

DAVID BRILEY
MAYOR



METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DEPARTMENT OF WATER AND SEWERAGE SERVICES
1600 SECOND AVENUE, NORTH
NASHVILLE, TENNESSEE 37208-2206

July 26, 2019

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U. S. Department of Justice
Post Office Box 7611
Washington, D. C. 20044-7611

United States Attorney
Middle District of Tennessee
110 Ninth Avenue, South, Suite A961
Nashville, TN 37203

Chief, Water Programs Enforcement Branch
Water Management Division
U. S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303

Mr. Barry Turner, Deputy Attorney General
Office of the Tennessee Attorney General
Environmental Division
P. O. Box 20207
Nashville, TN 37202

Mr. Patrick Parker, Assistant General Counsel
Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, TN 37243

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 for the second Quarter of 2019, which covers the time period from April 1, 2019 through June 30, 2019.



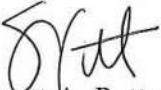
If you need assistance or an accommodation, please contact Metro Water Services,
1600 Second Avenue North, Nashville, Tennessee 37208 or 615-862-4862.

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

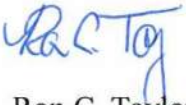
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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
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

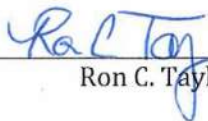
Clean Water Nashville Overflow Abatement Program

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

CONSENT DECREE QUARTERLY PROGRESS REPORT

April 1 through June 30, 2019

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



Date

Table of Contents

Section 1	Introduction	1-1
1.1	Additional Programs	1-1
1.2	Report Organization	1-2
Section 2	Corrective Action Plan/Engineering Report	2-1
2.1	Completed CAP/ER Projects	2-1
2.2	CAP/ER Projects under Construction	2-3
2.3	CAP/ER Projects under Design	2-3
2.4	Upcoming CAP/ER Projects	2-4
Section 3	Long Term Control Plan	3-1
3.1	Completed LTCP Projects	3-2
3.2	LTCP Projects under Construction	3-2
3.3	LTCP Projects under Design and Preconstruction	3-2
3.4	Upcoming LTCP Projects	3-3
Section 4	Additional Measures to Maintain Consent Decree Compliance	4-1
4.1	2017 Annual Rehabilitation – Dry Creek	4-1
4.2	2017 Annual Rehabilitation – Shepherd Hills	4-1
Section 5	Quarterly SSO and Dry Weather CSO Report	5-1

List of Tables

Table 5-1	Quarterly SSO Report	5-2
-----------	----------------------	-----

Appendix

Appendix A	Schedule for Current and Upcoming Projects
------------	--

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 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 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.

Approval of the CAP/ER was granted by EPA on August 10, 2017, with TDEC copied on the approval. Since submittal of the CAP/ER in 2011, information from additional flow monitoring data collection, constructability reviews, and hydraulic analyses has resulted in adjustments to several CAP/ER projects, as well as the identification of additional projects to remediate SSOs. A summary of those changes was presented to EPA and TDEC in the *Addendum to the CAP/ER*, dated September 27, 2017.

On-going CAP/ER 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:

- 28th Avenue Rehabilitation – Area 1 – Clifton Avenue
- Barker Road / Omohundro Equalization Storage Phase I
- Brick Church Pike Pipe Improvements
- Cowan / Riverside Rehabilitation – Area 1 – Jones Avenue
- Cowan / Riverside Rehabilitation – Area 2 – Dickerson Pike
- Cowan / Riverside Rehabilitation – Area 3 – West Trinity Lane
- Cowan / Riverside Rehabilitation – Area 4 – Pages Branch
- Davidson and Brook Hollow Sewer Improvements
- Dodson Chapel Equalization Tank and Wastewater Pumping Station Expansion
- Dodson Chapel Pipe Improvements
- Dry Creek Wastewater Treatment Plant Optimization

