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MAYOR



## METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

July 29, 2014

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Re: DOJ Case No. 90-5-1-1-09000  
Submittal of Quarterly Progress Report

Gentlemen and Madam:

In accordance with the provisions of the Consent Decree, Section XIX (Reporting Requirements), Subsection A, herewith we are transmitting the Quarterly Progress report which covers the time period from April 1, 2014 through June 30, 2014.



If you need assistance or accommodations, please contact Metro Water Services,  
William E. Coleman, Jr., at (615) 862-4862, 1600 Second Avenue North, Nashville, TN 37208.

A copy of the report is concurrently being placed in the Public Document Repository (PDR).

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.

If you have any questions concerning this report please contact me.

Sincerely,



Scott A. Potter, P.E.  
Director



Ron C. Taylor, P.E.  
Overflow Abatement Program Director  
Engineering Division

Cc: Mr. David Tucker, Assistant Director, Operations  
Mr. Cyrus Q. Toosi, P.E., Assistant Director / Chief Engineer, Engineering  
Mr. Gregory A. Ballard, P.E., Engineer 3  
Mr. Thomas G. Cross, Associate Director, Metropolitan Department of Law

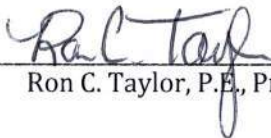
## Clean Water Nashville Overflow Abatement Program

Metropolitan Government of Nashville and Davidson County  
Department of Water and Sewerage Services

# CONSENT DECREE QUARTERLY PROGRESS REPORT

**April 1 through June 30, 2014**

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.

  
\_\_\_\_\_  
Ron C. Taylor, P.E., Program Director

7/29/14

\_\_\_\_\_  
Date

# Table of Contents

<b>Section 1</b>	<b>Introduction .....</b>	<b>1-1</b>
1.1	Additional Programs .....	1-1
1.2	Report Organization .....	1-2
<b>Section 2</b>	<b><i>Corrective Action Plan/Engineering Report</i>.....</b>	<b>2-1</b>
2.1	Completed CAP/ER Projects.....	2-1
2.2	CAP/ER Projects under Construction.....	2-2
2.3	CAP/ER Projects under Design.....	2-4
2.4	Upcoming CAP/ER Projects .....	2-6
<b>Section 3</b>	<b><i>Long Term Control Plan</i>.....</b>	<b>3-1</b>
3.1	Completed LTCP Projects.....	3-1
3.2	LTCP Projects under Construction.....	3-2
3.3	LTCP Projects under Design .....	3-2
3.4	Upcoming LTCP Projects .....	3-2
<b>Section 4</b>	<b>Additional Measures to Maintain Consent Decree Compliance .....</b>	<b>4-1</b>
4.1	2013 Annual Sewer Rehabilitation.....	4-1
4.2	2014 Annual Rehabilitation – Whites Creek Trunk .....	4-1
<b>Section 5</b>	<b>Quarterly SSO and Dry Weather CSO Report.....</b>	<b>5-1</b>

## List of Tables

Table 5-1	Quarterly SSO Report .....	5-2
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## Appendix

Appendix A	Schedule for Current and Upcoming Projects
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# Section 1

## Introduction

On March 12, 2009, the Metropolitan Government of Nashville and Davidson County, Tennessee (Metro), entered into a Consent Decree with the United States and the State of Tennessee. To fulfill the reporting requirements defined in Section XIX.A. of the Consent Decree, Metro has prepared this *Quarterly Progress Report*, which includes the following information:

1. Information on sanitary sewer overflows (SSOs) and dry-weather combined sewer system overflows (CSOs) occurring during the reporting period
2. A description of the work conducted during the reporting period to comply with the requirements of the Consent Decree
3. The anticipated work for the upcoming quarter to comply with the requirements of the Consent Decree
4. Any additional information necessary to demonstrate that Metro is adequately implementing the work

Work, as defined in the Consent Decree, includes all activities that Metro is required to perform under the Consent Decree. For the purposes of this *Quarterly Progress Report*, however, the focus will remain on current and upcoming work related to the *Corrective Action Plan/Engineering Report (CAP/ER)*, the *Long Term Control Plan (LTCP)*, and additional activities to address SSOs and CSOs.

### 1.1 Additional Programs

Several additional programs, listed below, were also required to be developed or implemented as part of the Consent Decree. Any modifications or updates to these programs will be identified in Section 4 of this report.

- *Spill and Overflow Response Plan (Section VII.C.2)* – Metro continues to operate under the current *Spill and Overflow Response Plan (SORP)*. A review of the SORP will be conducted annually with any proposed changes submitted for U.S. Environmental Protection Agency (EPA) review and approval by June 1 each year.
- *Inter-jurisdictional Agreement Program (Section VII.C.3)* – All required inter-jurisdictional agreements are now in place, and Metro will continue to operate under these agreements, including monitoring peak flows received.
- *Capacity Assurance Plan (Section VII.C.4)* – The *Capacity Assurance Plan* will continue to be applied as a tracking/approval tool for new development/flow in the sanitary sewer system (SSS).
- *Pump Station Operation Plan for Power Outages (Section VII.C.5)* – All projects identified in the *Pump Station Operation Plan for Power Outages* were completed prior to the start of the reporting period.

