

# City of Chattanooga Mayor Tim Kelly

January 31, 2024

J.C. Goodwin
Water Enforcement Branch
Enforcement and Compliance Assurance Division
US EPA-Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Re: United States of America et. al. v. City of Chattanooga, No. 1:12-cv-0024
Annual Work Progress Report No. 17 – January 2023 to December 2023

Dear Mr. Goodwin:

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

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

Mr. John Goodwin January 31, 2024 Page Two

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

Sincerely,

Mark Heinzer (Jan 2024 16:00 EST)

Mark Heinzer, P.E.

Administrator, Wastewater Department

#### Enclosure

cc: Peter Krzywicki, Chief, Environmental Enforcement Section

Environment and Natural Resources Division, US DOJ

Maryjo Bragan, Branch Chief, Water Enforcement Branch

Enforcement and Compliance Assurance Division, US EPA Region 4

Paul Schwartz, Esq., US EPA

Dane Wilson, Esq., US EPA

Jessica Murphy, Manager, Compliance and Enforcement Unit

Division of Water Resources, TDEC

Angela Oberschmidt, Program Coordinator, Division of Water Resources

Chattanooga Field Office, TDEC

Patrick Parker, TDEC

Sohnia Hong, Office of the Attorney General

Wilson Buntin, Office of the Attorney General

Adam Sowatzka, Esq., McGuireWoods

Mike Marino, P.E., Jacobs Engineering

Xavier Pedeux, PE., Jacobs Engineering

Mark Heinzer, P.E., Administrator - Wastewater Department, City of

Chattanooga



# Annual Work Progress Report No. 17

## January 1 – December 31, 2023

Prepared for

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

City of Chattanooga Wastewater Department Consent Decree Program Case No. 1:12-cv-00245

Prepared by

## City of Chattanooga

Wastewater Department

Submitted by

## **Jacobs**

Jacobs Engineering Group Inc. Consent Decree Program Manager

Chattanooga, Tennessee

January 31, 2024

## **Contents**

Con	tents			i
		Append	dix	iv
1.	Exec	utive Sเ	ummary	1
2.	Intro	duction		4
	2.1	Purpo	se	4
	2.2	Requi	rements	4
	2.3	Repor	t Structure	4
3.	Work	Progre	ss	6
	3.1 (com	-	city, Management, Operations and Management ("CMOM") Programs (¶2	,
		3.1.1	CMOM-Sewer Overflow Response Protocol ("SORP") (¶20.a) (complete 6	ed)
		3.1.2	CMOM-Emergency Response Plan (¶20.b) (completed)	6
		3.1.3	CMOM-FOG Mgmt. Plan (¶20.c) (completed)	6
		3.1.4 (comp	CMOM-Gravity Line Preventive Maintenance Program ("GLPMP") (¶20.	,
		3.1.5	CMOM-PS Operations Program ("PSOP") (¶20.e) (completed)	6
		3.1.6 (comp	CMOM-PS Preventive Maintenance Program ("PSPMP") (¶20.f)	6
		3.1.7	CMOM-Hydraulic Model Development (¶20.g) (completed)	6
		3.1.8	CMOM-Capacity Assurance Program ("CAP") (¶20.h.i) (completed)	6
		3.1.9	CMOM-Inter-Jurisdictional Agreement ("IJA") Program (¶20.i) (complete 7	∍d)
	3.2	Sanita	ry Sewer Evaluation Study ("SSES") Work Plan (¶21)	7
		SSES	Work Plan (¶21.a) (completed)	7
		Phase	e I SSES (¶21.b) (completed)	7
		3.2.1	Focused SSES and Rehabilitation-Chattanooga Creek 4 (completed)	7
		3.2.2	Focused SSES and Rehabilitation-Dobbs Branch 3 (completed)	7

