



# City of Chattanooga

Mayor Andy Berke

January 30, 2014

VIA CERTIFIED MAIL

Ms. Sara Schiff  
Environmental Engineer  
Clean Water Enforcement Branch  
US EPA-Region 4  
61 Forsyth Street, SW  
Atlanta, GA 30303

**Re: *United States of America et. al. v. City of Chattanooga, No. 1:12-cv-0024***  
**Semi-Annual Work Progress Report No. 1 – April 2013 to December 2013**

Dear Ms. Schiff:

On behalf of the City of Chattanooga, Tennessee ("City"), and in accordance with the consent decree entered by the United States District Court for the Eastern District of Tennessee (Southern Division), on April 24, 2013, in the case styled the United States of America et. al. v. City of Chattanooga, No. 1:12-cv-0024 ("Consent Decree"), we are submitting to both the Environmental Protection Agency ("EPA") and the Tennessee Department of Environment and Conservation ("TDEC") the first semi-annual work progress report required pursuant to paragraph 39 of the Consent Decree. This report is also being submitted in accordance with the letter from Denise Diaz, dated September 16, 2013, establishing the dates for reporting under the Consent Decree.

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Ms. Sara Schiff  
January 30, 2014  
Page Two

Please let me know if you have any questions regarding our submittal.

Sincerely,

A handwritten signature in cursive script that reads "Alice L. Cannella".

Alice L. Cannella, P.E.  
Director, Waste Resources Division

Enclosure

cc: Karl Fingerhood, Esq., US DOJ  
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# Semi-Annual Work Progress Report No. 1

**April 24 - December 31, 2013**

*Prepared for*

**Environmental Protection Agency and  
Tennessee Department of Environment and  
Conservation**

City of Chattanooga  
Waste Resources Division  
Consent Decree Program  
Case No. 1:12-cv-00245

*Prepared by*

**City of Chattanooga**  
Waste Resources Division

*Submitted by*

**JACOBS**  
Jacobs Engineering Group Inc.  
Consent Decree Program Manager

Chattanooga, Tennessee

January 30, 2014

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# Acronyms and Abbreviations

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CAP	Capacity Assurance Program
CD	Consent Decree
CIPP	Cured in Place Pipe
CMOM	Capacity, Management, Operations, and Management
CSO	Combined Sewer Overflow
CSOTF	Combined Sewer Overflow Treatment Facility
CSS	Combined Sewer System
EFT	Electronic Funds Transfer
EPA	Environmental Protection Agency
ESIP	Enterprise South Industrial Park
FOG	Fats, Oils, and Grease
HVAC	Heating, Ventilation, and Air Conditioning
IPS	Influent Pump Station
ISS	Interceptor Sewer System
LF	Linear Feet
LTCP	Long Term Control Plan
MBWWTP	Moccasin Bend Wastewater Treatment Plant
MCC	Motor Control Center
MGD	Million Gallons per Day
N/A	Not Applicable
NPDES	National Pollution Discharge Elimination System
NTP	Notice to Proceed
PDR	Public Document Repository
PS	Pump Station

RD I/I	Rain-derived Infiltration and Inflow
SCADA	Supervisory Control and Data Acquisition
SORP	Sewer Overflow Response Protocol
SRF	State Revolving Funds
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
TCWN	Tennessee Clean Water Network
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
USDOJ	United States Department of Justice
VFD	Variable Frequency Drive
WCTS	Waste Collection and Transmission System
WRD	Waste Resources Division
WWTA	Wastewater Treatment Authority

# 1.0 Executive Summary

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On April 24, 2013, the City of Chattanooga (“City”) entered into a consent decree with the United States and the State of Tennessee, in the case styled *United States of America et. al. v. City of Chattanooga, No. 1:12-cv-00245* (“CD”). This Semi-Annual Work Progress Report (“Report”) has been prepared to meet the requirements of paragraph 39 of the CD. In accordance with the CD, this Report presents the major milestones achieved in the last 6 months, and also provides projections for activities anticipated to be completed in the following 6 months. This Report presents milestones achieved from the Effective Date of the CD (April 24, 2013) through the end of the calendar year (December 31, 2013) and the projections cover the period of January 1, 2014 through June 30, 2014.

The City met all of the deadlines for this Report period. During the Report period, the City developed and submitted the deliverables listed in Table 1-1 to the Environmental Protection Agency (“EPA”) and the Tennessee Department of Environment and Conservation (“TDEC”) for review and approval. This information is also presented in Gantt chart format in Appendix A.

**Table 1-1**  
Completed Projects and Submitted Consent Decree Deliverables

CD Deliverable	CD Reference	CD Deadline	Submitted
Civil Penalty – 50% Cash Payment	Section VII., para 29	5/24/2013	5/17/2013
Distribution of Final CD	Section II., para 5	5/24/2013	5/24/2013
Payment of TCWN’s Attorney Fees	Section XV., para 81(b)	N/A <sup>1</sup>	8/6/2013
Establish Public Document Repository (PDR)	Section V., para 9	9/10/2013	9/10/2013
State Project – Project Plan	Section VII., para 30	10/24/2013	10/24/2013
Quarterly Report No. 1	Section IX., para 38	10/30/2013	10/30/2013
Community Input Plan <sup>2</sup>	Section VI., para 19	11/25/2013	11/25/2013
Sewer Overflow Response Protocol (SORP)	Section VI., para 20(a)	11/25/2013	11/25/2013
Automation of Valve Operators at CSO Facilities <sup>3</sup>	Section VI., para 22	4/25/2016	1/31/2014 <sup>4</sup>
South Chickamauga Creek PS and Force Main Upgrade <sup>3</sup>	Section VI., para 22	4/25/2016	1/31/2014 <sup>4</sup>

<sup>1</sup> The CD does not specify a deadline for this task.

<sup>2</sup> This document was not required by the CD to be submitted to EPA and TDEC.

<sup>3</sup> These are completed construction projects.

<sup>4</sup> This report serves as notification of project completion to EPA.

Table 1-2 lists the deliverables that the City will submit to the EPA and TDEC during the upcoming semi-annual period of January 1, 2014 through June 30, 2014. This information is also available in Gantt chart format in Appendix A.