- *Nine Minimum Controls Compliance Plan* (Section VII.D.1) – All elements of the *Nine Minimum Controls Compliance Plan* (NMC) were completed in 2012.
- Supplemental Environmental Projects (Section VIII) – The Supplemental Environmental Projects (SEPs) required in the Consent Decree were completed in 2010.

## 1.2 Report Organization

This *Quarterly Progress Report* is organized as follows:

Section 1 – Introduction

Section 2 – *Corrective Action Plan/Engineering Report*

Section 3 – *Long Term Control Plan*

Section 4 – Additional Measures to Maintain Consent Decree Compliance

Section 5 – Quarterly SSO and Dry-Weather CSO Report

## Section 2

### *Corrective Action Plan/Engineering Report*

To address the conditions causing overflows in their sanitary sewer system, Metro developed a *Corrective Action Plan / Engineering Report (CAP/ER)* that was submitted to EPA and the Tennessee Department of Environment and Conservation (TDEC) on September 11, 2011.

The CAP/ER development began with a characterization of Metro's sanitary sewer system through extensive monitoring and modeling to understand the existing system's limitations. The need for improvements to address both current and future sewer capacity needs was then assessed, and potential alternatives were evaluated to select efficient and cost effective solutions. These recommended projects, which include infrastructure rehabilitation, additional conveyance capacity, and storage of wet weather flows, are presented in the CAP/ER.

While EPA and TDEC review the report, Metro continues to move forward with the implementation of multiple projects presented in the CAP/ER. These projects are described in the following subsections, and a schedule illustrating current and upcoming work on CAP/ER projects is presented as Appendix A.

#### 2.1 Completed CAP/ER Projects

The following projects, discussed in the CAP/ER, achieved substantial completion prior to the start of the reporting period:

- Dry Creek Wastewater Treatment Plant Optimization
- Smith Springs Equalization Storage
- Barker Road / Omohundro Equalization Storage Phase I
- West Park Equalization Storage Phase I
- Mill Creek 36-inch Trunk Sewer System Rehabilitation
- Rockwood Conveyance Improvements
- Holiday Travel Park Gravity Conversion
- Whites Creek Wastewater Treatment Plant (WWTP) Optimization and Disinfection Project
- Whites Creek Wastewater Pumping Station
- Dodson Chapel Equalization Tank and Wastewater Pumping Station Expansion

## 2.2 CAP/ER Projects under Construction

The following projects, discussed in the CAP/ER, were under construction during the reporting period:

- **Joelton Rehabilitation**

The Joelton Rehabilitation project included the evaluation of approximately 38,700 linear feet of gravity sewer and almost 200 manholes. Condition assessment data obtained in the area indicated that manholes appeared to be the primary source of infiltration and inflow, and, therefore, the resulting design focused on the repair of manholes within the project area. The project consists of the replacement of approximately 17 manholes and curtain grouting, miscellaneous structural enhancements, or other improvements for the remaining manholes in the project area based on their existing condition. Additionally, several service laterals and cleanouts are being repaired.

Design began on January 2, 2013, and was completed in June 2013. Advertisement for construction began on July 1, 2013. Construction activities began on October 28, 2013, and the project achieved substantial completion on June 25, 2014.

- **Neely's Bend Rehabilitation**

Based on the condition assessment data collected in the area adjacent to the Neely's Bend Rehabilitation project (as presented in the CAP/ER), the area targeted for rehabilitation was extended to include all gravity sewers that drain directly to the Neely's Bend Pump Station. Approximately 31,400 linear feet of gravity sewer and associated manholes were evaluated during design. The scope for construction consists of cured-in-place pipe lining of approximately 22,000 linear feet of sewer, rehabilitation of more than 110 manholes, and approximately 250 service renewals using cured-in-place pipe lining and open-cut techniques.

Design began on September 27, 2012, and was completed in June 2013. Advertisement for construction began on July 1, 2013, with bids due on August 2, 2013. However, following a protest regarding the bid, the project was re-advertised for bids, and new bids were received on October 14, 2013. Construction activities commenced on December 16, 2013, and are anticipated to continue during the upcoming quarter.

- **Shelby Park Rehabilitation – Area 1 – Virginia Avenue**

This rehabilitation project is the first of multiple projects that will be conducted in the Shelby Park Rehabilitation project area. The area evaluated for rehabilitation included approximately 54,400 linear feet of gravity sewer. The resulting construction project consists of cured-in-place pipe lining of over 50,000 linear feet of gravity sewer, rehabilitation of associated manholes, and over 700 service renewals using cured-in-place pipe lining or open cut techniques.

