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MAYOR



## METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

July 29, 2015

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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, 2015 through June 30, 2015.



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.



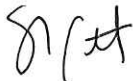
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A copy of this report is concurrently being placed in the Public Document Repository (PDR).

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  
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Cc: Mr. David Tucker, Assistant Director, Operations  
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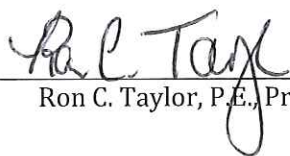
## Clean Water Nashville Overflow Abatement Program

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

# CONSENT DECREE QUARTERLY PROGRESS REPORT

**April 1 through June 30, 2015**

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

7/27/15

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.....	2-5
2.4	Upcoming CAP/ER Projects .....	2-7
<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. A revised SORP was submitted on May 29, 2015.
- *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
- Joelton Rehabilitation
- Neely's Bend Rehabilitation

## 2.2 CAP/ER Projects under Construction

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

- Shelby Park Rehabilitation – Area 1 - Virginia Avenue

This rehabilitation project is the first of multiple projects to 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 approximately 50,000 linear feet of gravity sewer, rehabilitation of associated manholes, and renewals of more than 700 services 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 construction contract was awarded in September 2013. Construction activities began on January 13, 2014, and were substantially complete on April 28, 2015.

- Lakewood Water and Sewer Replacement

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

- 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 were substantially complete on April 3, 2015.

- Cowan / Riverside Rehabilitation - Area 1 - Jones Avenue

This rehabilitation project is the first of multiple projects to 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 renewals of more than 630 services using cured-in-place pipe lining or open-cut techniques.

Design began on February 4, 2013, and was completed in 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 was substantially complete on April 14, 2015.



- **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 renewal of more than 700 services 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.

- **Cowan / Riverside Rehabilitation - Area 2 - Dickerson Pike**

This rehabilitation project is the second of multiple projects to 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 renewal of approximately 400 services 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 activities began on July 7, 2014, and are anticipated to be substantially complete 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 renewal of approximately 170 services 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 began on August 12, 2014, and are anticipated to be substantially complete during the upcoming quarter.

- **Dodson Chapel Pipe Improvements**

Following the completion of the Rockwood Conveyance Improvements project and subsequent updates to the hydraulic model in this area, the 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. This 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. Following completion of permitting and easement / right of entry activities, advertisement for construction began on November 7, 2014, and the construction contract was awarded in January 2015. Construction activities began on January 26, 2015, and are anticipated to continue through the upcoming quarter.

- **Shelby Park Rehabilitation - Area 3 - Greenland Avenue**

This rehabilitation project is the third of multiple projects to 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 began on August 27, 2014, and bids were received on September 25, 2014. However, a protest regarding the bid delayed the award of the contract until January 22, 2015. Construction activities began on February 23, 2015, and are anticipated to continue through the upcoming quarter.

- **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. After additional investigation, Metro selected the adjacent park site to accommodate the required storage volume.

Design efforts for the equalization tank were restarted in the 1<sup>st</sup> Quarter of 2013. Advertisement for construction began on January 5, 2015, and the contract was awarded in April 2015. Construction activities began on April 27, 2015, and are anticipated to continue through the upcoming quarter.

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

- Westchester Drive Rehabilitation

The Westchester Drive Rehabilitation project was developed as a separate project for the rehabilitation portion of the Brick Church Pike Pipe Improvements project. This project consists of the rehabilitation of approximately 3,800 linear feet of gravity sewer, including the rehabilitation of 37 service laterals.

Design activities for the Westchester Drive Rehabilitation project began on July 25, 2013. Advertisement for construction began on March 16, 2015, and the contract was awarded in May 2015. Construction activities began on June 1, 2015, and are anticipated 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:

- 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 3,800 linear feet of rehabilitation of the existing sewer. The rehabilitation portion was advertised as a separate construction project, the Westchester Drive Rehabilitation project described in the previous section.