- Ewing Creek / Brick Church Equalization Facility
- Gibson Creek Rehabilitation – Area 1 – Dupont Avenue
- Hidden Acres Rehabilitation
- Highway 100 / Tyne Boulevard – Trimble Rehabilitation
- Holiday Travel Park Gravity Conversion
- Joelton Rehabilitation
- Lakewood Water and Sewer Replacement
- Langford Farms – Madison Heights Rehabilitation
- Loves Branch Rehabilitation
- Mill Creek 36-inch Trunk Sewer System Rehabilitation
- Mill Creek / Opryland Equalization Facility – Phase II
- Neely's Bend Rehabilitation
- Rockwood Conveyance Improvements
- Shelby Park Rehabilitation – Area 1 – Virginia Avenue
- Shelby Park Rehabilitation – Area 2 – Norvel Avenue
- Shelby Park Rehabilitation – Area 3 – Greenland Avenue
- Shelby Park Rehabilitation – Area 4 – Brush Hill Road
- Shelby Park Rehabilitation – Area 5 – Cooper Lane
- Smith Springs Equalization Storage
- Smith Springs Rehabilitation – Area 1 – Priest Lake Meadows
- Smith Springs Rehabilitation – Area 2 – Castlegate
- West Park Equalization Storage Phase I
- West Park Equalization Facility Phase II
- Westchester Drive Rehabilitation
- Whites Creek Wastewater Pumping Station
- Whites Creek Wastewater Treatment Plant (WWTP) Optimization and Disinfection

2.2 CAP/ER Projects under Construction

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

- Vandiver Rehabilitation

The Vandiver Pump Station Upgrades project, as presented in the CAP/ER, consisted of expanding the pumping capacity of the Vandiver Pump Station to 11 million gallons per day to address overflows and surcharging in the existing system. Additional analysis of the flow monitoring and condition assessment data of the upstream gravity system indicated that rehabilitation to reduce wet weather flows may provide a viable option to reduce the required increase in pumping capacity. Because of this, the Vandiver Pump Station Upgrades project has been delayed to allow time for the completion of the Vandiver Rehabilitation project.

The project area evaluated for rehabilitation included more than 55,000 linear feet of gravity sewer. The resulting project, as advertised for construction, consists of the rehabilitation of approximately 30,650 linear feet of 6- to 21-inch diameter gravity sewer, the rehabilitation of associated manholes, and the renewal of approximately 570 services using cured-in-place pipe lining or open-cut techniques.

Design began on December 14, 2016, and was completed in July 2017. This project was packaged with the Hidden Acres Rehabilitation project for bidding, although construction activities for the two projects follow different schedules. Advertisement for construction activities began on November 2, 2017, and bid proposals were received on November 29, 2017. Construction activities began on March 26, 2018, and are anticipated to continue during the upcoming quarter.

2.3 CAP/ER Projects under Design

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

- 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 complete. Advertisement for construction is anticipated to occur in the second quarter of 2020.

- Hurricane Creek Pipe Improvements

The Hurricane Creek Pipe Improvements project, as presented in the CAP/ER, consisted of increasing the conveyance capacity of approximately 7,800 linear feet of gravity sewer to meet Metro's capacity assurance requirements. Following the analysis of additional flow monitoring conducted in the spring of 2015, the project's scope was revised to include the design of parallel and/or replacement gravity sewers for approximately 12,100 linear feet of existing

trunk sewer. Design began on July 12, 2016, and is complete. Permit and easement acquisition activities are underway and are anticipated to continue through the upcoming quarter.

- Gibson Creek Equalization Facility

The Gibson Creek Equalization Facility project, as presented in the CAP/ER, consists of the design and construction of a 10 million gallon wastewater storage tank and associated wet weather pumping station. Land acquisition activities were completed during the reporting period. Design began on September 12, 2016, and is complete. Permitting activities are underway and are anticipated to continue through the upcoming quarter. Advertisement for construction is anticipated to occur in the third quarter of 2020.

- Sevenmile Creek Rehabilitation – Area 1

The Sevenmile Creek Rehabilitation – Area 1 project is the first in a series of rehabilitation projects developed for the Mill Creek watershed and its tributaries. Although not originally included in the projects proposed in the CAP/ER, sewer rehabilitation in the Mill Creek watershed will be performed to reduce wet-weather flows, allowing a reduced length of conveyance improvements for the Mill Creek Trunk Improvements and Equalization Facility project. The project area to be evaluated for rehabilitation includes approximately 41,200 linear feet of gravity sewer. Design began on July 31, 2018, and is complete. Advertisement for construction is anticipated to occur in the third quarter of 2020.

- Shelby Park Rehabilitation – Area 6 – Shelby Trunk

This rehabilitation project is the sixth of multiple projects to be conducted in the Shelby Park Rehabilitation project area. The area to be evaluated for rehabilitation includes approximately 36,200 linear feet of gravity trunk sewer and 130 manholes. Design began on February 6, 2017, and is complete, including coordination with Metro Parks. Permitting activities were completed in December 2017. Advertisement for construction is anticipated to occur in the second quarter of 2020.