Design began on September 11, 2012, and was completed in June 2013. Advertisement for construction began on August 14, 2013, and the contract was awarded in September 2013. Construction activities began on January 13, 2014, and are expected to continue during the upcoming quarter.



- Lakewood Water and Sewer Replacement

The design of sewer, water, and stormwater improvements in the Lakewood area is complete. Advertisement for a two-step procurement process began during the 2<sup>nd</sup> Quarter of 2013. Bids for construction from the three pre-qualified contractors were received on October 4, 2013, and the Notice of Award was issued on October 17, 2013. Construction activities began on January 27, 2014, and are anticipated to continue during the upcoming quarter.

This project represents the first of two phases of work in the Lakewood area.

- Mill Creek / Opryland Equalization Facility – Phase II

Phase II of the Mill Creek / Opryland Equalization Facility project includes the construction of approximately 19 million gallons of additional storage. Design began on August 10, 2012, and was complete, including obtaining the required permits and approvals, in July 2013. Advertisement for construction began on August 14, 2013, and the contract was awarded in September 2013. Construction activities began on January 8, 2014, and are expected to continue during the upcoming quarter.

- Cowan / Riverside Rehabilitation – Area 1 – Jones Avenue

This rehabilitation project is the first of multiple projects that will be conducted in the Cowan / Riverside Rehabilitation project area. The area evaluated for rehabilitation included approximately 50,200 linear feet of gravity sewer and 270 manholes. The resulting construction project consists of cured-in-place pipe lining of over 40,000 linear feet of gravity sewer, rehabilitation of associated manholes, and over 630 service renewals using cured-in-place pipe lining or open cut techniques.

Design began on February 4, 2013, and was completed during September 2013. Advertisement for construction began on October 7, 2013, and bids were received on November 8, 2013. Construction began on January 29, 2014, and is anticipated to continue during the upcoming quarter.

- Shelby Park Rehabilitation – Area 2 – Norvel Avenue

This rehabilitation project is the second of multiple projects to be conducted in the Shelby Park Rehabilitation project area. The area evaluated for rehabilitation included approximately 57,000 linear feet of gravity sewer and 330 manholes. The resulting construction project consists of cured-in-place pipe lining of approximately 57,000 linear feet of gravity sewer, rehabilitation of associated manholes, and over 700 service renewals using cured-in-place pipe lining or open cut techniques.

Design began on July 3, 2013, and was completed in January 2014. Advertisement for construction began on February 5, 2014, and the contract was awarded in March 2014. Construction began on May 12, 2014, and is expected to continue through the upcoming quarter.

## 2.3 CAP/ER Projects under Design

The following projects, discussed in the CAP/ER, were under design during the reporting period:

- West Park Equalization Facility Phase II

In order to minimize impacts to the surrounding neighborhood, Phases II and III of the West Park Equalization Facility were combined into a single design and construction project. Design began in May 2012; however, during preliminary design it was determined that potential flood impacts to adjacent properties required an alternate site for the equalization tank. Following additional investigation, Metro selected the adjacent park site to accommodate the required storage volume. Design efforts for the equalization tank were restarted during the 1<sup>st</sup> Quarter of 2013 and are expected to be completed in the upcoming quarter.

When constructed, the additional improvements at the West Park Equalization Facility are expected to add 21 million gallons of storage and expanded pumping capacity.

- Dodson Chapel Pipe Improvements

Following the completion of the Rockwood Conveyance Improvements project and subsequent updates to the hydraulic model in this area, evaluation of the collection system in the Dodson Chapel Pipe Improvements area indicated that the extents of the proposed project could be reduced while still addressing overflows. The current project consists of increasing the conveyance capacity of approximately 3,400 linear feet of sewer. Design began on October 8, 2012. In mid-2013, an analysis of the 60 percent design and the associated Dodson Chapel Equalization Tank and Wastewater Pumping Station Expansion project indicated that an unacceptable level of surcharging is predicted upstream of the project area. To address this, the existing design was reviewed and modified to replace the proposed inverted siphon with an aerial crossing. Design activities were completed in June 2014. Permitting and easement acquisition activities are anticipated to continue through the upcoming quarter.

- Brick Church Pike Pipe Improvements

The Brick Church Pike Pipe Improvements project, as presented in the CAP/ER, consisted of increasing the conveyance capacity of approximately 15,500 linear feet of gravity sewer. Following the analysis of additional flow monitoring conducted in the spring of 2013, the project's scope was revised to include approximately 10,000 linear feet of pipe replacement to increase the sewer's conveyance capacity and approximately 3,000 linear feet of rehabilitation of the existing sewer. Additional rehabilitation activities are anticipated to take place in the upstream portion of the project area, including the small diameter sewers, through a separate, future project, the Tuckahoe and Nesbitt Rehabilitation project.