**Table 1-2**

Upcoming Completed Projects and Consent Decree Deliverables

<b>CD Deliverable</b>	<b>CD Reference</b>	<b>CD Deadline</b>	<b>Anticipated Submittal</b>
Quarterly Report No. 2	Section IX., para 38	1/30/2014	1/30/2014
Semi-annual Work Progress Report No. 1	Section IX., para 39	1/30/2014	1/30/2014
Annual Report No. 1	Section IX., para 40	3/1/2014	3/1/2014
Quarterly Report No. 3	Section IX., para 38	4/30/2014	4/30/2014
Fats, Oils and Grease (FOG) Management Plan	Section VI., para 20(c)	5/26/2014	5/26/2014
Gravity Line Preventive Maintenance Plan	Section VI., para 20(d)	5/26/2014	5/26/2014
Inter-Jurisdictional Agreement Program	Section VI., para 20(i)	5/26/2014	5/26/2014

## 2.0 Introduction

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### 2.1 Purpose

On April 24, 2013, the City entered into a CD with the United States and the State of Tennessee. Pursuant to Section IX of the CD, the City is required to submit work progress reports on a semi-annual basis to the EPA and TDEC. Chattanooga has prepared this Report to satisfy the reporting requirements found in paragraph 39 of the CD.

### 2.2 Requirements

As detailed in Section IX of the CD, the City is required to report the following information concerning compliance with the remedial actions set forth under the CD:

1. A description of projects and activities completed and milestones achieved during the previous 6 month period pursuant to the requirements of the CD, in Gantt chart or similar format, including a description of compliance or non-compliance with the requirements of the CD and, if applicable, the reasons for non-compliance;
2. A summary of significant projects and activities anticipated to be performed, and milestones anticipated to be achieved, in the successive 6 month period to comply with the requirements of the CD, in Gantt chart or similar format; and
3. Any additional information the City determines is appropriate to demonstrate that the City is implementing the remedial actions required under the CD in an adequate and timely manner.

### 2.3 Reporting Schedule

Pursuant to Paragraph 39 of the CD, semi-annual work progress reports are to be submitted to the EPA and TDEC beginning 30 days after the first 6 month period following the Effective Date of the CD. On August 29, 2013, the City submitted a letter to EPA requesting clarification regarding the schedule for submitting reports under the CD. On September 16, 2013, EPA provided the requested clarification letter. A copy of EPA's letter is provided in Appendix A. This and other future reports will be submitted pursuant to the schedule set forth in that letter.

### 2.4 Report Structure

Work progress is presented in the body of the Report in a narrative format. This narrative includes a brief description of each CD project, as well as any activities completed or milestones

that were achieved or are anticipated to be completed. In addition to these descriptions, a detailed schedule containing each of the projects in Gantt format is provided in Appendix A.

## 3.0 Work Progress

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### 3.1 Community Input Plan

The Community Input Plan has been developed in accordance with the requirements of Paragraph 19 of the CD. This plan provides education to the public and solicits input from the public on implementation of the CD. The plan was developed for a 7-member Wastewater Regulations and Appeals Board (“Board”) in accordance with Section VI, paragraph 19 of the CD. The Community Input Plan was submitted to the Board on November 25, 2013, and is pending Board approval.

### 3.2 Capacity, Management, Operations and Management (“CMOM”) Programs

#### 3.2.1 Sewer Overflow Response Protocol (“SORP”)

The SORP was developed in accordance with the requirements of Paragraph 20(a) of the CD. This document establishes a procedure which facilitates the City’s timely and effective response to all sanitary sewer overflows (“SSOs”). The SORP was developed and submitted to the Public Document Repository (“PDR”) for public review on October 23, 2013, followed by a submittal to the EPA and TDEC on November 25, 2013.

#### 3.2.2 Emergency Response Plan

The Emergency Response Plan (“ERP”) is being developed in accordance with Paragraph 20(b) of the CD. The ERP establishes procedures for the City’s Waste Resources Division (“WRD”) that will dictate a plan of operations for the Collection System, Wastewater Pump Stations, and Combined Sewer Overflow Treatment Facilities (“CSOTF”) during emergency situations. The ERP is also being developed in accordance with the CMOM guidance attached to the CD as Appendix B. The development of the ERP will continue throughout 2014, with no major milestones anticipated in the first half of the year.

#### 3.2.3 Fats, Oils, and Grease (“FOG”) Management Program

The City’s FOG management program is being developed in accordance with Paragraph 20(c) of the CD. The FOG management program involves a comprehensive re-evaluation of the City’s previous program, which was originally adopted in June of 2005. Development of the FOG management program document will continue into the first half of 2014, with submittal to the EPA and TDEC anticipated on May 26, 2014.

### **3.2.4 Gravity Line Preventive Maintenance Program**

The Gravity Line Preventive Maintenance Program is being developed in accordance with Paragraph 20(d) of the CD. This program will provide a plan of operations for preventive maintenance of gravity line sanitary sewers and manholes. Work on this program document will continue in the first half of 2014 and submittal of this program to the EPA and TDEC is anticipated on May 26, 2014.

### **3.2.5 Pump Station Operations and Preventive Maintenance Programs**

The Pump Station Operations and Preventive Maintenance Programs are being developed in accordance with Paragraphs 20(e) and 20(f) of the CD, respectively. These programs are being developed for the WRD and will establish a plan of operation for pump stations during routine and emergency operations, as well as establish routine preventive maintenance requirements. Work on the programs will continue throughout 2014, with no major milestones anticipated in the first half of the year.

### **3.2.6 Hydraulic Model Development**

The hydraulic model is being developed in accordance with Paragraph 20(g) of the CD. The model will assist the City with identifying capacity limitations and potential causes of SSOs in addition to prioritization of wet-weather related I/I reduction projects, optimization of CSOTF's, and proposed project alternative analysis. Work on the model will continue throughout 2014, with no major milestones anticipated in the first half of the year.

### **3.2.7 Capacity Assurance Program ("CAP")**

The CAP is being developed in accordance with Paragraph 20(h) of the CD. The CAP will identify each sewer sub-basin or part of a sub-basin with insufficient capacity under either one hour peak flows, or average conditions, or both. It will also analyze all portions of the Sanitary Sewer System that hydraulically impact all known wet weather-related SSOs and all portions of the Wastewater Treatment Plant that may contribute to violations of the NPDES permit. This program will enable the City to authorize new sewer service connections or increases in flow from existing sewer service connections. Work on the CAP will continue throughout 2014, with no major milestones anticipated in the first half of the year.

