Sewer Line Capacity Enhancement – Design 60% Complete
- SS6857 Olympia Subdivision Sewer System Evaluation Survey (SSES) and Rehabilitation Design – Design 20% Complete (decrease in completion % from previous report due to contract amendment).
- SS706012 Pump Station Improvements at 6 Sites – Design 95% Complete
- SS7172 Rehabilitation/Replacement Harbison #2, Mallard Point and Animal Shelter PS – Design 95% Complete
- SS7280 Rocky Branch-01 SSES and Rehabilitation – Design 10% Complete (decrease in completion % from previous report due to contract amendment).
- SS7279 Smith Branch-02 SSES and Rehabilitation – Design 14% Complete (decrease in completion % from previous report due to contract amendment).
- SS6833 Upgrade Piney Gove Lift Station – Construction 0% Complete
- SS7289 Rivermont Drive Pump Station – Design 15% Complete
- SS7199 Saluda River Basin SSES and Rehabilitation for SR-06 & 13 – Construction 80% Complete

- SS7207 Saluda River Basin SSES and Rehabilitation for SR07 & 8 – Construction 25% Complete (decrease in completion % from previous report due to construction change order).
- SS7208 Saluda River Basin SSES and Rehabilitation for SR-03, 10, & 12 – Construction 65% Complete
- SS7218 West Columbia Basin SSES and Rehabilitation for WC-02 – Construction 95% Complete
- SS7076-02 30-inch Gravity Sewer Burnside to Bluff & I-77 – Construction 99% 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, 1st Quarter 2015

City of Columbia, SC Quarterly SSO Listing 1st Quarter 2015									
SSO Date	SSO Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
1/4/2015	15:20	2537 Partridge Drive North, Columbia, SC 29209	Lift Station	1/4/2015	15:28	3,840	Goose Branch	Pump Station Failure	Reset Pump #1 And Re-Primed Pump #2. Checked Station Operation
1/4/2015	17:50	1409 Ivy Lane, Columbia, SC 29204	Manhole	TBD		3,750	Storm Drain	Roots	Removed Stoppage. Washed Mainline 80 Feet To Resume Normal Flow, Roots To Be Removed.
1/5/2015	13:15	800 Blue Ridge Ter, Columbia, SC 29203	Manhole	1/6/2015	12:00	2,125		Debris	Washed Mainline 150 Feet To Resume Normal Flow. Cleaned Debris Out Of Manhole.
1/12/2015	14:45	5081 Brickyard Rd, Columbia, SC 29203	Manhole	TBD		16,153	Crane Creek	Wet Weather	Wet Weather, Observation Only. Engineering In Design Phase Of Line
1/22/2015	13:00	120 Northpoint Ct, Columbia, SC 29016	Cleanout	1/26/2015	11:30	0		Roots	Washed Service Line 40 Ft To Resume To Normal Flow. Service Line Repair Work Order Was Generated And Scheduled.
1/23/2015	08:54	1822 Woodsboro Dr, Columbia, SC 29210	Manhole	1/27/2015		1,080	Unknown Creek	Collapsed Line	Washed Mainline 200 Ft To Resume Normal Flow. Televised Mainline 51 Ft Upstream Going Through Downstream Manhole. At 51 Ft, Broken Mainline. Work Order Generated For Mainline Repair.
1/27/2015	08:30	2140 Rolling Hills Rd, Columbia, SC 29210	Cleanout	1/27/2015	08:30	0		Roots	Cleaned Up Solids And Spread Lime In Area. Disciplinary Action Will Be Taken On Employee For Failure To Report SSO Evidence
1/30/2015	11:30	107 Finsbury Ct, Columbia, SC 29212	Manhole	1/30/2015	12:30	349		Roots	Removed Stoppage To Resume Normal Flow. Washed Mainline 450 Feet
1/30/2015	17:00	2140 Rolling Hills Dr, Columbia, SC 29210	Manhole	1/30/2015	17:30	375	Creek Behind Residence	Roots	Removed Stoppage To Resume Normal Flow. Washed Mainline 405 Feet
2/2/2015	13:30	1159 Olympia Ave, Columbia, SC 29201	Cleanout	2/2/2015	14:20	81		Roots	Emergency Service Line Repair. Washed Service Line 100 Feet To Resume Normal Flow, Repaired Service Tap
2/5/2015	11:45	1218 Lyon St, Columbia, SC 29204	Manhole	2/5/2015	12:31	1,575	Storm Drain	Collapsed Line	Removed Stoppage, To Resume Normal Flow. Washed Mainline 315 Feet And Removed Stoppage
2/5/2015	13:00	286 Sandhurst Rd, Columbia, SC 29210	Cleanout	2/5/2015	13:40	45		Collapsed Line	Washed Service Line To Resume Normal Flow. Service Line Tap Repair
2/5/2015	19:45	227 Brookshire Rd, Columbia, SC 29210	Cleanout	2/6/2015	08:09	450	Storm Drain In Yard	Grease	Removed Stoppage. Washed Mainline 300 Feet. Removed Stoppage
2/8/2015	10:00	186 Waterford Dr., Columbia, SC 29203	Manhole	TBD		900		Collapsed Line	Washed Mainline 300 Ft To Resume To Normal Flow. Televised Mainline Downstream 190 Ft And Televised Upstream 70 Ft. Generated Work Order For Mainline Repair.