Proposals for design of the Brick Church Pipe Improvements project were submitted on January 11, 2013, and design for this project began on July 25, 2013. Design activities are anticipated to continue through the upcoming quarter.

- Cowan / Riverside Rehabilitation – Area 2 – Dickerson Pike

This rehabilitation project is the second of multiple projects that will be conducted in the Cowan / Riverside Rehabilitation project area. The area evaluated for rehabilitation included

approximately 51,400 linear feet of gravity sewer and 290 manholes. The resulting construction project consists of cured-in-place pipe lining of approximately 42,000 linear feet of gravity sewer, rehabilitation of associated manholes, and over 400 service renewals using cured-in-place pipe lining or open cut techniques.

Design began on July 3, 2013, and was completed in March 2014. Advertisement for construction began on March 14, 2014, and a contract was awarded in May 2014. Construction is anticipated to commence during the upcoming quarter.

- Highway 100 / Tyne Boulevard – Trimble Rehabilitation

The Highway 100 / Tyne Boulevard Pipe Improvements project, as presented in the CAP/ER, consisted of approximately 18,500 linear feet of conveyance improvements to alleviate overflows and surcharging in the existing gravity sewer. A detailed review of the existing sewer route and flows in the area indicated that rehabilitation to reduce wet weather flows in this area may be a viable option to address overflows. Because of this, the Highway 100 / Tyne Boulevard Pipe Improvements project has been delayed to allow time for the completion of the Highway 100 / Tyne Boulevard – Trimble Rehabilitation project. The area evaluated for rehabilitation included approximately 63,000 linear feet of gravity sewer and 300 manholes. The resulting construction project consists of cured-in-place pipe lining of approximately 32,000 linear feet of gravity sewer, rehabilitation of associated manholes, and approximately 170 service renewals using cured-in-place pipe lining or open cut techniques.

Design began on September 17, 2013, and was completed in March 2014. Advertisement for construction began on April 23, 2014, and the contract was awarded in June 2014. Construction activities are anticipated to begin during the upcoming quarter.

- Shelby Park Rehabilitation – Area 3 – Greenland Avenue

This rehabilitation project is the third of multiple projects that will be conducted in the Shelby Park Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 49,000 linear feet of gravity sewer and 260 manholes. Design began on December 5, 2013, and was completed in May 2014. Advertisement for construction is anticipated to begin during the upcoming quarter.

- Davidson and Brook Hollow Sewer Improvements

The Davidson and Brook Hollow Sewer Improvements project, referred to as the 622 Davidson Rehabilitation in the CAP/ER, included the evaluation of approximately 53,800 linear feet of gravity sewer and 300 manholes for rehabilitation. Additional condition assessment data, including flow monitoring and smoke testing data, has also been collected and analyzed. That analysis indicated that approximately 1,900 linear feet of sewer in this area requires upsizing in order to address the associated overflow. The project description was revised to include both the upsizing as well as repair of several adjacent pipe segments. Design began on April 24, 2014, and is anticipated to continue through the upcoming quarter.

## 2.4 Upcoming CAP/ER Projects

The following projects, discussed in the CAP/ER, are anticipated to begin procurement for design services during the upcoming quarter:

- 28<sup>th</sup> Avenue Rehabilitation – Area 1

The 28<sup>th</sup> Avenue Rehabilitation – Area 1 project is the first of multiple projects that will be conducted in the 28<sup>th</sup> Avenue Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 44,000 linear feet of gravity sewer and associated manholes. A preliminary review of the condition assessment data collected in the project area indicated several locations that require dye testing and closed-circuit television (CCTV) inspection. Procurement of design services is anticipated to begin in the upcoming quarter following the completion of the additional data collection.

- Davidson Branch Pump Station and Equalization Facility

The Davidson Branch Pump Station and Equalization Facility project, referred to as the Davidson Branch Equalization Storage project in the CAP/ER, includes the relocation of an existing duty station and construction of a wastewater storage tank and wet weather pumping station on a property adjacent to the existing Davidson Branch Pump Station. Property acquisition, which has been ongoing for the previous 27 months, has continued throughout the reporting period. Procurement of design services is anticipated to begin in the upcoming quarter.

- Shelby Park Rehabilitation – Area 4 – Brush Hill Road

This rehabilitation project is the fourth of multiple projects that will be conducted in the Shelby Park Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 47,400 linear feet of gravity sewer and 260 manholes. Procurement of design services is anticipated to begin in the upcoming quarter.

- Cowan / Riverside Rehabilitation – Area 3

This rehabilitation project is the third of multiple projects that will be conducted in the Cowan / Riverside Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 48,100 linear feet of gravity sewer and 260 manholes. Procurement of design services is anticipated to begin in the upcoming quarter.