Proposals for design of the Brick Church Pike Improvements project were submitted on January 11, 2013, and design for this project began on July 25, 2013. Design activities for the Brick Church Pike Improvements are anticipated to be completed in the upcoming quarter, with permitting and easement activities continuing through 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 for rehabilitation of approximately 53,800 linear feet of gravity sewer and 300 manholes. 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. This project now includes both the upsizing as well as repair of several adjacent pipe segments.

Design began on April 24, 2014, and was completed in December 2014. Permitting and most easement activities have been completed, and advertisement for construction is anticipated to occur in the upcoming quarter.

- Shelby Park Rehabilitation – Area 4 - Brush Hill Road

This rehabilitation project is the fourth of multiple projects to 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.

Design began on October 27, 2014, and was completed in March 2015. Advertisement for construction began on April 28, 2015. Contract award and the initiation of construction activities are anticipated to commence during the upcoming quarter.

- Cowan / Riverside Rehabilitation – Area 3 – West Trinity Lane

This rehabilitation project is the third of multiple projects to 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.

Design began on November 17, 2014, and was completed in April 2015. Advertisement for construction is anticipated to begin during the upcoming quarter.

- Cowan / Riverside Rehabilitation – Area 4 – Pages Branch

This rehabilitation project is the fourth of multiple projects to be conducted in the Cowan / Riverside Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 54,200 linear feet of gravity sewer and 260 manholes. Design began on January 26, 2015, and is anticipated to continue through the upcoming quarter.

- 28th Avenue Rehabilitation – Area 1 – Clifton Avenue

The 28<sup>th</sup> Avenue Rehabilitation - Area 1 – Clifton Avenue project is the first of multiple projects to 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 required dye testing and closed-circuit television (CCTV) inspection, which was completed prior to design. Design began on February 2, 2015, and is anticipated to continue through the upcoming quarter.

- Smith Springs Rehabilitation – Area 1 – Priest Lake Meadows

The Smith Springs Rehabilitation – Area 1 – Priest Lake Meadows project is the first of multiple rehabilitation projects to be conducted upstream of the Smith Springs Pump Station. Based on additional flow monitoring data, the boundary of the project area, as presented in the CAP/ER, has been adjusted to target areas that are believed to contribute to higher wet weather flows. The area to be evaluated for rehabilitation includes approximately 63,800 linear feet of gravity sewer and associated manholes. Design began on February 2, 2015, and is anticipated to continue through the upcoming quarter.

- 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. Design began on May 1, 2015, and is anticipated to continue through the upcoming quarter.

- Gibson Creek Rehabilitation – Area 1 – Dupont Avenue

The Gibson Creek Rehabilitation – Area 1 – Dupont Avenue project is the first of multiple rehabilitation projects to be conducted upstream of the Gibson Creek Pump Station. The area to be evaluated for rehabilitation includes approximately 57,000 linear feet of gravity sewer and associated manholes. Procurement of design services was initiated during the reporting period, and design is anticipated to begin in the upcoming quarter.

- Cowan / Riverside Rehabilitation - Area 5 – Youngs Lane

This rehabilitation project is the fifth of multiple projects to be conducted in the Cowan / Riverside Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 57,800 linear feet of gravity sewer and 310 manholes. Design began on May 26, 2015, and is anticipated to continue throughout the upcoming quarter.

## 2.4 Upcoming CAP/ER Projects

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

- Ewing Creek / Brick Church Equalization Facility

The Ewing Creek / Brick Church Equalization Facility project, referred to as the Brick Church Pike Equalization Facility project in the CAP/ER, includes the construction of a 10.6 million gallon wastewater storage tank and associated wet weather pumping station. Procurement of design services was initiated during the reporting period, and design is anticipated begin in the upcoming quarter.

- Langford Farms Rehabilitation

The Langford Farms Rehabilitation project is located upstream of the Langford Farm Pump Station. The area to be evaluated for rehabilitation includes approximately 13,300 linear feet of gravity sewer and 67 manholes. Procurement of design services is anticipated to begin following the collection of smoke testing data in August 2015.