		Focused SSES and Rehabilitation-South Chickamauga Creek 1 leted)	7
		Focused SSES and Rehabilitation-South Chickamauga Creek 5	7
		Focused SSES and Rehabilitation-South Chickamauga Creek 16 leted)	7
	Phase	II SSES (¶21.b)	8
	3.2.6	Focused SSES and Rehabilitation-Tennessee River 10 (completed)	8
	3.2.7	Focused SSES and Rehabilitation-Dobbs Branch 6 (completed)	8
	3.2.8	Focused SSES and Rehabilitation-Friars Branch 13 (completed)	8
	3.2.9	Focused SSES and Rehabilitation-Mackey Branch 5 (completed)	8
		Focused SSES and Rehabilitation-Tennessee River 8 Sewer vements	8
	3.2.11	Focused SSES and Rehabilitation-South Chickamauga Creek 9	8
	3.2.12	Focused SSES and Rehabilitation-Tennessee River 5	9
3.3	Early A	Action Capital Improvement Projects (¶22)	9
	3.3.1	SSO and Wet Weather Volume Reduction Projects	9
	3.3.2	MBWWTP Projects (completed)	12
	3.3.3	CSO Projects (completed)	12
	3.3.4	Operations Projects (completed)	12
3.4	East B	ank/West Bank Outfall Assessment and Rehabilitation Plan (¶23)1	12
3.5	Long T	erm Control Plan ("LTCP") Updates (¶24)1	13
		LTCP-Additional Operational Plan ("AOP") for Chattanooga Creek CSOs (¶24.a) (completed)1	
	3.5.2	LTCP – AOP Implementation (¶24.a) (completed)	13
	3.5.3 (compl	LTCP-Post Construction Compliance Monitoring Program (¶24.b) leted)1	13
	3.5.4	Maximizing Treatment at MBWWTP (¶24.c)1	13
3.6	MBWV	VTP Process Controls Program (¶25) (completed)1	13
3.7	Green	Infrastructure ("GI") Program Plan for CSS Basins (¶26) (completed)1	13
3.8	Civil P	enalty (¶28-30) (completed)1	14
	3.8.1	Cash Payment (¶29) (completed)1	14

		3.8.2 Highland Park GI Demonstration Project (¶30) (completed)	14
	3.9	Agawela Drive Stream Restoration – SEP (¶31-37) (completed)	14
	3.10	Reporting Requirements (¶38-40)	14
	3.11	Stipulated Penalties (¶46-55)	15
4.	Addit	ional Work (¶39)	17
	4.1	201 Facility Plan Update (completed)	17
	4.2	Citico Pump Station and CSOTF Upgrades (completed)	17
	4.3 (com	South Chick Pump Station Phase II and Spring Creek Pump Station Upgrade bleted)	
	4.4	Carter Street Sewer Rehabilitation (completed)	17
	4.5	MBWWTP-Control Room Upgrades (completed)	17
	4.6	MBWWTP – Detritors Rehabilitation (completed)	17
	4.7	Implementation of CD GI Projects in the CSS (completed)	18
	4.8	Friar's Branch-South Chick Creek 5 Interceptor Rehabilitation (completed)	18
	4.9	Citico Pump Station Reliability Improvements (completed)	18
	4.10	MBWWTP Secondary Clarifier Upgrades and Additions (completed)	18
	4.11	CSOTF Study (completed)	18
	4.12	South Chickamauga Interceptor Improvements – Phase 1 (completed)	18
	4.13 (comp	Focused SSES and Rehabilitation-South Chickamauga Creek 1 – Phase 2 bleted)	18
	4.14	Critical Pump Station Improvements Master Plan (completed)	18
	4.15	Lupton Drive Chronic SSO Elimination Project (completed)	19
	4.16	Brainerd Golf Course Pump Station Safety Upgrade	19
	4.17	Pump Station Improvements – Hixson 2	19
	4.18	Wet Weather Combined Sewer Storage – Phase 1, 2 & 3 (completed)	19
	4.19	CSOTF Improvements – Phase 1	19
	4.20	CSOTF Equipment Replacement Program	20
	4.21	Dobbs Branch Basin Improvements – Phase 1	20
	4.22	Dobbs Branch Basin Improvements – Phase 2	20
	4 23	Wet Weather Storage Phase 4 – South Chickamauga Pump Station	20