In addition to the projects listed above, Metro continues to conduct planning activities for multiple projects including acquiring necessary land to site facilities and collecting sewer condition assessment data.

## Section 3

### *Long Term Control Plan*

To reduce the occurrence and impact of combined sewer overflows into the Cumberland River, Metro developed an update to the *Long Term Control Plan* (LTCP), that was submitted to EPA and TDEC on September 11, 2011.

The LTCP followed EPA's *Combined Sewer Overflow Control Policy* in implementing a rigorous process for identifying and evaluating alternatives to reduce combined sewer overflows. Consideration included financial and engineering analyses to develop recommended improvements in conjunction with four key objectives that were established early in the planning process:

- Improve the water quality of the Cumberland River by reducing impacts from combined sewer overflows
- Provide a level of CSO control that results in improvements in water quality that are consistent with the community's use of the Cumberland River
- Align investment in CSO controls to be commensurate with the contribution of CSOs to water quality relative to other sources
- Consider the impact of the overall program cost on the ratepayers in the current economic climate

These goals and objectives were developed based on feedback provided by representatives from MWS, local government, and the community through a public engagement campaign developed to solicit input from affected stakeholders.

Metro continues to work with EPA and TDEC to address preliminary feedback on the LTCP. Metro has provided additional information pertaining to the proposed LTCP's compliance with Tennessee's water quality criteria, including additional modeling data that assessed the impact of CSO discharges on the Cumberland River. Additional modeling analyses, including updated CORMIX modeling, have been conducted for the Washington CSO location. Discussions have been on-going throughout the reporting period and are expected to continue through the upcoming quarter.

As review of the LTCP continues, Metro continues to move forward with the implementation of several projects presented in the LTCP. These projects are described in the following subsections, and a schedule illustrating current and upcoming work on LTCP projects is presented as Appendix A.

#### 3.1 Completed LTCP Projects

The following projects, discussed in the LTCP, were completed prior to the start of the reporting period:

- Broadway Improvements
- Washington CSO Facility Improvements

- Van Buren Improvements
- Driftwood Equalization Basin Expansion

## 3.2 LTCP Projects under Construction

The following project, discussed in the LTCP, was under construction during the reporting period:

- Apex Sewer Corrections

The Apex Sewer Corrections project consists of the installation of approximately 700 linear feet of new gravity sewer and the rehabilitation of approximately 2,300 linear feet of existing gravity sewer in the Washington CSO basin.

Design began on March 25, 2013, and was completed in September 2013. Advertisement for construction began on October 31, 2013, and the contract was awarded in December 2013. Construction activities began on February 10, 2014, and are expected to be substantially complete during the upcoming quarter.

## 3.3 LTCP Projects under Design

There are currently no LTCP projects under design.

## 3.4 Upcoming LTCP Projects

No additional LTCP projects are anticipated to begin design during the upcoming quarter.

Work is nearing completion on the *Central Wastewater Treatment Plant Optimization Study* which will determine the maximum capacity for secondary treatment that can be achieved without constructing additional aeration basins or clarifiers. In order to achieve the maximum capacity, certain enhancements to the facility will be required, such as replacing the aeration system, modifying the disinfection process, and addressing hydraulic deficiencies. A draft of the report has been under review by Metro during the current quarter. It is anticipated that the report will be posted to the Clean Water Nashville website during the upcoming quarter. Work is underway to convert the recommendations of the study into a scope of work that will be utilized for soliciting design services for the project. It is anticipated that the advertisement for design services will be published before the end of the 2014 calendar year.

## Section 4

# Additional Measures to Maintain Consent Decree Compliance

In addition to the CAP/ER and LTCP projects described in the previous sections, the measures described in the following subsections are related to Metro's on-going Consent Decree compliance.

### 4.1 2013 Annual Sewer Rehabilitation

Design of the 2013 Annual Sewer Rehabilitation project commenced on June 23, 2013, and was completed in June 2014. The project is anticipated to advertise for bids during the upcoming quarter.

For this project, which extends throughout the Metro service area, approximately 150 pipe segments have been identified for repair or rehabilitation. These sewers are located in areas outside of CAP/ER rehabilitation areas and are classified as high-priority or medium-priority sewers for evaluation based upon their observed condition as well as their potential consequence of failure.

### 4.2 2014 Annual Rehabilitation – Whites Creek Trunk

The 2014 Annual Rehabilitation – Whites Creek Trunk project consists of the evaluation and rehabilitation of the trunk sewer that follows or is adjacent to Whites Creek. The area to be evaluated for rehabilitation includes approximately 55,800 linear feet of gravity sewer, ranging in diameter from 8 to 60 inches. These sewers are located outside of CAP/ER rehabilitation areas and are classified as high-priority sewers for evaluation due to observations of infiltration. Procurement of design services is anticipated to begin in the upcoming quarter.