- Smith Springs Rehabilitation – Area 3 – Harbour Town

The Smith Springs Rehabilitation – Area 3 – Harbour Town project is the third of multiple rehabilitation projects that will be conducted upstream of the Smith Springs Pump Station. The project area to be evaluated for rehabilitation includes over 60,000 linear feet of gravity sewer. Design began on June 5, 2017, and is complete. Advertisement for construction is anticipated to occur in the second quarter of 2020.

2.4 Upcoming CAP/ER Projects

Metro continues to conduct planning activities for multiple projects including collecting flow monitoring and sewer condition assessment data. Additional projects are anticipated to begin procurement for design services in late 2019.

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.

On June 18, 2018, Metro presented to EPA and TDEC an *Addendum to the LTCP* which summarizes the updates and modifications to projects described in the LTCP since its submittal in 2011.

In a February 11, 2019, letter, EPA provided review comments to Metro on the LTCP and *Addendum to the LTCP*. Metro's letter in response, dated March 6, 2019, proposes to the following path forward:

- Implement the recommended improvements at the Central WWTP identified in the *Basis of Design Report*
- Implement the selected control measures at the Driftwood and Boscobel CSO outfalls
- Submit a revised LTCP within twelve months after TDEC finalizes their revised water quality standards
- Implement the remedial measures identified in the revised LTCP within five years after approval or modification of the revised LTCP, provided the remaining costs do not exceed \$200 million.

Discussions about the LTCP are expected to continue through the upcoming quarter.

As review of the LTCP continues, Metro continues to move forward with the implementation of the approved portions of the LTCP. 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:

- Apex Sewer Corrections
- Broadway Improvements
- Driftwood Equalization Basin Expansion
- Sludge Transfer Facility (as part of Central WWTP Capacity Improvements and CSO Reduction)
- Van Buren Improvements
- Washington CSO Facility Improvements

3.2 LTCP Projects under Construction

There are currently no LTCP projects under construction.

3.3 LTCP Projects under Design and Preconstruction

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

- Central WWTP Capacity Improvements and CSO Reduction, A and B

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 completed 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 (A and B) were awarded in April 2015. Following contract negotiations and other designer procurement activities, design activities for both contracts began on September 21, 2015. The *Basis of Design Report* was finalized in December 2016.

In mid-2017, Metro officially decided to design and construct a single headworks facility that will serve both combined and sanitary influents. This design is to be completed by Hazen and Sawyer. All other work at the plant will be designed by Brown and Caldwell. Each firm's notice to proceed for detailed design was issued on June 23, 2017. Design activities are underway and are anticipated to continue through the upcoming quarter.

On March 23, 2017, Metro completed the procurement and contracting of a Construction Manager at Risk to provide pre-construction services during the design phase and to act as the general contractor during the construction phase of this project. Brasfield & Gorrie was selected as the Construction Manager at Risk. Through the reporting period, the Construction Manager at Risk provided input on design efforts, continued to analyze the construction schedule to determine critical path items, and refined construction cost estimates.

3.4 Upcoming LTCP Projects

There are currently no LTCP projects 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 2017 Annual Rehabilitation – Dry Creek

The 2017 Annual Rehabilitation – Dry Creek project, which is located in the Dry Creek Wastewater Treatment Plant's service area, consists of the evaluation and rehabilitation of approximately 57,900 linear feet of gravity sewer, ranging in diameter from 8 to 30 inches. These sewers are located outside of CAP/ER rehabilitation areas and include many sewers classified as high priority for evaluation due to observations of infiltration. Design began on March 27, 2017, and was completed in September 2017. Advertisement for construction is anticipated to occur in the fourth quarter of 2020.

4.2 2017 Annual Rehabilitation – Shepherd Hills

The 2017 Annual Rehabilitation – Shepherd Hills project, which is located in the Dry Creek Wastewater Treatment Plant's service area, consists of approximately 59,900 linear feet of gravity sewer, ranging in diameter from 8 to 30 inches. This project targets sewers located outside of CAP/ER rehabilitation areas and includes many sewers classified as high priority for evaluation due to observations of infiltration. Design began on May 30, 2017, and was completed in October 2017. Advertisement for construction is anticipated to occur in the third quarter of 2020.