- Madison Heights / Rainbow Terrace Rehabilitation

The Madison Heights / Rainbow Terrace Rehabilitation project is located upstream of the Madison Heights and Rainbow Terrace Pump Stations. The area to be evaluated for rehabilitation includes approximately 6,000 linear feet of gravity sewer and 38 manholes. Procurement of design services is anticipated to begin following the collection of smoke testing data in August 2015.

- Smith Springs Rehabilitation – Area 2 – Castlegate

The Smith Springs Rehabilitation – Area 2 – Castlegate project is the second of multiple rehabilitation projects that will be conducted upstream of the Smith Springs Pump Station. The area to be evaluated for rehabilitation includes approximately 58,900 linear feet of gravity sewer and more than 300 manholes. Procurement of design services is anticipated to begin following the collection of smoke testing data in August and September 2015.

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 a memorandum summarizing additional data describing the impact of CSO discharges on water quality in the Cumberland River. Discussions are expected to continue through the upcoming quarter.

As review of the LTCP continues, Metro continues to move forward with the implementation of the Central WWTP Capacity Improvements and CSO Reduction project; however, Metro does not intend to move forward with other projects presented in the LTCP until approval is obtained. Active 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
- Apex Sewer Corrections

## 3.2 LTCP Projects under Construction

There are currently no LTCP projects under construction.

## 3.3 LTCP Projects under Design

There are currently no LTCP projects under design.

## 3.4 Upcoming LTCP Projects

The following project, discussed in the LTCP, is anticipated to continue procurement for design services during the upcoming quarter:

- Central WWTP Capacity Improvements and CSO Reduction

The Central WWTP Capacity Improvements and CSO Reduction project will reduce the overflow frequency and volume from the Kerrigan CSO by increasing both the wet weather treatment capacity of the Central WWTP and the overall capacity of the Central Pumping Station. The project will also add on-site CSO storage and equalization to assist in managing the dramatic flow rate increases from the combined sewer system during intense rainfall events. This project is the result of the *Central Wastewater Treatment Plant Optimization Study* which was finalized in 2014. The study identified limiting factors in each of the Central WWTP's unit processes and confirmed that peak wet weather secondary treatment capacity could be significantly increased through upgrades to the existing headworks, secondary aeration, and final clarification systems without building new tankage. As such, this project replaces the following projects presented in the LTCP:

- CWWTP Optimization and EQ Conversion
- CWWTP EQ Addition Phase 1
- CWWTP Pumps / EQ Grit Equipment
- CWWTP EQ Addition Phase 2
- CWWTP EQ Addition Phase 3

Advertisement for design services for the Central WWTP Capacity Improvements and CSO Reduction project began in January 2015, and two design contracts were awarded in April 2015. Contract negotiations and other designer procurement activities are anticipated to continue throughout the upcoming quarter.