### **3.2.8 Inter-Jurisdictional Agreement Program**

The inter-jurisdictional agreement program is being developed in accordance with Paragraph 20(i) of the CD. This program will govern the renewal of existing agreements or the entering of new agreements that cover the collection, conveyance, and treatment of sewage by the City from municipal satellite sewer systems. The program, among other things, will set forth provisions including flow limitation requirements, management and maintenance requirements, compliance requirements for industrial users, and mechanisms for modification and enforcement of the agreements. Work on the inter-jurisdictional agreement program will continue in the first half of 2014 and submittal to EPA and TDEC is anticipated on May 26, 2014.

### 3.3 SSES Work Plan

The SSES Work Plan is being developed in accordance with Paragraph 21 of the CD. The purpose of the SSES Work Plan is to assess, analyze, and rehabilitate the infrastructure of City's Sanitary Sewer System in order to address I/I, structural defects, and other conditions which currently cause or which may cause SSOs. The work plan will establish procedures for prioritizing problem areas within the sewer system and for setting schedules which will allow for the efficient undertaking of the assessment and rehab. Furthermore, this plan will be executed in two phases, with Phase 1 focusing on 5 sewer sub-basins identified as having the highest rainfall-induced I/I. These sewer sub-basins are Chattanooga Creek 4, Dobbs Branch 3, South Chickamauga Creek 1, South Chickamauga Creek 5, and South Chickamauga Creek 16, each of which are discussed in further detail in the sections below. Phase I SSES projects are currently underway. Phase II of the SSES work plan will focus on the 24 remaining sewer sub-basins. Several components of the SSES Work Plan include corrosion defect identification, flow monitoring, CCTV inspection, and smoke testing. Development of the SSES Work Plan is currently underway with submittal to the EPA and TDEC anticipated in the second half of 2014.

#### 3.3.1 Chattanooga Creek 4

This project represents 1 of the 5 Phase I priority sewer sub-basins and is being executed in accordance with Paragraph 21 of the CD. The Chattanooga Creek 4 sewer sub-basin consists of approximately 68,000 linear feet ("LF") of sanitary sewer piping, ranging from 6 to 48 inches in diameter. The Notice to Proceed ("NTP") for professional services was issued April 19, 2013, and as of December of 2013, SSES investigations have been completed on approximately 61,000 LF of sewer. The Preliminary Engineering Report ("PER") is anticipated to be submitted to the City by the contractor in June of 2014.

#### 3.3.2 Dobbs Branch 3

This project represents 1 of the 5 Phase I priority sewer sub-basins and is being executed in accordance with Paragraph 21 of the CD. The Dobb's Branch 3 sewer sub-basin consists of approximately 45,000 LF of sanitary sewer piping, ranging from 6 to 24 inches in diameter. The NTP for professional services was issued April 19, 2013, and SSES investigations were completed for approximately 44,000 LF of sewer on October 4, 2013. The PER is anticipated to be submitted to the City by the contractor in February of 2014.

#### 3.3.3 South Chickamauga Creek 1

This project represents 1 of the 5 Phase I priority sewer sub-basins and is being executed in accordance with Paragraph 21 of the CD. The South Chickamauga Creek 1 sewer sub-basin consists of approximately 81,000 LF of sanitary sewer piping, ranging from 4 to 84 inches in diameter. SSES investigations of this sewer sub-basin are currently ongoing, with approximately 58,000 LF of sewer piping inspected as of December 28, 2013. The PER is anticipated to be submitted to the City to review in April, 2014.

### 3.3.4 South Chickamauga Creek 5

This project represents 1 of the 5 Phase I priority sewer sub-basins and is being executed in accordance with Paragraph 21 of the CD. The South Chickamauga Creek 5 sewer sub-basin consists of approximately 90,000 LF of sanitary sewer piping, ranging from 6 to 66 inches in diameter. SSES investigations of this sewer sub-basin are currently ongoing, with approximately 52,000 LF of sewer piping inspected as of December of 2013. The PER is expected to be submitted to the City to review in February 2014.

### 3.3.5 South Chickamauga Creek 16

This project represents 1 of the 5 Phase I priority sewer sub-basins and is being executed in accordance with Paragraph 21 of the CD. The South Chickamauga Creek 16 sewer sub-basin SSES and rehabilitation is captured as part of the East Brainerd Pump Station and Collection System Rehabilitation project, a CD Early Action Capital Improvement project. Consequently, the SSES and rehabilitation recommendations and design for this sub-basin have been completed under the East Brainerd contract. SSES was performed on approximately 255,000 LF of sewer piping. State Revolving Fund Loan Program ("SRF") approval of contract documents was received on August 6, 2013, and bids were received on October 24, 2013. A contractor has been selected and NTP for construction is anticipated to be issued in February of 2014.

## 3.4 Early Action Capital Improvement Projects

### 3.4.1 SSO and Wet Weather Volume Reduction Projects

#### 3.4.1.1 DuPont Pump Station and Basin Improvements

The DuPont Pump Station and Basin Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project is Phase 1 of a 2 Phase approach to improvements of wet weather flow storage and conveyance for the DuPont Parkway Pump Station. Improvements include SSES and rehabilitation of approximately 242,000 LF of sanitary sewer piping, ranging from 8 to 48 inches in diameter, as well as the design and construction of a new 3 million-gallon lined earthen storage facility adjacent to the existing 6 million gallon storage facility on private commercial property. The NTP for professional services was issued on April 19, 2013, and SSES has been performed on approximately 243,000 LF of sewer piping. The PER is anticipated to be submitted to the City for review in March of 2014.

#### 3.4.1.2 Collegedale Pump Station Improvements

The Collegedale Pump Station Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes the increase in capacity and reliability of the Collegedale Pump Station to reduce sanitary sewer overflows. The main features of this project include upgrading the pump station to increase capacity and installing a storage tank to equalize wet weather flows. The project also consists of force main improvements that are being coordinated and coincide with a Tennessee Department of Transportation ("TDOT") project. A

portion of these improvements are planned to be constructed under the TDOT project. The NTP for professional services was issued on April 19, 2013, and the PER is anticipated to be submitted to the City for review in March of 2014.