4.24	Citico Pump Station Improvements	21
4.25	Riverview Park/CGCC Chronic SSO Elimination Project	21
4.26	South Chick Creek 2, 3, & 4 Interceptor Rehab	21
4.27	Tiftonia Pump Station 1 Safety Upgrade	21
4.28	ISS Capacity Improvements – Creekside Preserve	21
4.29	Wet Weather Storage Phase 6 – Hixson Pump Station 1	22
4.30	Tiftonia Pump Station 2 Safety Upgrade	22
4.31	MBWWTP SCADA Master Plan – Phase 1 - 3	22
4.32	MBWWTP Improvements – Centrifuge Upgrades (completed)	22
4.33	Citico Force Main Rehabilitation	22
4.34	Mountain Creek Pump Station Improvements (completed)	23
4.35	Big Ridge #5 Pump Station Improvements	23
4.36	Big Ridge #2 Pump Station Improvements	23
4.37	Highland Park Pump Station Improvements	23
4.38	Lookout Creek Sewer Basin Master Plan (completed)	23
4.39	MBWWTP Wet Weather Response Team (completed)	23
4.40	Selected Pump Station Safety Upgrades	24
4.41	23 <sup>rd</sup> Street Pump Station Improvements	24
4.42	Influent Pump Station Improvements (IPS Screen Bypass)	24
4.43	Central Avenue Sewer Improvements (Prev. Lupton City Sewer Rehab)	24
4.44	Winterview Pump Station and Basin Improvements	24
4.45	Tiftonia Pump Station #3 Improvements	25
4.46	South Chickamauga Pump Station Improvements	25
4.47	Green Infrastructure – Lincoln Park	25

## **Appendix**

A Project Schedules Gantt Chart

## Tables

1-1	Completed Projects and Submitted Consent Decree Deliverables for the Current Reporting Period
1-2	Anticipated Completed Projects and Consent Decree Deliverables for the Next Reporting

## **Acronyms and Abbreviations**

ARAP Aquatic Resource Alteration Permit

CAP Capacity Assurance Program

CD Consent Decree

CIPP Cured in Place Pipe

CMOM Capacity, Management, Operations, and Management

CSO Combined Sewer Overflow

CSOTF Combined Sewer Overflow Treatment Facility

CSS Combined Sewer System

EFT Electronic Funds Transfer

EPA Environmental Protection Agency

ESIP Enterprise South Industrial Park

FOG Fats, Oils, and Grease

FSE Food Service Establishments

GLPMP Gravity Line Preventative Maintenance Program

HVAC Heating, Ventilation, and Air Conditioning

I/I Inflow and Infiltration

IPS Influent Pump Station

ISS Interceptor Sewer System

LF Linear Feet

LTCP Long Term Control Plan

MBWWTP Moccasin Bend Wastewater Treatment Plant

MBEC Moccasin Bend Environmental Campus

MCC Motor Control Center

MGD Million Gallons per Day

N/A Not Applicable

NOAA National Oceanic and Atmospheric Administration

NPDES National Pollution Discharge Elimination System

NTP Notice to Proceed

PCP Process Controls Program

PCCMP Post Construction Compliance Monitoring Program

PDR Public Document Repository

PLC Programmable Logic Controller

PS Pump Station

PSOP Pump Station Operations Program

PSPMP Pump Station Preventive Maintenance Program

RDII Rain-derived Infiltration and Inflow

RFQ Request for Quotation

SCADA Supervisory Control and Data Acquisition

SOP Standard Operating Procedure

SORP Sewer Overflow Response Protocol

SRF State Revolving Funds

SSES Sanitary Sewer Evaluation Study

SSO Sanitary Sewer Overflow

SUO Sewer Use Ordinance

TCWN Tennessee Clean Water Network

TDEC Tennessee Department of Environment and Conservation

TDOT Tennessee Department of Transportation

USDOJ United States Department of Justice

VFD Variable Frequency Drive

WCTS Waste Collection and Transmission System

WWD Wastewater Department

WWTA Wastewater Treatment Authority

## 1. Executive Summary

On April 24, 2013, the City of Chattanooga ("City") entered into a consent decree with the United States and the State of Tennessee, in the case styled *United States of America et. al. v. City of Chattanooga, No. 1:12-cv-00245* ("CD"). This Annual Work Progress Report ("Report") has been prepared pursuant to the requirements of paragraph 39 of the CD. In accordance with the CD, this Report presents the major milestones achieved in the last 12 months, and also provides projections for activities anticipated to be completed in the following 12 months. This Report presents milestones achieved from January 1, 2023 through December 31, 2023 ("Report Period"), and the projections cover the period of January 1, 2024 through December 31, 2024.