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

## 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. Advertisement for construction began on July 8, 2014, and the contract was awarded in September 2014. Construction activities began on October 15, 2014, and are anticipated to continue through 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. Design began on October 13, 2014, and was completed in May 2015, with permitting and easement acquisition activities continuing. Advertisement for construction 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 2015, Metro experienced 61 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, 2015									
Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
03-Apr-15	03-Apr-15	0.83	3.00	0.001	Blockage	14307002	117 Harpeth Trace Ct	No	No
13-Apr-15	13-Apr-15	0.92	3.50	0.001	Blockage	14303027	11 Vaughns Gap Rd	Yes	No
14-Apr-15	14-Apr-15	2.35	2.50	0.925	Power Outage	03411009	Dry Creek SPS	Yes	No
14-Apr-15	16-Apr-15	3.15	23.84	1.102	Rainfall	10210012	Davidson Branch SPS	Yes	No
16-Apr-15	17-Apr-15	1.35	9.00	0.15	Rainfall	16009013	East Lakemont SPS	Yes	No
16-Apr-15	16-Apr-15	3.54	8.50	0.15	Rainfall	07008061	Riverside Drive PS	Yes	No
16-Apr-15	16-Apr-15	3.22	20.50	0.001	Rainfall	05013010	3300 Briley Park Blvd S	Yes	No
16-Apr-15	16-Apr-15	3.22	17.00	0.1	Rainfall	06001013	3258 Brick Church Pk	Yes	No
16-Apr-15	17-Apr-15	3.22	21.00	0.3	Rainfall	05010033	3414 Brick Church Pk	Yes	No
16-Apr-15	16-Apr-15	2.51	2.00	0.6	Rainfall	08709040	Farmingham Woods PS	Yes	No
16-Apr-15	16-Apr-15	2.81	8.00	0.02	Rainfall	11909113	2803 Foster Ave	Yes	No
16-Apr-15	16-Apr-15	2.84	10.00	0.001	Rainfall	08602062	0 Dodson Chapel	Yes	No
16-Apr-15	16-Apr-15	2.84	7.67	0.083	Rainfall	08410007	Barker Road	Yes	No
16-Apr-15	16-Apr-15	3.22	17.00	0.07	Rainfall	05010029	3438 Briley Park Blvd	Yes	No
17-Apr-15	17-Apr-15	0.00	1.00	0.00001	Blockage	05302055	1404 Bryan St	No	No
19-Apr-15	19-Apr-15	2.37	9.75	1.088	Rainfall	05205001	Gibson Creek SPS	Yes	No
19-Apr-15	20-Apr-15	2.14	27.00	5.984	VFD	09409003	Brown's Creek SPS	Yes	No
19-Apr-15	20-Apr-15	2.11	15.67	1.142	Rainfall	13609002	Smith Springs SPS	Yes	No
19-Apr-15	19-Apr-15	2.37	5.92	0.47	Rainfall	05116016	Loves Branch SPS	Yes	No
19-Apr-15	20-Apr-15	2.42	9.67	0.399	Rainfall	07114041	Cowan St. Relief Bleeder	Yes	No
19-Apr-15	19-Apr-15	2.42	3.17	0.15	Rainfall	06213035	Williamson Ferry SPS	Yes	No
19-Apr-15	22-Apr-15	1.60	52.08	6.046	Rainfall	08410007	Barker Road	Yes	No
19-Apr-15	20-Apr-15	1.74	34.00	0.5	Rainfall	16009013	East Lakemont SPS	Yes	No
19-Apr-15	19-Apr-15	2.37	9.00	0.2	Rainfall	05213002	Madison Heights PS	Yes	No
19-Apr-15	20-Apr-15	1.45	15.00	0.25	Rainfall	07008061	Riverside Drive PS	Yes	No
19-Apr-15	22-Apr-15	1.99	61.00	0.001	Rainfall	11516063	6215 Jocelyn Hollow Rd	No	No
19-Apr-15	20-Apr-15	1.86	18.16	0.538	Rainfall	10210012	Davidson Branch SPS	Yes	No
19-Apr-15	19-Apr-15	2.64	2.00	0.00001	Blockage	04316007	1223 London Bridge Rd	No	No