#### 3.4.1.3 East Brainerd Pump Station Improvements

The East Brainerd Pump Station Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes the SSES and rehabilitation of portions of the East Brainerd basin collection system and the upgrade of the pump station. The SSES included approximately 255,455 LF of sewer piping and over 629 manholes. The pump station upgrade will include replacing and upgrading the existing station and installing a larger, parallel force main of approximately 600 LF to increase capacity. Improvements to the collection system and pump station were designed as two different projects with two sets of contract documents. SRF approval of the contract documents for the collection system was received on August 6, 2013. Bids were received On October 24, 2013 and the contract awarded on November 19, 2013. The selected contractor is currently awaiting NTP for construction of the collection system rehabilitation, which is anticipated in February of 2014. The pump station upgrade is under final design with bid advertisement anticipated in June of 2014.

#### 3.4.1.4 Altamont PS and Collection System Improvements

The Altamont PS and Collection System Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes the upgrade of the existing pump station with electrical controls and instrumentation, valves and piping, a new back-up generator, lighting, and other related equipment, as well as rehabilitation of approximately 17,000 feet of gravity sewer and service pipelines. This project was also split into two projects for contracting purposes: one for the pump station upgrade and one for the collection system rehabilitation. Substantial completion was received for the pump station on July 31, 2013, and completion and closeout is expected in anticipated in March 2014. Substantial completion was received for the collection system on October 22, 2013, and completion and closeout is anticipated in March of 2014.

#### 3.4.1.5 Pineville Road Sewer Basin Improvements

The Pineville Road Sewer Basin Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves the replacement of the existing can-type Pineville Road pump station and upgrading it to a submersible type pump station. The design includes a new wet well, piping, valves, electrical controls and instrumentation, back-up generator, and a new 1,600 linear foot 8 inch force main for the pump station, as well as rehabilitation of a portion of the basin's collection system. Design of the project is complete as of October 15, 2013, and bids were received on November 7, 2013. A contractor has been selected and the NTP for construction services is anticipated to be issued in February of 2014.

#### 3.4.1.6 Citico Creek Interceptor Rehabilitation

The Citico Creek Interceptor Rehabilitation project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project include repair of 6,300 linear feet of 42 inch gravity

sewer interceptor pipe using trenchless rehabilitation techniques and manhole rehabilitation. The NTP for construction was issued on June 3, 2013, with substantial completion achieved on November 19, 2013. Completion and closeout of this project is anticipated in March of 2014.

#### 3.4.1.7 Highland Park Sewer Rehabilitation

The Highland Park Sewer Rehabilitation project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes repair of 40,000 LF of 8, 10, and 12 inch gravity sewer pipelines using trenchless rehabilitation techniques and manhole rehabilitation. The NTP for professional services was issued on April 19, 2013, and as of October 8, 2013, the SSES data has been collected for approximately 54,000 LF of sewer piping and is currently being reviewed in preparation for rehabilitation recommendations. The PER is anticipated to be submitted to the City for review in April of 2014.

#### 3.4.1.8 Citico CSOTF Pump Station Study

The Citico CSOTF Pump Station study is being performed pursuant to Paragraph 22 and Appendix C of the CD. The Citico CSOTF utilizes primary treatment to remove solids from flows above what can be pumped by the adjacent Citico Pump Station before discharging to the Tennessee River. During rain events, the river is frequently above levels that will allow the CSOTF to operate properly. This study will evaluate alternatives and select a recommended solution to improve the treated effluent conveyance of the facility during high river levels. A consultant has been selected and the NTP for professional services was issued on January 24, 2013. The study is currently expected to be completed and submitted to the City for review in January of 2014.

#### 3.4.1.9 Tremont Area Sewer Separation Study

The Tremont Area Sewer Separation study is being performed pursuant to Paragraph 22 and Appendix C of the CD. The Tremont Street drainage basin is served by the sanitary sewer collection system and the Tremont CSOTF. During intense rain events, combined flow in the drainage basin spikes considerably causing capacity issues within both the collection system and the Tremont CSOTF. This study will evaluate the feasibility of separating the combined sewer and sanitary sewer system in the Tremont area, evaluate alternatives and select a recommended solution. A consultant was selected and the City issued the NTP for professional services on March 1, 2013. The study is expected to be completed and submitted to the City for review in January of 2014.

#### 3.4.1.10 Enterprise South Industrial Park ("ESIP") PS, Force Main and Interceptor Rehabilitation

The ESIP PS, Force Main and Interceptor Rehabilitation project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes the replacement and upgrade of four existing pumps to four new 1.0 mgd pumps. Additionally, a new 4,800 LF 16 inch force main will be installed as well as replacing the existing 15 inch sewer with 8,500 LF of 36 inch gravity sewer. Final design of this project is currently underway, with SRF approval of contract documents anticipated in February 2014. The bid opening is anticipated in May of 2014.

#### 3.4.1.11 Orchard Knob Sanitary Pump Station

The Orchard Knob Sanitary Pump Station project is being performed pursuant to Paragraph 22 and Appendix C of the CD. The Orchard Knob Sanitary Pump Station, along with portions of the influent sewer piping, was constructed by the City in 1976. The purpose of the project is to design and construct improvements to increase the reliability and extend the service life of the pump station. The upgrade involves the replacement of the existing pumps, piping, valves, electrical controls and instrumentation, and back-up generator. The NTP for professional services was issued January 24, 2013, and the PER was submitted to the City for review on September 24, 2013. The project is anticipated to proceed to detailed design in January of 2014.

#### 3.4.1.12 Friar's Branch Pump Station Upgrade

The Friar's Branch Pump Station Upgrade is being performed pursuant to Paragraph 22 and Appendix C of the CD. Friar's Branch Pump Station, along with portions of the influent sewer piping, was constructed in 1976. The purpose of this project is to design and construct improvements to increase reliability and extend the service life of the pump station. This project involves replacement of the existing pumps, piping, effluent trough, electrical controls and instrumentation, and addition of an onsite odor control system. The NTP for professional services was issued April 19, 2013, and the PER was submitted to the City for review on October 18, 2013. The project is anticipated to proceed to detailed design in January of 2014.

#### 3.4.1.13 Friar's Branch Basin Improvements

The Friar's Branch Basin Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves rehabilitation of portions of the collection system in the Friar's Branch basin. The sewer basin consists of approximately 232,000 LF of sanitary sewer piping, ranging from 4 to 30 inches in diameter. SSES investigations were conducted on approximately 212,000 LF of sewer piping as of December 10, 2013. The PER is anticipated to be submitted to the City for review in March of 2014.