During the Report Period, the City developed and submitted the deliverables that are listed in Table 1-1 to the Environmental Protection Agency ("EPA") and the Tennessee Department of Environment and Conservation ("TDEC") for review and approval. This information is also presented in Gantt chart format in Appendix A.

Table 1-1

Completed Projects and Submitted Consent Decree Deliverables for the Current Reporting Period

CD Projects and Deliverables	CD Reference	CD Deadline	Submittal Date/ Completion Date
Quarterly Report No. 38	Section IX., para 38	1/31/2023	1/31/2023
Quarterly Report No. 39	Section IX., para 38	4/30/2023	4/30/2023
Quarterly Report No. 40	Section IX., para 38	7/31/2023	7/31/2023
Quarterly Report No. 41	Section IX., para 38	10/31/2023	10/31/2023
Annual Work Progress Report No. 16	Section IX., para 39	1/31/2023	1/31/2023
Annual Report 10	Section IX., para 40	2/28/2023	2/28/2023
DuPont PS and Basin Improvements – Phase 2**	Section VI., para 22	6/24/2020*	5/22/2023

<sup>\*</sup>A Notice of Delay was sent to EPA on August 23, 2018

Table 1-2 lists the projects and deliverables that the City expects to complete during the upcoming annual period of January 1, 2024 through December 31, 2024. This information is also available in Gantt chart format in Appendix A.

Table 1-2

Anticipated Completed Projects and Consent Decree Deliverables for the Next Reporting Period

CD Projects and Deliverables	CD Reference	CD Deadline	Anticipated Submittal/ Completion Date
Quarterly Report No. 42	Section IX., para 38	1/31/2024	1/31/2024
Quarterly Report No. 43	Section IX., para 38	4/30/2024	4/30/2024
Quarterly Report No. 44	Section IX., para 38	7/31/2024	7/31/2024
Quarterly Report No. 45	Section IX., para 38	10/31/2024	10/31/2024
Annual Work Progress Report No. 17	Section IX., para 39	1/31/2024	1/31/2024
Annual Report 11	Section IX., para 40	2/28/2024	2/28/2024

On December 4, 2023, the parties proposed a modification to the CD, which extends certain deadlines in the Consent Decree while adding remedial projects that the City must complete. ("First Material CD Modification"). The First Material CD Modification will not be effective until approved by the Court following a mandatory public notice period. The new projects will be undertaken in collaboration with the Hamilton County Water and Wastewater Treatment Authority ("WWTA") and will be implemented at locations where the work will benefit both the City's sewer system and the sewer system owned and operated by WWTA. These projects will consist of the design and construction of equalization basins for temporary storage of wet weather flows from WWTA's sewer system that are transmitted into Chattanooga's sewer system. The mitigation of wet weather flows from WWTA's system into Chattanooga's sewer system will facilitate the elimination of sanitary sewer overflows ("SSOs") in the City's system. The cost of the additional required projects is estimated to be \$185 million.

This page is intended to be blank.

## 2.Introduction

## 2.1 Purpose

Pursuant to Section IX, paragraph 39, of the CD, the City is required to submit work progress reports on an annual basis to the EPA and TDEC. Chattanooga has prepared this Report to satisfy this reporting requirement.

### 2.2 Requirements

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

- A description of projects and activities completed and milestones achieved during the previous 12-month period pursuant to the requirements of the CD, in Gantt chart or similar format, including a description of compliance or non-compliance with the requirements of the CD and, if applicable, the reasons for non-compliance;
- A summary of significant projects and activities anticipated to be performed, and milestones anticipated to be achieved, in the successive 12-month period to comply with the requirements of the CD, in Gantt chart or similar format; and
- 3. Any additional information the City determines is appropriate to demonstrate that the City is implementing the remedial actions required under the CD in an adequate and timely manner.

## 2.3 Report Structure

Work progress is presented in the body of the Report in a narrative format. This narrative includes a brief description of each CD project, as well as any activities completed or milestones that were achieved or are anticipated to be completed. In addition to these descriptions, a detailed schedule containing each of the projects in Gantt format is provided in Appendix A.