## Quarterly SSO Report

### April 1 through June 30, 2015

Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
19-Apr-15	20-Apr-15	2.42	23.00	0.001	Rainfall	07306012	2813 Cooper Ln	No	No
19-Apr-15	20-Apr-15	2.42	23.00	0.001	Rainfall	07309066	2301 Cooper Terrace	No	No
19-Apr-15	20-Apr-15	2.19	25.00	0.001	Rainfall	06001013	3258 Brick Church Pk	Yes	No
19-Apr-15	20-Apr-15	2.19	39.00	0.001	Rainfall	05013010	3300 Briley Park Blvd S	Yes	No
19-Apr-15	20-Apr-15	2.19	39.00	0.1	Rainfall	05010033	3414 Brick Church Pk	Yes	No
19-Apr-15	20-Apr-15	2.19	39.00	0.001	Rainfall	05010029	3438 Briley Park Blvd	Yes	No
20-Apr-15	21-Apr-15	1.66	29.00	0.6	Mechanical	WMN56D002	Rolling Hills SPS #2	Yes	No
20-Apr-15	20-Apr-15	2.19	21.00	0.001	Rainfall	05010094	3438 Briley Park Blvd N	Yes	No
20-Apr-15	20-Apr-15	2.19	21.00	0.001	Rainfall	05010093	3438 Briley Park Blvd N	Yes	No
20-Apr-15	21-Apr-15	1.60	23.00	0.1	Rainfall	09510050	501 Bismark Dr	Yes	No
20-Apr-15	20-Apr-15	2.19	21.00	0.001	Rainfall	05010027	3438 Briley Park Blvd N	Yes	No
20-Apr-15	21-Apr-15	1.83	22.50	0.001	Rainfall	11907146	0 Old Glenrose Ave	Yes	No
23-Apr-15	26-Apr-15	0.20	82.00	0.1	Line Break	18303006	1640 J P Hennessy Dr	Yes	No
26-Apr-15	26-Apr-15	0.00	1.00	0.00001	Blockage	04316007	1223 London Bridge Rd	No	No
29-Apr-15	29-Apr-15	0.00	5.00	0.001	Blockage	16107019	508 Hilson Ct	No	No
30-Apr-15	30-Apr-15	0.00	3.50	0.0001	Blockage	05809006	4345 Eatons Creek Rd	Yes	No
03-May-15	04-May-15	0.00	5.00	0.00001	Force Main	WMN033G004	265 Forest Trail	Yes	No
15-May-15	16-May-15	0.07	24.00	0.0001	Line Break	09310146	210 4th Ave S	No	No
19-May-15	19-May-15	0.00	1.00	0.012	Line Break	11909068	2801 Nolensville Pk	Yes	No
19-May-15	19-May-15	0.00	3.00	0.001	Blockage	09306045	127 3rd Ave S	Yes	No
22-May-15	22-May-15	0.00	0.25	0.00001	Blockage	14905113	4904 Pebble Creek Dr	No	No
22-May-15	22-May-15	0.01	1.50	0.00001	Blockage	14409005	4362 Chickering Ln	No	No
23-May-15	23-May-15	0.00	1.50	0.0001	Blockage	WMN033P077	2604 Gretchen Ct	Yes	No
26-May-15	26-May-15	0.38	2.00	0.001	Blockage	11702013	3009 Woodlawn Dr	No	No
26-May-15	26-May-15	0.35	1.00	0.001	Blockage	14802070	5209 Linbar Dr	Yes	No
27-May-15	27-May-15	0.41	1.00	0.001	Blockage	10310060	804 Kendall Dr	Yes	No
03-Jun-15	03-Jun-15	0.00	1.50	0.00001	Blockage	09216103	106 19th Ave S	No	No
03-Jun-15	03-Jun-15	0.00	1.00	0.0001	Blockage	09403048	2821 Hody Dr	No	No
08-Jun-15	08-Jun-15	1.74	1.75	0.046	Rainfall	10210012	Davidson Branch SPS	Yes	No