#### 3.4.1.14 Chattanooga Creek Interceptor Rehabilitation

The Chattanooga Creek Interceptor Rehabilitation project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves the repair of approximately 6,300 LF of 36 inch interceptor gravity sewer pipelines using trenchless rehabilitation techniques. The NTP for professional services was issued on April 18, 2013, and the SSES investigations of the interceptor were completed on September 30, 2013. The PER is anticipated to be submitted to the City for review in February of 2014.

#### 3.4.1.15 Tannery Flats Interceptor Rehabilitation

The Tannery Flats Interceptor Rehabilitation project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project includes the rehabilitation of approximately 6,300 LF of 36 inch interceptor gravity sewer pipelines using trenchless rehabilitation techniques and manhole rehabilitation. NTP for professional services was issued on April 19, 2013, and the SSES investigations were completed on September 16, 2013. The PER was submitted to the

City for review on November 7, 2013. This project is anticipated to proceed to detailed design in January of 2014.

#### 3.4.1.16 East Bank/West Bank Flow Monitoring

The East Bank/West Bank Flow Monitoring project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves the study, design and implementation of a more accurate way to determine discharge volume from the East Bank and West Bank overflow locations. Two alternatives are being developed in parallel. One alternative seeks to monitor the flow utilizing the existing facilities by installing customized metering devices. The other alternative involves modification of the existing facilities to allow for a more traditional flow monitoring approach. NTP for the modification to the existing facilities was issued on January 15, 2013. The PER for this alternative commenced on February 11, 2013, and a pilot of the customized flow monitoring approach in the existing facilities began March 29, 2013. Detailed design of the modification to existing facilities is expected to begin in February of 2014.

### 3.4.2 MBWWTP Projects

#### 3.4.2.1 MBWWTP Hydraulic and Pump Improvements

The MBWWTP Hydraulic and Pump Improvements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. The existing influent and equalization pump stations at the MBWWTP are currently rated at 120 and 140 million gallons per day ("MGD"), respectively. Additionally, both pump stations are at the end of their useful service lives. The purpose of this project is to increase the pumping capacity at both stations in order to maximize flow through secondary treatment by designing and constructing upgrades to the pump stations. In addition to the pump station upgrades, a hydraulic model is being developed for the purpose of planning and design of future projects at the MBWWTP. The main features of the pump station upgrade include rebuilding and upgrading the existing pumps, and upgrading the electrical components, variable frequency drives ("VFDs"), and instrumentation of the pump stations. The NTP for professional services was issued on January 24, 2013. The Hydraulic Model Profile report was submitted to the City for review on November 22, 2013, followed shortly by the PER on December 2, 2013. Detailed design is anticipated to begin in February of 2014 and will continue throughout the first half of 2014.

#### 3.4.2.2 MBWWTP Bar and Fine Screen Replacements

The MBWWTP Bar and Fine Screen Replacements project is being performed pursuant to Paragraph 22 and Appendix C of the CD. Existing screening facilities at the MBWWTP influent pump station are inefficient and at the end of their useful service life. In addition to their age, the fine screens blind often due to rags in the influent. The purpose of this project is to design and construct a solution which will correct the screening issues at the plant. The main features of this project include installing and upgrading the concrete channel, installing new bar screens, upgrading the motor control center panel, upgrading and replacing the screw conveyors, belt conveyor and slide gates, and updating the electrical and instrumentation design. This project is currently under detailed design, with no major milestones achieved or anticipated during the reporting period.

#### 3.4.2.3 MBWWTP Secondary Clarifier Valve Motor Operator Replacement

The MBWWTP Secondary Clarifier Valve Motor Operator Replacement project is required under Paragraph 22 and Appendix C of the CD. This project is in the conceptual development stage and has no updates for the reporting period.

#### 3.4.2.4 MBWWTP Effluent Disinfection System Upgrade

The MBWWTP Effluent Disinfection System Upgrade project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves the design and construction of a new bulk sodium hypochlorite system to replace the existing chlorine gas system at the MBWWTP. The NTP for professional services was issued on January 24, 2013, and the Basis of Design Report was submitted on November 22, 2013. Detailed design began on October 10, 2013, and is expected to continue throughout the first half of 2014.

### 3.4.3 CSO Projects

#### 3.4.3.1 Carter Street CSOTF Sewer Outfall Replacement

The Carter Street CSOTF Sewer Outfall Replacement project is being performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves rehabilitation of approximately 1,800 LF of 30 inch diameter concrete pipe and associated manholes, using trenchless technology where possible. This project is under detailed design, with SRF approval of contract documents expected in April of 2014.

#### 3.4.3.2 Automation of Valve Operators at CSO Facilities

The Automation of Valve Operators at CSO Facilities was performed pursuant to Paragraph 22 and Appendix C of the CD. This project involves the installation of automated sluice gates and control systems at the 19<sup>th</sup> and Carter Street CSOTF to improve operation of the facilities. This project is complete as of May of 2013.

### 3.4.4 Operations Projects

#### 3.4.4.1 South Chickamauga Creek PS and Force Main Upgrade

The South Chickamauga Creek PS and Force Main Upgrade project was performed pursuant to Paragraph 22 and Appendix C of the CD. This project involved the replacement of large diameter valves, HVAC system upgrade, influent gate upgrade and force main modifications to the South Chickamauga Creek sanitary sewer pump station. The required performance certification was provided to SRF on December 10, 2013 and is complete.

#### 3.4.4.2 MBWWTP Telemetry and SCADA Upgrades

The MBWWTP Telemetry and SCADA Upgrades project is being performed pursuant to Paragraph 22 and Appendix C of the CD. Status and alarm conditions for Chattanooga's remote sewage, storm water pumping stations, and CSOTFs are monitored remotely from the MBWWTP. The current radio communications system has been in service since 1994 and is no longer supported by the manufacturer. The system needs to be replaced to maintain operational

sustainability. This project involves updating and installing control and monitoring systems for reacting to and controlling equipment to convey wastewater to the MBWWTP. NTP for professional services was issued on January 24, 2013 and is currently in detailed design. Final plans are anticipated to be submitted for SRF approval in February of 2014, with bid phase services expected to begin in April of 2014.