This page is intended to be blank.

## 3. Work Progress

# 3.1 Capacity, Management, Operations and Management ("CMOM") Programs (¶20) (completed)

#### 3.1.1 CMOM-Sewer Overflow Response Protocol ("SORP") (¶20.a) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

#### 3.1.2 CMOM-Emergency Response Plan (¶20.b) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

#### 3.1.3 CMOM-FOG Mgmt. Plan (¶20.c) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016. A revised FOG Plan was submitted to the EPA on September 28, 2016 and approved on December 7, 2016.

## 3.1.4 CMOM-Gravity Line Preventive Maintenance Program ("GLPMP") (¶20.d) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

#### 3.1.5 CMOM-PS Operations Program ("PSOP") (¶20.e) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

#### 3.1.6 CMOM-PS Preventive Maintenance Program ("PSPMP") (¶20.f) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

#### 3.1.7 CMOM-Hydraulic Model Development (¶20.g) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

#### 3.1.8 CMOM-Capacity Assurance Program ("CAP") (¶20.h.i) (completed)

This CAP report required by ¶20.h.i. has been completed. See Semi-Annual Work Progress Report No. 7 submitted January 25, 2017. The requirements set forth in ¶20.h.ii. have been extended to sixty (60) months after the effective date of the First Material CD Modification.

#### 3.1.9 CMOM-Inter-Jurisdictional Agreement ("IJA") Program (¶20.i) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 4 submitted July 24, 2015.

# 3.2 Sanitary Sewer Evaluation Study ("SSES") Work Plan (¶21)

## SSES Work Plan (¶21.a) (completed)

According to paragraph 21.a. of the Consent Decree, "Within nineteen (19) Months after the Effective Date of this Consent Decree, Chattanooga shall submit to EPA and TDEC for review and comment a SSES Work Plan." This deliverable was due on November 24, 2014, and Chattanooga submitted it early on November 18, 2014.

## Phase I SSES (¶21.b) (completed)

EPA approved the SSES Work Plan on July 10, 2015, which required all of the Phase I SSES work (involving the five following sewersheds: Chattanooga Creek 4; Dobbs Branch 3; South Chickamauga Creek 1; South Chickamauga Creek 5; and South Chickamauga Creek 16) to be completed under the plan by July 10, 2020, in accordance with paragraph 21.b. of the Consent Decree. All of the work under the Phase I SSES Work Plan was completed by that date (in fact, it was completed by January 29, 2019) as set forth as follows:

#### 3.2.1 Focused SSES and Rehabilitation-Chattanooga Creek 4 (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

#### 3.2.2 Focused SSES and Rehabilitation-Dobbs Branch 3 (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

#### 3.2.3 Focused SSES and Rehabilitation-South Chickamauga Creek 1 (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

#### 3.2.4 Focused SSES and Rehabilitation-South Chickamauga Creek 5 (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

#### 3.2.5 Focused SSES and Rehabilitation-South Chickamauga Creek 16 (completed)

This project has been completed. See Semi-Annual Report No. 5 submitted January 27, 2016. We also note that this work was also completed in conjunction with related work in and adjacent to this basin involving the Early Action Capital Improvement Project #3.3.1.3 below (East Brainerd Collection System and PS Rehabilitation). See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

## Phase II SSES (¶21.b)

According to paragraph 21.b. of the Consent Decree "SSES Phase II shall be completed for the remaining twenty-four (24) Sewersheds, as shown on the map attached hereto as Appendix A, within fifteen (15) years after EPA's approval of the SSES Work Plan." Based on the approval date of the SSES Work Plan by EPA, the due date for the Phase II SSES work is July 10, 2030. Chattanooga has begun work on Phase II, as outlined below. We note that four of these sewersheds were completed early during in Phase I in conjunction with related work in and adjacent to this basin involving Early Action Capital Improvement Projects.

#### 3.2.6 Focused SSES and Rehabilitation-Tennessee River 10 (completed)

This project was completed as part of Early Action Capital Improvement Project #3.3.1.1 below (DuPont Pump Station and Basin Improvements – Phase 1).