## Section 5

# Quarterly SSO and Dry Weather CSO Report

During the 2<sup>nd</sup> Quarter of 2014, Metro experienced 76 SSOs, as listed in **Table 5-1**.

No dry-weather CSOs occurred during the reporting period.



Table 5-1 Quarterly SSO Report

Quarterly SSO Report April 1 through June 30, 2014									
Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
02-Apr-14	02-Apr-14	0.00	1.00	0.001	Blockage	14703095	370 Wallace Rd.	Yes	No
02-Apr-14	02-Apr-14	0.00	1.33	0.874	Power Related	09409003	Browns Creek SPS / Visco Dr.	Yes	No
04-Apr-14	04-Apr-14	0.96	1.42	0.002	Rainfall	10210012	Davidson Branch SPS	Yes	No
06-Apr-14	06-Apr-14	0.41	1.00	0.00001	Blockage	11616060	4004 Estes Rd.	No	No
07-Apr-14	07-Apr-14	0.00	1.50	0.001	Blockage	12006036	1320 Murfreesboro Pk.	No	No
11-Apr-14	11-Apr-14	0.00	8.50	0.0001	Valve	14815022	2509 Hessey Pass	Yes	No
15-Apr-14	15-Apr-14	0.00	0.16	0.00001	Valve	09806082	3196 Earhart Rd.	No	No
21-Apr-14	21-Apr-14	0.00	2.50	0.00001	Blockage	14816066	308 Carrolton Station Rd.	No	No
28-Apr-14	28-Apr-14	4.08	12.50	0.001	Rainfall	09012057	6303 Henry Ford Dr.	Yes	No
28-Apr-14	28-Apr-14	4.15	1.00	0.001	Rainfall	03413034	1442 Gallatin Pk.	No	No
28-Apr-14	28-Apr-14	4.08	0.50	0.00001	Rainfall	09015007	473 Annex Ave.	No	Yes
28-Apr-14	29-Apr-14	4.79	31.00	0.001	Rainfall	06001011	3258 Brick Church Pk.	No	No
28-Apr-14	29-Apr-14	4.79	31.00	0.0001	Rainfall	05010033	3414 Brick Church Pk.	No	No
28-Apr-14	29-Apr-14	4.36	3.00	0.001	Rainfall	13007005	4302 Harding Pl.	Yes	No
28-Apr-14	28-Apr-14	4.79	31.00	0.001	Rainfall	06001013	3258 Brick Church Pk.	No	No
28-Apr-14	29-Apr-14	4.36	45.00	0.001	Rainfall	13104131	4112 Rockdale Ave.	No	No
28-Apr-14	28-Apr-14	2.87	3.00	0.001	Blockage	13511001	600 Longhunter Ct. B.	No	No
28-Apr-14	29-Apr-14	4.23	11.50	0.912	Rainfall	04312004	Vandiver SPS	Yes	No
28-Apr-14	29-Apr-14	4.08	10.66	1.118	Rainfall	09105090	West Park SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	13.09	1.142	Rainfall	05116016	Loves Branch SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	7.09	1.314	Rainfall	05205001	Gibson Creek SPS	Yes	No
28-Apr-14	29-Apr-14	4.08	30.16	0.718	Rainfall	10210012	Davidson Branch SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	12.50	0.5	Rainfall	05216026	Neely's Bend SPS	Yes	No
28-Apr-14	29-Apr-14	4.34	5.25	0.35	Rainfall	06213035	Williamson Ferry SPS	Yes	No
28-Apr-14	29-Apr-14	4.08	16.50	0.3	Rainfall	10203057	Cleeces Ferry SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	14.00	0.3	Rainfall	05213002	Madison Heights SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	26.50	0.4	Rainfall	05207007	Berwick Trail SPS / Center St.	Yes	No
28-Apr-14	29-Apr-14	4.55	2.67	0.033	Rainfall	08101015	River Dr. SPS	Yes	No
28-Apr-14	29-Apr-14	4.55	3.84	0.293	Rainfall	09104025	28th Ave SPS / Centennial Blvd.	Yes	No
28-Apr-14	29-Apr-14	4.78	21.00	0.07	Rainfall	01416001	Joelton SPS	Yes	No
28-Apr-14	29-Apr-14	4.15	5.00	0.5	Rainfall	06208003	Hidden Acres SPS	Yes	No