## 3.5 Long Term Control Plan (“LTCP”) Updates

### 3.5.1 Additional Operational Plan

The Additional Operational Plan is being developed pursuant to Paragraph 24(a) of the CD. This program will result in a plan for the Chattanooga Creek CSO Outfalls (Central Avenue CSO and William Street CSO). The plan will augment Chattanooga’s current CSO control measures with additional long term controls to ensure that discharges from these CSO’s meet State water quality standards. Work on this plan will continue through the first half of 2014, with no major milestones anticipated in the first half of the year.

### 3.5.2 Post Construction Compliance Monitoring Program

The Post Construction Compliance Monitoring Program is being developed pursuant to Paragraph 24(b) of the CD. This program will develop a monitoring program for the Central Avenue and William Street CSO Outfalls to verify compliance with State water quality standards and protection of designated uses. Work on this program will continue through the first half of 2014, with no major milestones anticipated in the first half of the year.

## 3.6 MBWWTP Process Controls Program

The MBWWTP Process Controls Program is being developed pursuant to Paragraph 25 of the CD. The purpose of this project is to minimize the frequency, duration, and volume of any bypass and violation of an effluent limit at the MBWWTP through proper management, operation and maintenance controls. The NTP for professional services was issued on January 24, 2013, and work on the MBWWTP Process Controls Program will continue through 2014. No major milestones are anticipated in the first half of the year.

## 3.7 Green Infrastructure Plan

The Green Infrastructure Plan is being developed pursuant to Paragraph 26 of the CD. This project will result in a master plan for implementing green infrastructure practices and designs in the Combined Sewer System (“CSS”) basin to reduce storm water flows into the CSS. The NTP for professional services was issued on January 24, 2013, and work on the Green Infrastructure Plan will continue through 2014. No major milestones are anticipated in the first half of the year.

## 3.8 Civil Penalty

Compliance with Section VII of the CD requires the payment of the sum of \$476,400 as a civil penalty. Payment of the civil penalty is to be made as follows:

- Cash Payment – 50% of the civil penalty (\$238,200) is to be paid to the United States by FedWire Electronic Funds Transfer (EFT); and
- State Project – the remaining 50% of the civil penalty is to be spent on the state project in accordance to Appendix D of the CD.

### 3.8.1 Cash Payment

In accordance with Paragraph 29 of the CD, the cash payment of \$238,200 was made to EPA on May 17, 2013.

### 3.8.2 Highland Park Green Infrastructure Demonstration Project

The Highland Park Green Infrastructure Demonstration Project is currently being performed pursuant to Appendix D of the CD. The project will retrofit a portion of the Highland Park neighborhood in Chattanooga with green infrastructure through the use of green infrastructure practices such as streetscapes, pervious pavement, tree boxes, bio-swales and bio-retention facilities. A project plan was developed and submitted to the EPA for review and approval on October 24, 2013. Once approved the City will begin working on the detailed design.

## 3.9 SEP – Agawela Drive Stream Restoration

This project is being performed pursuant to Section VIII and Appendix E of the CD. The Agawela Drive Stream Restoration targets a tributary of the South Chickamauga Creek, which is currently on the 303(d) list for habitat alteration and sediment. The project involves restoration of a minimum of 1,500 LF of the tributary, and is designed to significantly improve water quality of both the tributary and South Chickamauga Creek. The NTP for professional services was issued on January 24, 2013, and the PER was submitted on May 22, 2013. Detailed design of the restoration began on October 16, 2013, and is currently underway. Conservation easements are currently being drafted and are anticipated to be obtained in the first half of 2014.

## 4.0 Additional Work

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According to paragraph 39(c) of the CD, the City is required to include in this Report “[a]ny additional information Chattanooga determines is appropriate to demonstrate that Chattanooga is implementing the remedial actions required under this Consent Decree in an adequate and timely manner.” The purpose of this section is to address this requirement of the CD.

In addition to the work progress achieved in accordance with the CD as described in the previous sections, the City continued to implement remedial and improvement efforts under existing Capital Improvement and CMOM Programs during the reporting period. The work described below is aimed at assessing and improving Chattanooga’s Interceptor Sewer System (“ISS”) and while not required by the CD, these programs directly impact Chattanooga’s on-going CD compliance.

### 4.0 Annual Gravity Line Preventive Maintenance Program

One key component of Chattanooga’s CMOM Program is the Annual Gravity Line Preventive Maintenance Program, which provides for preventive maintenance of sanitary sewer pipes and manholes, including hydraulic and mechanical cleaning, root control, pipeline rehabilitation, access management and routine inspections in order to reduce the occurrence of SSOs. The implementation schedule is based primarily on the highest I/I rates. Table 4-1 below includes the quantities achieved in the reporting period April 24, 2013 to December 31, 2013:

**Table 4-1**  
Annual Gravity Line Preventive Maintenance Quantities

Item	Quantity
Line Cleaned (ft)	1,358,772
Line CCTV (ft)	416,146
Lines Replaced (ft)	1,339
Lines Smoke Tested (ft)	48,841
Easement Clearing (ft)	19,418

### 4.1 201 Facilities Plan Update

This project will provide an update to the Chattanooga, Tennessee-Georgia Regional Wastewater Facilities Plan (“201 Plan”), which was previously updated in 2008. The updated

201 Plan will also be used to coordinate future SRF Loan Program projects. This plan is one of the master planning documents that the City will use to manage the technical solutions derived from the work required by the CD. The City expects to utilize the hydraulic model. The 201 Plan update is currently being developed and is anticipated to be completed in June of 2014.

## **4.2 Backup Electrical Power at MBWWTP and Other ISS Sites**

The City has recently completed an analysis of the electrical power feeds at each of their wastewater and storm water pumping stations and combined sewer overflow facilities located within WRD's service area. The result of this analysis is a list of priority projects that will be executed approximately over the next 5 years to address electrical power or backup pumping redundancy at each location. These sites include several sanitary sewer and storm water pumping stations throughout the ISS as well as the MBWWTP. These projects will serve to increase operational reliability especially during emergency situations. It is anticipated that these projects will be advertised for bidding in the summer of 2014.