#### 3.2.7 Focused SSES and Rehabilitation-Dobbs Branch 6 (completed)

This project was completed as part of Early Action Capital Improvement Project #3.3.1.7 below (Highland Park Sewer Rehabilitation).

#### 3.2.8 Focused SSES and Rehabilitation-Friars Branch 13 (completed)

This project was completed as part of Early Action Capital Improvement Project #3.3.1.13 below (Friars Branch Basin Improvements).

#### 3.2.9 Focused SSES and Rehabilitation-Mackey Branch 5 (completed)

This project was completed as part of Early Action Capital Improvement Project #3.3.1.3 below (East Brainerd Collection System and PS Rehabilitation).

#### 3.2.10 Focused SSES and Rehabilitation-Tennessee River 8 Sewer Improvements

The project involves SSES work in the Tennessee River 8 sewer sub-basin on approximately 96,300 linear feet of pipe to identify areas where unwanted groundwater or stormwater can infiltrate the sanitary sewer system. From the SSES, approximately 38,500 linear feet of sewer and service pipeline and 400 manholes will be repaired or replaced. Approximately 3,700 linear feet of 8 and 10-inch sewer will also be upgraded to 12-inch. The NTP for professional services was issued on January 13, 2021. The construction began in the first half of 2023 and the project is expected to be completed in the first half of 2025.

#### 3.2.11 Focused SSES and Rehabilitation-South Chickamauga Creek 9

The project involves SSES work in the South Chick Creek 9 sewer sub-basin on approximately over 74,100 linear feet of pipe to identify areas where groundwater or stormwater can infiltrate the sanitary sewer system. From the SSES, approximately over 29,600 linear feet of sewer and service pipeline and over 190 manholes will be repaired or replaced using methods of cured-in-place pipe, point repairs, and open cut. This project will reduce I/I in both sub-basins and eliminate SSOs, and in particular, the Shallowford Road Chronic SSO located in the South Chick Creek 9 sewer sub-basin. The construction for South Chick Creek 9 began in the first half of 2023 and is expected to be completed in the second half of 2024.

#### 3.2.12 Focused SSES and Rehabilitation-Tennessee River 5

The project's rehabilitation works will include cured-in-place pipe ("CIPP"), pipe bursting, open cut construction, point repairs, and manhole rehabilitation and replacement. These upgrades will reduce significant Inflow and Infiltration ("I/I") issues and SSOs in the area, as well as increase the overall system reliability. The NTP for professional services was issued in June 2022. The construction began in the second half of 2023 and is expected to be completed in the second half of 2024.

## 3.3 Early Action Capital Improvement Projects (¶22)

#### 3.3.1 SSO and Wet Weather Volume Reduction Projects

## 3.3.1.1 DuPont Pump Station and Basin Improvements – Phase 1 (completed) and Phase 2 (completed)

The DuPont Pump Station ("PS") and Basin Improvements Phase 1 and 2 projects are being performed pursuant to Paragraph 22 and Appendix C of the CD.

<u>Phase 1</u> This work has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

<u>Phase 2</u> The original plan called for the design and construction of approximately 7.5 million gallons of wet weather storage and a new wet weather PS at the DuPont PS site. Prior to the start of construction in the first half of 2017, public concern of the nature of the project grew and the City undertook an analysis of potential alternatives. In 2018, the City developed a new plan which calls for the re-design and construction of an approximately 22 Million Gallons per Day ("MGD") new wet weather PS further downstream of the existing DuPont PS site on City owned property in a commercial area where the DuPont-Lupton City interceptors merge. The re-design also includes a new diversion structure, standby generator, and upsizing of approximately 7,000 LF section of gravity interceptors.

We note that on August 23, 2018, the City submitted a Notice of Delay to EPA pursuant to paragraph 57 of the Consent Decree, detailing the following with respect to this project: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Chattanooga's rationale for attributing such delay to a force majeure event; and a statement as to whether, in the opinion of Chattanooga, such event may cause or contribute to an endangerment to public health, welfare, or the environment.