## Quarterly SSO Report

### April 1 through June 30, 2014

Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
28-Apr-14	29-Apr-14	4.18	10.00	0.3	Rainfall	08709040	Farmingham Woods SPS	Yes	No
28-Apr-14	29-Apr-14	4.93	15.00	0.3	Rainfall	16009013	East Lakemont SPS	Yes	No
28-Apr-14	29-Apr-14	4.79	0.75	0.002	Rainfall	02916001	Germantown SPS	Yes	No
28-Apr-14	29-Apr-14	4.08	19.75	0.87	Rainfall	09011002	516 Basswood Ave.	Yes	No
28-Apr-14	01-May-14	4.18	53.42	12.736	Rainfall	08410007	149 Barker Rd.	Yes	No
28-Apr-14	30-Apr-14	4.34	40.58	4.318	Rainfall	07114041	Cowan St. SPS	Yes	No
28-Apr-14	28-Apr-14	4.34	15.00	0.001	Rainfall	07306012	2813 Cooper Lane	Yes	No
28-Apr-14	28-Apr-14	4.36	3.00	0.001	Rainfall	13007007	718 Lynnwood Blvd.	Yes	No
28-Apr-14	29-Apr-14	4.79	16.00	0.001	Rainfall	05013010	3300 Briley Park Blvd. S	No	No
28-Apr-14	29-Apr-14	4.09	8.00	0.001	Rainfall	11909113	2803 Foster Ave.	Yes	No
29-Apr-14	29-Apr-14	4.09	8.00	0.001	Rainfall	11913092	2932 Louise Dr.	No	No
29-Apr-14	30-Apr-14	4.08	20.50	0.001	Blockage	08013031	6600 Briley Pkwy.	Yes	No
29-Apr-14	29-Apr-14	4.09	24.00	1	Rainfall	11907146	431 E. Thompson Ln.	Yes	No
29-Apr-14	29-Apr-14	3.53	0.50	0.001	Blockage	09211108	1912 Charlotte Ave.	Yes	No
29-Apr-14	29-Apr-14	4.15	19.50	8.219	Rainfall	03411009	Dry Creek SPS	Yes	No
29-Apr-14	29-Apr-14	4.07	1.08	0.007	Rainfall	09409003	Browns Creek SPS / Visco Dr.	Yes	No
29-Apr-14	29-Apr-14	2.64	4.00	0.25	Rainfall	17609001	Hurricane Creek SPS	Yes	No
29-Apr-14	29-Apr-14	3.83	7.00	0.3	Rainfall	15110038	Longhunter Chase SPS	Yes	No
29-Apr-14	29-Apr-14	4.11	6.25	0.2	Rainfall	07014003	Fairway Center SPS	Yes	No
29-Apr-14	29-Apr-14	4.48	6.00	0.1	Rainfall	WLS053A020	Langford Farms SPS	Yes	No
29-Apr-14	29-Apr-14	4.15	9.00	0.001	Rainfall	04309041	504 N. DuPont Ave.	No	No
01-May-14	01-May-14	0.00	2.00	0.001	Blockage	04410020	607 Fowler St.	Yes	No
01-May-14	02-May-14	0.00	7.00	0.00001	Blockage	08013001	0 Centennial Blvd.	No	No
02-May-14	02-May-14	0.00	3.00	0.001	Blockage	18303015	1550 Heil Quaker Blvd.	Yes	No
02-May-14	02-May-14	0.00	2.33	0.039	Power Related	04312004	Vandiver SPS	Yes	No
04-May-14	04-May-14	0.00	2.00	0.0001	Blockage	14702067	4811 Abbay Dr.	Yes	No
07-May-14	07-May-14	0.00	1.00	0.0001	Blockage	15013010	3179 Hamilton Church Rd.	No	No
07-May-14	07-May-14	0.00	1.00	0.001	Blockage	15009036	3344 Calais Cr.	Yes	No
10-May-14	10-May-14	0.07	2.00	0.0001	Blockage	08211038	188 N 6th St.	Yes	No
15-May-14	15-May-14	1.26	1.00	0.01	Mechanical	05207007	Berwick Trail SPS / Center St.	Yes	No
20-May-14	20-May-14	0.00	4.00	0.0001	Blockage	14805026	3817 Briarcliff Ct.	No	No
27-May-14	27-May-14	0.00	4.00	0.001	Blockage	14805016	3756 Turley Dr.	No	No