Section 5

Quarterly SSO and Dry Weather CSO Report

During the reporting period, Metro experienced 55 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, 2019										
Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup	
01-Apr-19	03-Apr-19	0.00	24.00	0.0001	Force Main Valve	15012019	5116 Kensal Dr	Yes	No	
06-Apr-19	06-Apr-19	0.00	4.00	0.0001	Blockage	02713010	2423 Mansker Dr	Yes	No	
06-Apr-19	07-Apr-19	0.00	7.00	0.001	Blockage	17506029	1156 Shallowbrook Tr S	No	No	
07-Apr-19	07-Apr-19	1.78	2.00	0.0001	Blockage	09106026	5814 Morrow Rd	Yes	No	
08-Apr-19	08-Apr-19	1.78	3.67	0.092	Rainfall	10210012	Davidson Branch SPS	Yes	No	
08-Apr-19	08-Apr-19	2.51	7.58	0.142	Rainfall	08410007	149 Barker Road	Yes	No	
08-Apr-19	08-Apr-19	1.25	3.00	0.0001	Line Break	WMN031P040	1641 Pinkerton Rd	Yes	No	
12-Apr-19	12-Apr-19	0.12	2.75	0.01	Mechanical	01416001	Joelton SPS	Yes	No	
14-Apr-19	14-Apr-19	1.51	5.00	0.0001	Blockage	04309047	408 Delaware Ave	Yes	No	
14-Apr-19	14-Apr-19	1.51	5.00	0.001	Blockage	04309048	407 Delaware Ave	Yes	No	
14-Apr-19	14-Apr-19	1.71	11.00	0.187	Rainfall	08410007	149 Barker Road	Yes	No	
14-Apr-19	14-Apr-19	1.56	11.17	0.775	Rainfall	10210012	Davidson Branch SPS	Yes	No	
14-Apr-19	14-Apr-19	1.65	2.50	0.01	Rainfall	01416001	Joelton SPS	Yes	No	
17-Apr-19	17-Apr-19	0.00	1.50	0.001	Blockage	09401150	904 Village Ct	No	No	
18-Apr-19	20-Apr-19	2.25	30.00	1.363	Rainfall	10210012	Davidson Branch SPS	Yes	No	
19-Apr-19	19-Apr-19	1.90	1.50	0.00001	Blockage	10505142	1440 12th Ave S	No	No	
20-Apr-19	20-Apr-19	1.58	7.58	0.029	Rainfall	08410007	149 Barker Road	Yes	No	
24-Apr-19	24-Apr-19	0.00	8.50	0.00001	Line Break	09413084	710 Calhoun Ave	Yes	No	
28-Apr-19	28-Apr-19	0.00	3.00	0.0001	Blockage	12013024	1210 Currey Rd	Yes	No	
29-Apr-19	29-Apr-19	0.00	Unknown	0.1	Previous Rainfall	08601141	3590 Hermitage Industrial Dr	Yes	No	
03-May-19	03-May-19	0.30	0.50	0.0001	Blockage	08301105	927 Gallatin Ave	Yes	No	
03-May-19	03-May-19	0.25	1.00	0.01	Contractor	08514005	Munn Road SPS	Yes	No	
04-May-19	04-May-19	0.00	1.50	0.00001	Line Break	00715020	2038 Graceland Dr	No	No	
09-May-19	09-May-19	0.69	1.00	0.00001	Blockage	WMN056F040	7218 Nolensville Pk	No	No	
16-May-19	16-May-19	0.00	7.00	0.0001	Force Main	09805082	1735 Stewarts Ferry Pk	No	No	
18-May-19	19-May-19	0.00	1.50	0.0001	Blockage	16410004	4316 Summercrest Blvd	Yes	No	
24-May-19	24-May-19	0.00	0.50	0.00001	Blockage	14814090	4644 Packard Dr	No	No	
28-May-19	28-May-19	0.00	1.50	0.05	Controller	16410021	Summerfield SPS	Yes	No	