Following the initial notice, additional challenges have caused additional delays: the COVID-19 pandemic and associated supply chain issues, along with delays from permitting agencies (e.g., TVA, USACE, and TDEC). The re-design was completed and approved in October 2019. Successful bids for both PS and pipeline contract were received by February 13, 2020. Several challenges slowed down construction, including the 9-month review of the TVA 26a permit from Jan 2020 to Oct 2020, the required Phase 1 Archaeological Survey completed in the Summer of 2020, the SRF review of ATA package for Contract B (Gravity Sewer), lengthy negotiations with the Riverton Development for easement and drainage issues, coordination with the railroad for boring, and a construction claim between the consultant and the contractor. This project has since been completed in May 2023.

### 3.3.1.2 Collegedale Pump Station Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 7 submitted January 25, 2017.

#### 3.3.1.3 East Brainerd Collection System and Pump Station Rehabilitation (completed)

<u>Collections System Rehabilitation</u>- This work has been completed. See Semi-Annual Report No. 5 submitted January 27, 2016.

<u>PS Rehabilitation</u>- This work has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

#### 3.3.1.4 Altamont Sewer Basin and Pump Station Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 2 submitted July 28, 2014.

#### 3.3.1.5 Pineville Pump Station and Sewer Basin Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 3 submitted January 27, 2015.

### 3.3.1.6 Citico Creek Interceptor Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 2 submitted July 28, 2014.

#### 3.3.1.7 Highland Park Sewer Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 9 submitted January 29, 2018.

#### 3.3.1.8 Citico CSOTF Pump Station Improvement Study (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 3 submitted January 27, 2015.

#### 3.3.1.9 Tremont Area Sewer Separation Study (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 2 submitted July 28, 2014.

## 3.3.1.10 Enterprise South Industrial Park ("ESIP") Pump Station, Force Main and Interceptor Upgrade (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

#### 3.3.1.11 Orchard Knob Pump Station Improvements (completed)

This work has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

#### 3.3.1.12 Friars Branch Pump Station Improvements (completed)

This project has been substantial completed. See Semi-Annual Work Process Report No.12 submitted July 31, 2019.

#### 3.3.1.13 Friars Branch Basin Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

#### 3.3.1.14 Chattanooga Creek Interceptor Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

#### 3.3.1.15 Tannery Flats Interceptor Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

#### 3.3.1.16 East Bank/West Bank ("EB/WB") Flow Monitoring (complete)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

## 3.3.1.17 Environmental and Economic Infrastructure Improvement Plan ("E2I2") SSO Abatement Program

These projects will be added as a CD-required project under Paragraph 22 by the First Material CD Modification when it is effective. We are providing information on these projects on the assumption that the CD Modification will be approved by the Court.

- <u>e2l2 Lee Highway (Appendix C, Project 16)</u> This project is described in detail in the e2i2 Agreement, as amended. The main features of this project are to perform a flow analysis to determine a basis of design and install a wet weather pump station, storage tank to equalize wet weather flows, and upgrade gravity sewer and other appurtenances.
- <u>e2l2 East Ridge (Appendix C, Project 17)</u> This project is described in detail in the e2i2 Agreement, as amended. The main features of this project are to perform a flow analysis to determine a basis of design and install a wet weather pump station, storage tank to equalize wet weather flows, and upgrade gravity sewer and other appurtenances.
- e2I2 Signal Mountain/Red Bank (Appendix C, Project 18) This project is described in detail in the e2i2 Agreement, as amended. The main features of this project are to perform a flow analysis to allow for the upgrade of gravity sewers and other appurtenances and to determine a basis of design and install wet weather pump station(s) and storage tank(s) to equalize wet weather flows from Red Bank and potentially flows from the Signal Mountain POTW. If Chattanooga has received notification by July 1, 2024, that WWTA will decommission the Signal Mountain plant and send Signal Mountain flow to Chattanooga, this project shall be sized, designed and constructed to accommodate Red Bank flows and flows from the Signal Mountain WWTP, as described in the e2i2 Agreement, as amended. If Chattanooga has not received notification by July 1, 2024, that WWTA will decommission the Signal Mountain plant and send Signal Mountain flows to Chattanooga, this project, if necessary, shall be sized, designed and constructed to accommodate Red Bank flows, as described in the e2i2 Agreement, as amended, and Chattanooga shall not be required to manage any Signal Mountain WWTP flows through this project.