## Quarterly SSO Report

### April 1 through June 30, 2014

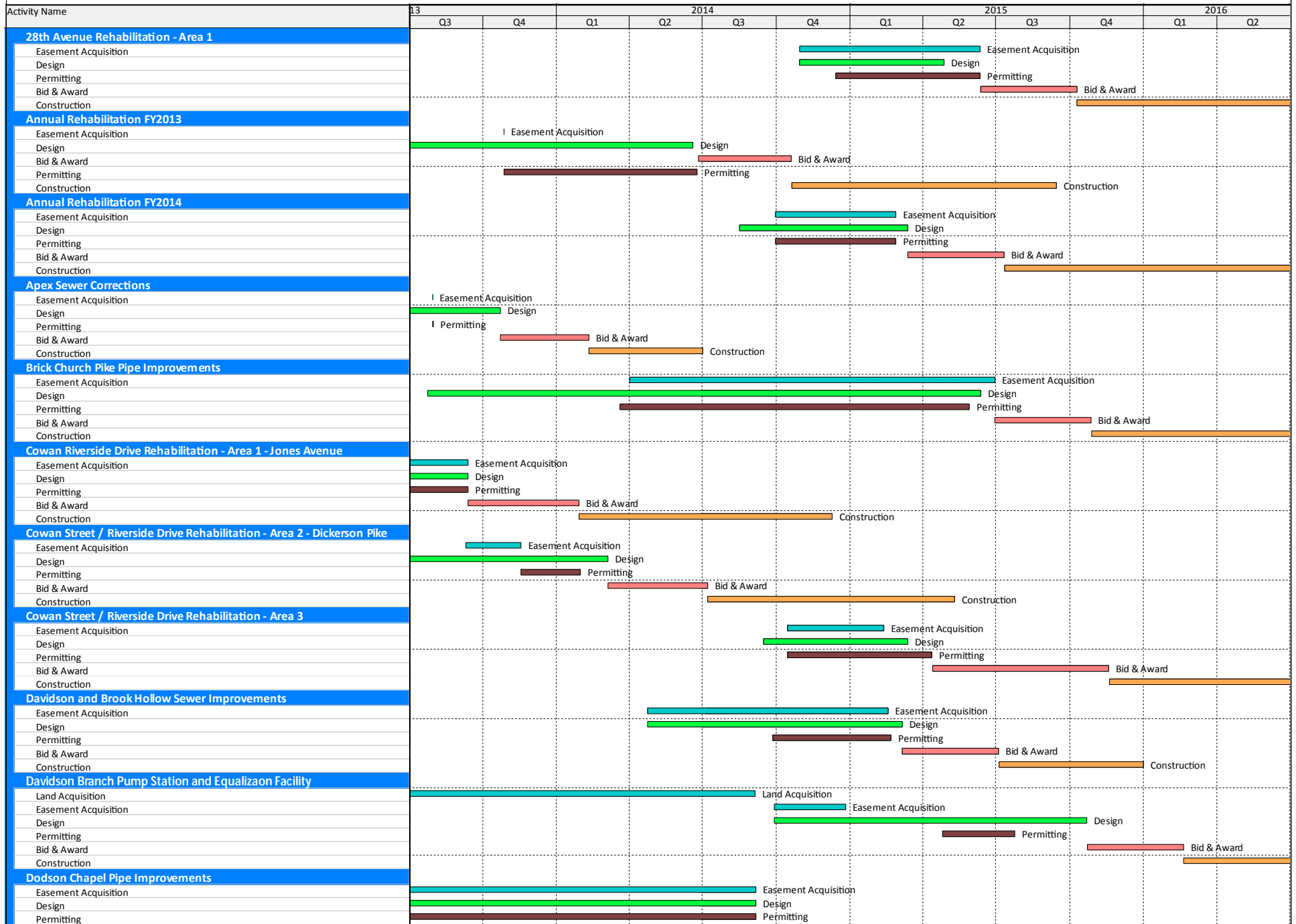
Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
30-May-14	30-May-14	0.00	1.50	0.00001	Blockage	10709028	1001 Harold Dr.	No	No
30-May-14	30-May-14	0.00	4.00	0.00001	Blockage	04901020	3932 Lloyd Rd.	No	No
03-Jun-14	03-Jun-14	0.00	1.00	0.001	Blockage	13512004	171 Bell Rd.	No	No
05-Jun-14	06-Jun-14	0.19	7.00	0.001	Blockage	09809051	5501B Regatta Blvd.	Yes	No
09-Jun-14	09-Jun-14	0.62	0.50	0.001	Blockage	16112016	5771 Nolensville Pk.	Yes	No
09-Jun-14	09-Jun-14	0.66	2.00	0.001	Blockage	16102015	482 Westcrest Dr.	No	Yes
10-Jun-14	10-Jun-14	0.85	5.00	0.0001	Force Main	06415172	4418 Lebanon Pk.	No	No
16-Jun-14	17-Jun-14	0.00	9.00	0.00001	Blockage	05311025	109 Becker Ave.	No	No
19-Jun-14	19-Jun-14	0.00	1.00	0.0001	Blockage	13004008	4211 Sneed Rd.	No	No
24-Jun-14	24-Jun-14	0.27	1.00	0.001	Blockage	10505075	1214 11th Ave. S.	Yes	No
24-Jun-14	24-Jun-14	0.38	1.00	0.001	Blockage	14604015	4714 Trousdale Dr.	No	No
26-Jun-14	26-Jun-14	0.00	2.50	0.001	Blockage	13114075	1323 Burton Valley Rd.	No	No
28-Jun-14	28-Jun-14	0.21	1.50	0.0001	Blockage	05010072	3400 Fawnwood Pl.	Yes	No

# Appendix A

## Schedule for Current and Upcoming Projects

Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2014 Quarterly Progress Report - 2nd Quarter



Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2014 Quarterly Progress Report - 2nd Quarter