# Appendix A

## Project Schedules Gantt Chart

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Activity ID	Activity Name	Original Duration	Start	Finish	2010				2011				2012				2013				2014		
					Q3	Q4	Q1	Q2	Q3														
<b>Chattanooga Consent Decree Deliverables Schedule</b>																							
<b>Program Milestones</b>																							
<b>Program Milestones</b>																							
<b>Consent Decree Effective Date</b>																							
<b>PROGRAM MILESTONES</b>																							
<b>Section II - Applicability</b>																							
<b>Para 5 - Distribute CD</b>																							
<b>Distribute Consent Decree</b>																							
<b>Para 5 - Distribute CD</b>																							
<b>Section V - Review / Certification of Deliverables</b>																							
<b>Para 9 - Public Document Repository</b>																							
<b>Public Document Repository</b>																							
<b>Para 9 - Public Document Repository Development</b>																							
<b>Section VI - Compliance Requirements</b>																							
<b>Para 19 - Community Input Plan</b>																							
<b>Community Input Plan</b>																							
<b>Para 19 - Community Input Plan</b>																							
BC1010	Community Input Plan Development	215	24-Apr-13 A	24-Nov-13 A																			
BC1020	Community Input Plan Submitted to WWRAB	0		25-Nov-13 A																			
<b>Para 20 - CMOM</b>																							
<b>CMOM-Sewer Overflow Response Protocol (SORP)</b>																							
<b>Consent Decree Duration (7 Months)</b>																							
<b>Project Procurement</b>																							
<b>Planning Phase</b>																							
<b>Public Document Repository</b>																							
<b>EPA and TDEC Approvals</b>																							
<b>CMOM-Emergency Response Plan</b>																							
<b>Consent Decree Duration (19 Months)</b>																							
<b>Project Procurement</b>																							
<b>Planning Phase</b>																							
<b>Public Document Repository</b>																							
<b>EPA and TDEC Approvals</b>																							
<b>CMOM-Fats, Oils, and Grease (FOG) Mgmt Plan</b>																							
<b>Consent Decree Duration (13 Months)</b>																							
<b>Project Procurement</b>																							
<b>Planning Phase</b>																							
<b>Public Document Repository</b>																							
<b>EPA and TDEC Approvals</b>																							
<b>CMOM-Gravity Line Preventive Maint. Program</b>																							
<b>Consent Decree Duration (13 Months)</b>																							



- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Baseline Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	2010				2011				2012				2013				2014		
					Q3	Q4	Q1	Q2	Q3														
<b>Focused SSES and Rehab - Dobb's Branch 3</b>																							
	Consent Decree Duration (79 Months)	2407	12-Dec-12 A	25-Nov-19																			
	Project Procurement	113	12-Dec-12 A	18-Apr-13 A																			
	Planning Phase	260	19-Apr-13 A	01-Feb-14																			
	Engineering Phase	226	02-Feb-14	15-Sep-14																			
	Construction Bidding Phase	90	16-Sep-14	14-Dec-14																			
	Construction Phase	340	15-Dec-14	19-Nov-15																			
	Project Completion Report	30	20-Nov-15	19-Dec-15																			
<b>Focused SSES and Rehab - South Chick Creek 1</b>																							
	Consent Decree Duration (79 Months)	2407	12-Dec-12 A	25-Nov-19																			
	Project Procurement	128	12-Dec-12 A	18-Apr-13 A																			
	Planning Phase	326	29-Apr-13 A	01-Apr-14																			
	Engineering Phase	208	02-Apr-14	26-Oct-14																			
	Construction Bidding Phase	150	27-Oct-14	25-Mar-15																			
	Construction Phase	270	26-Mar-15	20-Dec-15																			
	Project Completion Report	30	21-Dec-15	19-Jan-16																			
<b>Focused SSES and Rehab - South Chick Creek 5</b>																							
	Consent Decree Duration (79 Months)	2407	12-Dec-12 A	25-Nov-19																			
	Project Procurement	128	12-Dec-12 A	18-Apr-13 A																			
	Planning Phase	343	18-Apr-13 A	01-Feb-14																			
	Engineering Phase	187	02-Feb-14	07-Aug-14																			
	Construction Bidding Phase	105	08-Aug-14	20-Nov-14																			
	Construction Phase	168	21-Nov-14	07-May-15																			
	Project Completion Report	30	08-May-15	06-Jun-15																			
<b>Focused SSES and Rehab - South Chick Creek 16</b>																							
	Consent Decree Duration (79 Months)	2407	07-Sep-12 A	25-Nov-19																			
	Project Procurement	1	07-Sep-12 A	07-Sep-12 A																			
	Planning Phase	201	07-Sep-12 A	26-Mar-13 A																			
	Engineering Phase	327	07-Sep-12 A	06-Aug-13 A																			
	Construction Bidding Phase	90	07-Aug-13 A	01-Feb-14																			
	Construction Phase	365	02-Feb-14	01-Feb-15																			
	Project Completion Report	30	02-Feb-15	03-Mar-15																			
<b>Para 22 - Early Action Capital Improvement Projects</b>																							
<b>SSO and Wet Weather Volume Reduction Projects</b>																							
<b>DuPont Phase I - PS and Collection Sys. Improvements</b>																							
	Consent Decree Duration (60 Months)	1827	12-Dec-12 A	24-Apr-18																			



- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Baseline Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	2010		2011				2012				2013				2014				
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
<b>Consent Decree Duration (36 Months)</b>					1098																		
<b>Project Procurement</b>					0																		
<b>Planning Phase</b>					190																		
<b>Engineering Phase</b>					372																		
<b>Construction Bidding Phase</b>					80																		
<b>Construction Phase</b>					369																		
<b>Project Completion Report</b>					30																		
<b>Pineville Road Sewer Basin Improvements</b>					1327																		
<b>Consent Decree Duration (36 Months)</b>					1098																		
<b>Project Procurement</b>					1																		
<b>Planning Phase</b>					168																		
<b>Engineering Phase</b>					1098																		
<b>Construction Bidding Phase</b>					143																		
<b>Construction Phase</b>					182																		
<b>Project Completion Report</b>					30																		
<b>Citico Creek Interceptor Rehab</b>					1327																		
<b>Consent Decree Duration (36 Months)</b>					1098																		
<b>Project Procurement</b>					0																		
<b>Planning Phase</b>					63																		
<b>Engineering Phase</b>					390																		
<b>Construction Bidding Phase</b>					31																		
<b>Construction Phase</b>					196																		
<b>Project Completion Report</b>					30																		
<b>Highland Park Sewer Rehab</b>					1960																		
<b>Consent Decree Duration (60 Months)</b>					1827																		
<b>Project Procurement</b>					128																		
<b>Planning Phase</b>					301																		
<b>Engineering Phase</b>					172																		
<b>Construction Bidding Phase</b>					89																		
<b>Construction Phase</b>					199																		
<b>Project Completion Report</b>					30																		
<b>Citico CSOTF PS Improvement Study</b>					1286																		
<b>Consent Decree Duration (36 Months)</b>					1098																		
<b>Project Procurement</b>					97																		
<b>Planning Phase</b>					360																		
<b>Project Completion Report</b>					60																		



- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Baseline Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	2010				2011				2012				2013				2014	
					Q3	Q4	Q1	Q2	Q3	Q4												
<b>Tremont Area Sewer Separation Study</b>																						
	Consent Decree Duration (36 Months)	1098	24-Apr-13 A	25-Apr-16																		
	Project Procurement	0	07-Sep-12 A	07-Sep-12 A																		
	Planning Phase	267	01-Mar-13 A	01-Jan-14																		
	Project Completion Report	30	02-Jan-14	31-Jan-14																		
<b>ESIP PS, Force Main and Interceptor Rehab</b>																						
	Consent Decree Duration (36 Months)	1098	24-Apr-13 A	25-Apr-16																		
	Project Procurement	0	07-Sep-12 A	07-Sep-12 A																		
	Planning Phase	41	25-Feb-11 A	07-Sep-12 A																		
	Engineering Phase	1008	08-Apr-11 A	28-Feb-14																		
	Construction Bidding Phase	263	01-Mar-14	18-Nov-14																		
	Construction Phase	274	19-Nov-14	19-Aug-15																		
	Project Completion Report	30	20-Aug-15	18-Sep-15																		
<b>Orchard Knob PS Improvements</b>																						
	Consent Decree Duration (60 Months)	1827	24-Apr-13 A	24-Apr-18																		
	Project Procurement	97	18-Oct-12 A	22-Jan-13 A																		
	Planning Phase	334	23-Jan-13 A	31-Dec-13																		
	Engineering Phase	157	31-Dec-13	05-Jun-14																		
	Construction Bidding Phase	118	06-Jun-14	01-Oct-14																		
	Construction Phase	372	02-Oct-14	08-Oct-15																		
	Project Completion Report	30	09-Oct-15	07-Nov-15																		
<b>Friar's Branch PS Improvements</b>																						
	Consent Decree Duration (60 Months)	1827	24-Apr-13 A	24-Apr-18																		
	Project Procurement	128	12-Dec-12 A	18-Apr-13 A																		
	Planning Phase	248	19-Apr-13 A	31-Dec-13																		
	Engineering Phase	227	31-Dec-13	14-Aug-14																		
	Construction Bidding Phase	118	15-Aug-14	10-Dec-14																		
	Construction Phase	488	11-Dec-14	11-Apr-16																		
	Project Completion Report	30	12-Apr-16	11-May-16																		
<b>Friar's Branch Basin Improvements</b>																						
	Consent Decree Duration (60 Months)	1827	24-Apr-13 A	24-Apr-18																		
	Project Procurement	128	12-Dec-12 A	18-Apr-13 A																		
	Planning Phase	313	19-Apr-13 A	25-Feb-14																		
	Engineering Phase	381	26-Feb-14	13-Mar-15																		
	Construction Bidding Phase	150	14-Mar-15	10-Aug-15																		
	Construction Phase	271	11-Aug-15	07-May-16																		



- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Baseline Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	2010				2011				2012				2013				2014		
					Q3	Q4	Q1	Q2	Q3														
<b>Operations Projects</b>																							
<b>South Chick Creek PS and Force Main Upgrade</b>																							
	Consent Decree Duration (36 Months)	1098	24-Apr-13 A	25-Apr-16																			
	Project Procurement	66	07-Sep-12 A	11-Nov-12 A																			
	Planning Phase	0	12-Nov-12 A	12-Nov-12 A																			
	Engineering Phase	0	12-Nov-12 A	12-Nov-12 A																			
	Construction Bidding Phase	0	12-Nov-12 A	12-Nov-12 A																			
	Construction Phase	5	12-Nov-12 A	16-Nov-12 A																			
	Project Completion Report	409	17-Nov-12 A	31-Dec-13																			
<b>MBWWTP Telemetry and SCADA Upgrades</b>																							
	Consent Decree Duration (60 Months)	1827	24-Apr-13 A	24-Apr-18																			
	Project Procurement	97	18-Oct-12 A	22-Jan-13 A																			
	Planning Phase	325	09-Oct-12 A	23-Jun-13 A																			
	Engineering Phase	293	24-Jun-13 A	17-Apr-14																			
	Construction Bidding Phase	89	18-Apr-14	15-Jul-14																			
	Construction Phase	381	16-Jul-14	31-Jul-15																			
	Project Completion Report	30	01-Aug-15	30-Aug-15																			
<b>Para 24 - Long Term Control Plan Updates</b>																							
<b>LTCP-Post Const. Compliance Monitoring Program</b>																							
	Consent Decree Duration (19 Months)	580	24-Apr-13 A	24-Nov-14																			
	Project Procurement	351	15-Jul-12 A	01-Jul-13 A																			
	Planning Phase	465	02-Jul-13 A	09-Oct-14																			
	Public Document Repository	46	10-Oct-14	24-Nov-14																			
	EPA and TDEC Approvals	67	25-Nov-14	30-Jan-15																			
<b>LTCP-Additional Operational Plan</b>																							
	Consent Decree Duration (48 Months)	1462	24-Apr-13 A	24-Apr-17																			
	Project Procurement	364	15-Jul-13 A	13-Jul-14																			
	Planning Phase	970	14-Jul-14	09-Mar-17																			
	Public Document Repository	46	10-Mar-17	24-Apr-17																			
	EPA and TDEC Approvals	67	25-Apr-17	30-Jun-17																			
<b>Para 26 - Green Infrastructure Plan</b>																							
<b>Green Infrastructure Master Plan for CSO Basins</b>																							
	Consent Decree Duration (24 Months)	731	24-Apr-13 A	24-Apr-15																			
	Project Procurement	97	18-Oct-12 A	22-Jan-13 A																			
	Planning Phase	776	23-Jan-13 A	09-Mar-15																			
	Public Document Repository	46	10-Mar-15	24-Apr-15																			



- Actual Level of Effort
- Actual Work
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- Baseline Milestone

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