## Quarterly SSO Report

### April 1 through June 30, 2015

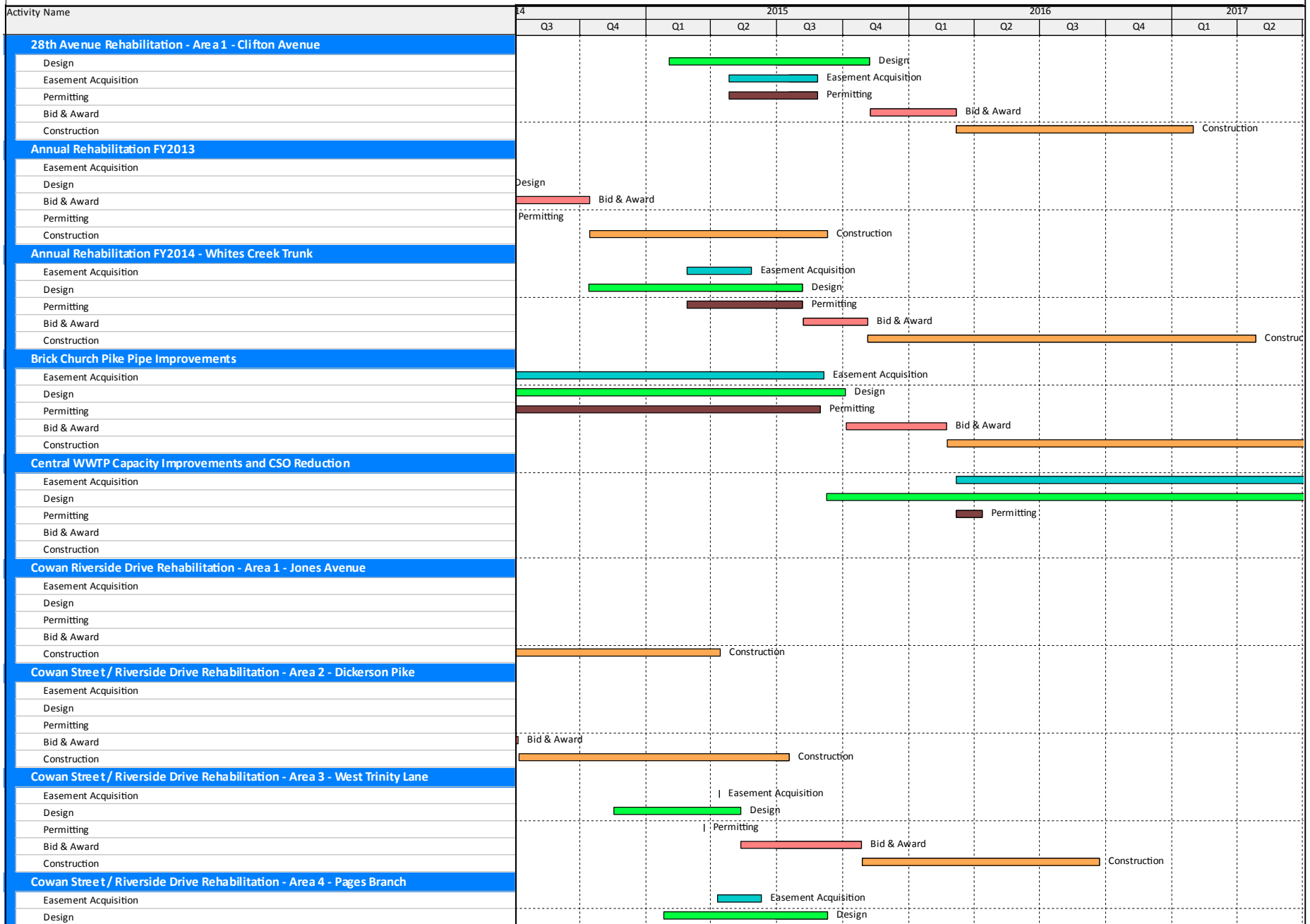
Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
08-Jun-15	09-Jun-15	2.04	11.58	1.493	Rainfall	07114041	Cowan St. Relief Bleeder	Yes	No
11-Jun-15	11-Jun-15	0.00	4.00	0.001	Blockage	13607032	112 Coastal Ct W	No	No
28-Jun-15	28-Jun-15	0.00	2.00	0.001	Mechanical	WMN030E001	Birchwood SPS	Yes	No
29-Jun-15	29-Jun-15	0.09	1.00	0.00001	Blockage	16203068	503 Santee Ct	No	No