Quarterly SSO Report

April 1 through June 30, 2019

Event Start Date	Event End Date	Rainfall (inches)	Duration (hours)	Overflow Volume (MG)	Overflow Cause	Location Manhole ID	Location	Unpermitted Discharge	Building Backup
28-May-19	28-May-19	0.00	0.80	0.05	Other	15110038	Longhunter Chase SPS	Yes	No
05-Jun-19	05-Jun-19	0.00	3.00	0.00035	Air Relief Valve	NA	800 Youngs Ln	Yes	No
07-Jun-19	07-Jun-19	5.75	2.00	0.0001	Blockage	05303103	1411 Clarke St	Yes	No
07-Jun-19	07-Jun-19	5.09	2.50	0.3	Rainfall	06208003	Hidden Acres SPS	Yes	No
07-Jun-19	07-Jun-19	5.01	2.10	0.01	Rainfall	05207006	Berwick Trail / Center St.	Yes	No
07-Jun-19	07-Jun-19	5.09	2.00	0.126	Rainfall	05116016	Loves Branch SPS	Yes	No
07-Jun-19	07-Jun-19	2.33	4.83	0.165	Rainfall	08410007	149 Barker Road	Yes	No
07-Jun-19	07-Jun-19	5.09	0.50	0.138	Rainfall	05205001	Gibson Creek SPS	Yes	No
07-Jun-19	07-Jun-19	5.09	4.92	2.249	Rainfall	03411009	Dry Creek SPS	Yes	No
07-Jun-19	07-Jun-19	5.75	10.25	0.69	Rainfall	04312004	Vandiver SPS	Yes	No
09-Jun-19	10-Jun-19	3.22	9.75	1.025	Rainfall	04312004	Vandiver SPS	Yes	No
09-Jun-19	09-Jun-19	2.47	3.30	0.3	Rainfall	06208003	Hidden Acres SPS	Yes	No
09-Jun-19	10-Jun-19	1.36	2.59	0.013	Rainfall	08410007	149 Barker Road	Yes	No
09-Jun-19	09-Jun-19	2.47	3.50	0.07	Rainfall	05213002	Madison Heights SPS	Yes	No
09-Jun-19	09-Jun-19	2.47	1.00	0.001	Rainfall	04312007	140 Vandiver	Yes	No
09-Jun-19	09-Jun-19	3.41	4.60	0.08	Rainfall	05315020	Lakewood SPS	Yes	No
09-Jun-19	09-Jun-19	3.52	2.00	0.01	Rainfall	14704082	Hopedale SPS	Yes	No
10-Jun-19	10-Jun-19	0.00	5.50	0.0005	Blockage	08504057	5125 Mountainbrooke Cir	No	No
12-Jun-19	12-Jun-19	0.00	2.00	0.00001	Blockage	11709059	3713 Sugartree Pl	No	No
17-Jun-19	17-Jun-19	0.00	3.50	0.0001	Blockage	13316032	4900 Dolphin Dr	No	No
20-Jun-19	20-Jun-19	0.00	4.00	0.01	Electrical	WMN057A015	Baronswood SPS	Yes	No
21-Jun-19	22-Jun-19	0.29	8.75	0.1	Electrical	07504102	Bonnafair SPS	Yes	No
21-Jun-19	24-Jun-19	1.62	80.67	2.056	Controller	04312004	Vandiver SPS	Yes	No
24-Jun-19	24-Jun-19	1.46	2.25	0.01	Rainfall	01416001	Joelton SPS	Yes	No
28-Jun-19	28-Jun-19	0.00	1.00	0.0001	Blockage	15007072	3156 Country Meadow Rd	Yes	No
28-Jun-19	28-Jun-19	0.00	2.00	0.0001	Blockage	14904024	2639 Willowbranch Dr	Yes	No
30-Jun-19	30-Jun-19	0.00	4.00	0.00001	Blockage	07003001	703 Ledford Dr	No	No

Appendix A

Schedule for Current and Upcoming Projects

Note: The construction activity is through substantial completion.

Nashville Overflow Abatement Program 2019 Quarterly Progress Report - 2nd Quarter

Activity Name	2019				2020				2021	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Annual Rehabilitation FY2017 - Dry Creek										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Annual Rehabilitation FY2017 - Shepherd Hills										
Planning										
Easement Acquisition										
Design										
Permitting										
Bid & Award										
Construction										
Central A - WWTP Capacity - Improvements and CSO Reduction										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Central B - WWTP Capacity Improvements and CSO Reduction										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Davidson Branch Pump Station and Equalization Facility										
Planning										
Design										
Easement Acquisition										
Permitting										
Bid & Award										
Construction										
Gibson Creek Equalization Facility										
Easement Acquisition										
Planning										
Design										
Permitting										
Bid & Award										
Construction										
Hurricane Creek Pipe Improvements										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Sevenmile Creek Rehabilitation - Area 1										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										

Note: The construction activity is through substantial completion.

Nashville Overflow Abatement Program 2019 Quarterly Progress Report - 2nd Quarter

Activity Name	2019				2020				2021	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning	■									
Design	■									
Permitting				■						
Easement Acquisition			■							
Bid & Award								■		
Construction										
Shelby Park Rehabilitation - Area 6 - Shelby Trunk										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Smith Springs Rehabilitation - Area 3 - Harbour Town										
Planning										
Design										
Permitting										
Easement Acquisition										
Bid & Award										
Construction										
Vandiver Rehabilitation										
Planning										
Design										
Easement Acquisition										
Permitting										
Bid & Award										
Construction										