2/9/2015	10:23	4308 Euclid Ave, Columbia, SC 29203	Cleanout	2/9/2015	10:30	5		Debris	Removed Stoppage To Resume To Normal Flow. Washed Service Line 20 Ft & Televised Service Line 16.04 Ft
2/10/2015	14:00	6604 Frost Ave, Columbia, SC 29203	Cleanout	2/10/2015	03:00	100		Roots	Washed Service Line With Terminator 100 Feet To Resume Normal Flow. Washed Service Line With Terminator 100 Feet To Resume Normal Flow
2/10/2015	23:00	1159 Olympia Ave, Columbia, SC 29201	Cleanout	TBD		15		Collapsed Line	Washed Service Line 70 Feet To Resume Normal Flow. Service Line Repair
2/12/2015	08:30	1955 Rolling Hills Rd, Columbia, SC 29210	Manhole	2/12/2015	09:00	750		Grease	Removed Stoppage To Resume To Normal Flow. Washed Mainline 150 Ft
2/13/2015	11:30	7 Avocet Ct, Columbia, SC 29203	Cleanout	2/16/2015	10:25	25		Grease	Washed Service Line 120 Feet To Resume Normal Flow. Emergency Install Clean Out
2/16/2015	16:41	79 St Albans Rd, Irmo, SC 29212	Cleanout	TBD		16		Roots	Washed Service Line 50 Feet To Resume Normal Flow. Dig For Root Removal And Install Clean Out
2/17/2015	13:45	3130 Bluff Rd, Columbia, SC 29209	Manhole	2/18/2015	17:00	270	Contributory To Gills Creek	3rd Party Responsibility	Washed Mainline 120 Ft To Resume To Normal Flow. Repaired Mainline
2/19/2015	15:30	312 Sawtimber Lane, Columbia, SC 29209	Manhole	2/20/2015	08:30	7,000	Lake Rebecca	Roots	Washed Mainline 300 Feet To Resume Normal Flow. Mainline CCTV, And Washed Mainline To Remove Roots, Raked Up Solids And Put Lime In The Area
2/20/2015	13:40	331 Shareditch Rd, Columbia, SC 29210	Cleanout	2/20/2015	13:54	209		Roots	Removed Stoppage To Resume Normal Flow. Washed Service Line And Mainline 75 Feet
2/21/2015	16:15	1409 Ivy Lane, Columbia, SC 29204	Manhole	TBD		3,375	Storm Drain	Roots	Washed Mainline 343 Feet Removed Stoppage To Resume Normal Flow. Mainline Repair
2/22/2015	14:25	410 Broken Hill Rd, Columbia, SC 29212	Manhole	2/22/2015	15:00	13		Roots	Removed Stoppage To Resume Normal Flow. Washed Mainline 200 Feet To Remove Roots

City of Columbia, SC Quarterly SSO Listing 1st Quarter 2015									
SSO Date	SSO Time	Location	Source	Date of Corrective Action	Time of Corrective Action	Estimated Volume (gallons)	Receiving Water (if any)	Cause	Actions Taken
2/23/2015	13:45	1209 Hyatt Ave, Columbia, SC 29203	Cleanout	2/24/2015	13:00	19		3rd Party Responsibility	Had City Contractor Cut Tap. Tap Cut Out By City Contractor
2/26/2015	12:15	5081 Brickyard Rd, Columbia, SC 29203	Manhole	TBD		233,563	Crane Creek	Wet Weather	Wet Weather, Observation Only. Bid Opening For CIP Project February 24, 2015
2/26/2015	08:50	1320 Elm Tree Rd, Columbia, SC 29209	Cleanout	2/26/2015	10:05	700		Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 100 Feet To Remove Stoppage
2/26/2015	15:30	1400 Peeples St, Columbia, SC 29203	Manhole	TBD		43,500	Crane Creek	Wet Weather	Wet Weather, Observation Only. Bid Opening For CIP Project February 24, 2015
2/26/2015	20:00	2708 Ansel St, Columbia, SC 29204	Manhole	2/26/15	22:00	489		Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 350 Feet, Removed Stoppage
2/26/2015	22:20	830 Gracern Rd, Columbia, SC 29210	Manhole	2/26/2015	23:50	2,400	Storm Drain	Debris	Removed Stoppage To Resume Normal Flow. Washed Mainline 400 Feet, De-Greased And Vacuumed Debris Out Of Line
3/1/2015	07:45	443 Arrowwood Rd, Columbia, SC 29210	Force Main	3/1/2015	12:00	105	Storm Drain	Force Main	Replaced ARV. Flushed Storm Drain
3/2/2015	14:20	4000 Glendon Rd, Columbia, SC 29203	Manhole	3/2/2015	17:00	1	Contributory To Smith Branch	Debris	Washed Mainline 612 Ft To Resume To Normal Flow. Removed Debris And Pumped Out Ditch And Flushed. 1020 Mins X 825 Gpm = 842,500 Gallons Recovered. Pump Curve Cd100.