# Appendix A

## Schedule for Current and Upcoming Projects

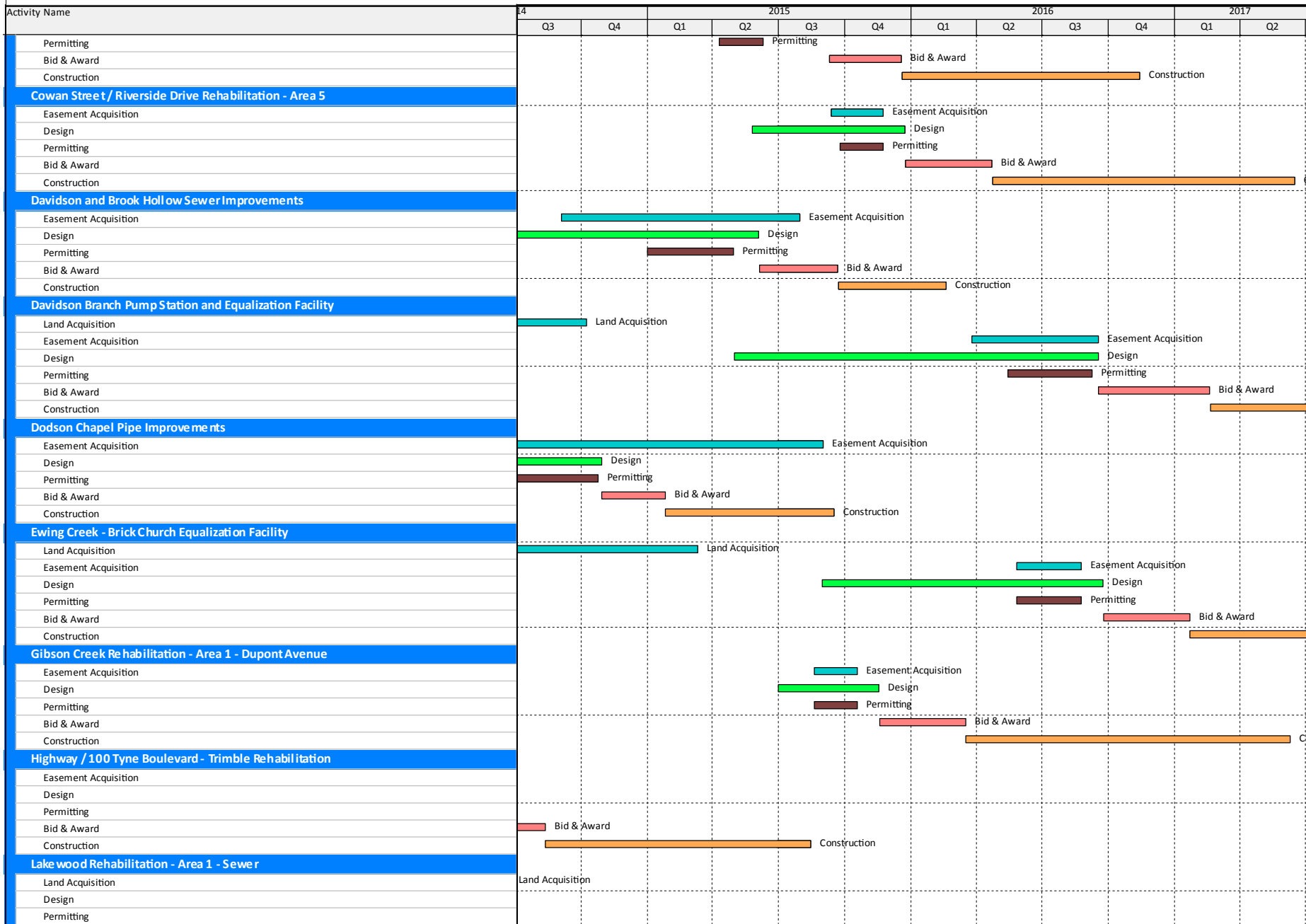
Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2015 Quarterly Progress Report - 2nd Quarter



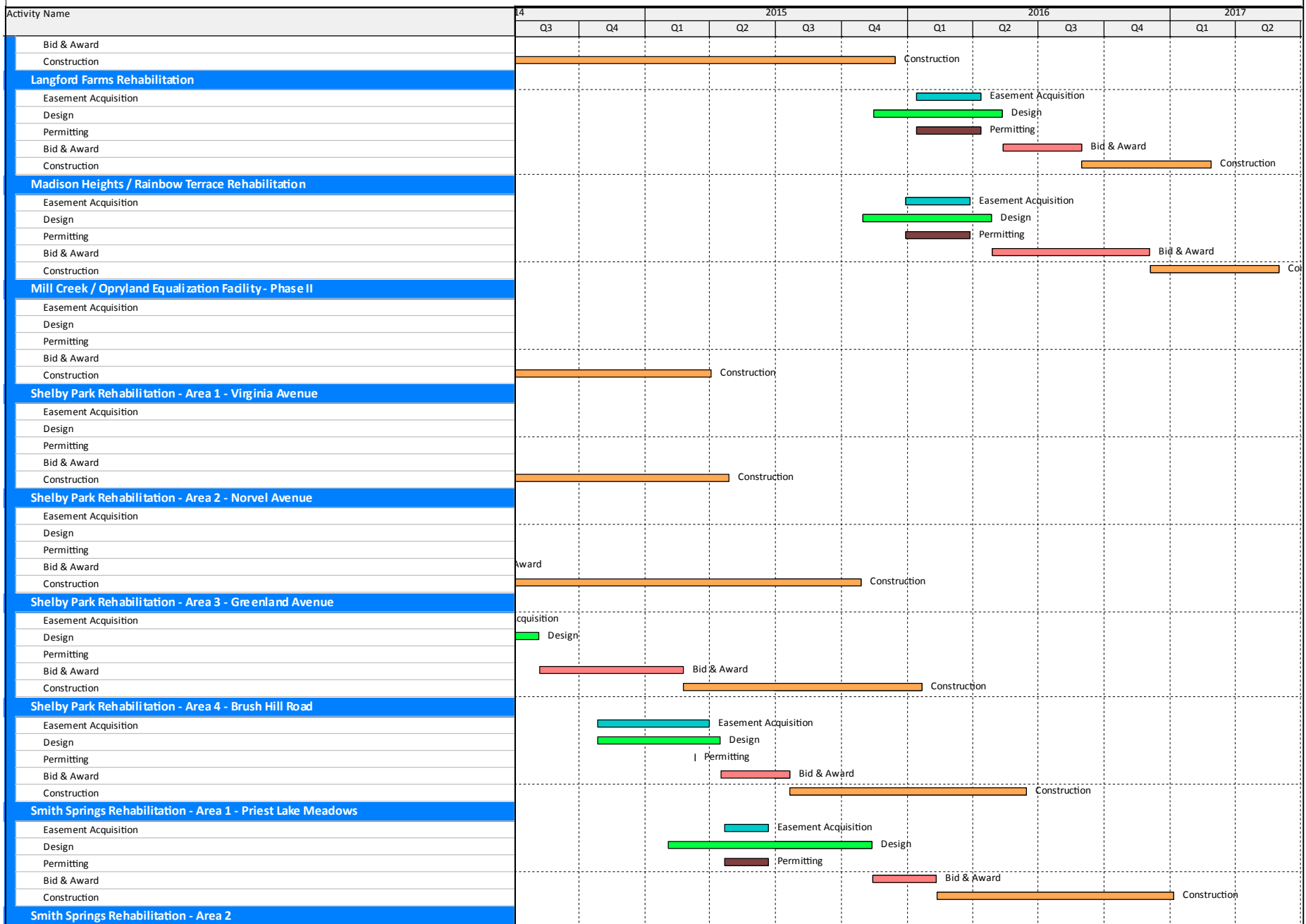
Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2015 Quarterly Progress Report - 2nd Quarter



Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2015 Quarterly Progress Report - 2nd Quarter



Note: The construction activity shows through substantial completion.

## Nashville Overflow Abatement Program 2015 Quarterly Progress Report - 2nd Quarter