3/3/2015	14:35	341 Grey Bark Dr, Columbia, SC 29209	Cleanout	3/4/2015	09:00	37		Roots	Rod Line 25 Feet To Remove Stoppage. Emergency Service Line Repair
3/4/2015	16:45	140 Charles Towne Ct, Columbia, SC 29209	Manhole	TBD		16		Roots	Washed Mainline 200 Feet To Remove Stoppage To Resume Normal Flow. Tap Renewal And Mainline Repair
3/8/2015	15:00	3144 Grace Hill Rd, Columbia, SC 29206	Manhole	3/8/2015	16:00	300	Orphanage Branch	Collapsed Line	Removed Stoppage To Resume Normal Flow. Emergency Mainline Repair
3/9/2015	13:30	2308 Cardington Dr, Columbia, SC 29209	Manhole	3/9/2015	13:45	1,125	Unknown Storm Drain	Grease	Removed Stoppage To Resume To Normal Flow. Washed Mainline 250 Ft
3/11/2015	10:05	1228 Harden St, Columbia, SC 29204	Cleanout	3/11/2015	10:35	750		Debris	Washed Downstream Manhole To Release Pressure. Washed Manhole 60 Feet To Resume Normal Flow
3/12/2015	10:31	6530 Davidson St, Columbia, SC 29209	Manhole	3/12/2015	11:15	1,125		Grease	Washed Mainline 100 Ft. Washed Mainline 100 Ft
3/9/2015	15:30	696 Amberley Rd, Columbia, SC 29203	Manhole	3/9/2015	17:55	7,000		Grease	Removed Stoppage To Resume To Normal Flow. Washed Mainline 300 Ft
3/10/2015	13:07	921 Marlboro St, Columbia, SC 29201	Manhole	3/10/2015	13:45	940	Storm Drain	Grease	Washed Mainline To Remove Stoppage. Washed Mainline 100 Feet, Removed Stoppage
3/15/2015	13:35	100 Oberlin Rd, Columbia, SC 29212	Cleanout	TBD		315	Storm Drain	Roots	Washed Mainline 100 Feet, Removed Stoppage To Resume Normal Flow. Mainline Repair
3/17/2015	07:31	2537 Partridge Drive North, Columbia, SC 29209	Lift Station	3/17/2015	08:01	620		3rd Party Responsibility	Restored Power. Restored Power; Dammed Up Ditch To Contain And Spread Lime
3/23/2015	15:30	70 Durango Ave, Columbia, SC 29203	Cleanout	TBD		1,125	Contributory To Crane	Collapsed Line	Removed Stoppage, Washed Mainline 300 Feet To Resume Normal Flow. Mainline Repair
3/24/2015	08:00	1624 Ripplerock Rd, Columbia, SC 29210	Cleanout	3/24/2015	08:00	45		Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 70 Feet To Remove Stoppage
3/25/2015	08:30	417 Briercliff Dr, Columbia, SC 29203	Manhole	TBD		2,400	Unknown Creek	Roots	Washed Mainline 40 Feet. Removed Stoppage To Resume Normal Flow. Mainline Repair
3/28/2015	16:00	1723 Westminster Dr, Columbia, SC 29204	Cleanout	3/28/2015	17:00	300	Storm Drain	Grease	Removed Stoppage To Resume Normal Flow. Washed Mainline 80 Feet, Washed Service Line 35 Feet. De-Greased Line.
3/29/2015	20:30	2246 Rolling Hills Rd, Columbia, SC 29210	Cleanout	3/29/2015	21:15	150		Roots	Removed Stoppage To Resume Normal Flow. Washed Service Line 50 Feet, Cut Out Roots
3/29/2015	15:30	2140 Rolling Hills Rd, Columbia, SC 29210	Cleanout	TBD		1,513		Roots	Washed Mainline 100 Feet. Mainline Repair

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.