The NTP for professional services was issued in April 2020, and the 15% design was completed in the second half of 2022. An RFP was issued in November 2022 and a Design-Build team was

selected, with the NTP issued on July 26, 2023. The design is in progress and construction is anticipated to start in the second half of 2024.

#### 3.3.2 MBWWTP Projects (completed)

#### 3.3.2.1 MBWWTP Secondary Clarifier Valve Motor Operator Replacement (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

### 3.3.2.2 MBWWTP Hydraulic and Pump Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

#### 3.3.2.3 MBWWTP Bar and Fine Screen Replacements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

#### 3.3.2.4 MBWWTP Effluent Disinfection System Upgrade (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

#### 3.3.3 CSO Projects (completed)

#### 3.3.3.1 Carter Street CSOTF Sewer Outfall Replacement (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 6 submitted July 27, 2016.

#### 3.3.3.2 Automation of Valve Operators at CSO Facilities (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 1 submitted January 30, 2014.

#### 3.3.4 Operations Projects (completed)

#### 3.3.4.1 South Chickamauga Pump Station Reliability Improvements (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 1 submitted January 30, 2014.

## 3.3.4.2 MBWWTP Telemetry and Supervisory Control and Data Acquisition ("SCADA") Upgrades (Completed)

This project has been completed. See Semi-Annual Work Progress Report No. 9 submitted January 29, 2018.

# 3.4 East Bank/West Bank Outfall Assessment and Rehabilitation Plan (¶23)

Pursuant to the CD Modification, "in the event that either the East Bank Outfall or the West Bank Outfall experiences an SSO within a 12-month period commencing sixty (60) Months from Effective Date of the First Material Modification, Chattanooga shall submit to EPA and

TDEC for review and comment within seven (7) Months after such SSO event (that occurs during that 12-month period) an East Bank/West Bank Assessment and Rehabilitation Plan to eliminate SSOs from these unpermitted outfalls." Therefore, assuming that the CD Modification is approved by the Court, this requirement will become effective 5 years from that date.

## 3.5 Long Term Control Plan ("LTCP") Updates (¶24)

## 3.5.1 LTCP-Additional Operational Plan ("AOP") for Chattanooga Creek CSO Outfalls (¶24.a) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 9 submitted January 29, 2018.

#### 3.5.2 LTCP - AOP Implementation (¶24.a) (completed)

This project was completed. See Annual Work Progress Report No. 16 submitted January 31, 2023. A final letter documenting the force majeure was sent to EPA on July 11, 2023.

### 3.5.3 LTCP-Post Construction Compliance Monitoring Program (¶24.b) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 3 submitted January 27, 2015.

#### 3.5.4 Maximizing Treatment at MBWWTP (¶24.c)

This project includes the development of a feasible alternatives analysis to assess the implementation of any feasible alternatives to prevent the illegal Bypass from any treatment process at the MBWWTP. According to paragraph 24.c. of the Consent Decree, "in the event that a Bypass occurs within the first (1st) year following completion of SSES Phase I and the Early Action Capital Improvement Projects, Chattanooga shall submit to EPA and TDEC for review and comment within twelve (12) Months after such Bypass event a Feasible Alternatives Analysis in accordance with Section II.C.7 of the CSO Control Policy." The Early Action Capital Improvement Projects were completed in May 2023. There were no illegal Bypasses from any treatment process at the MBWWTP from May to December 2023. This requirement will be met without triggering the need for a feasibility study if there are no illegal Bypasses from any treatment process at the MBWWTP from January to April 2024.

## 3.6 MBWWTP Process Controls Program (¶25) (completed).

This project has been completed. See Semi-Annual Work Progress Report No. 3 submitted January 27, 2015.

# 3.7 Green Infrastructure ("GI") Program Plan for CSS Basins (¶26) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 5 submitted January 27, 2016.

## 3.8 Civil Penalty (¶28-30) (completed)

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

- Cash Payment 50% of the civil penalty (\$238,200) is to be paid to the United States by FedWire Electronic Funds Transfer. This payment was made to EPA on May 17, 2013.
- State Project the remaining 50% of the civil penalty is to be spent on the state project in accordance to Appendix D of the CD.

### 3.8.1 Cash Payment (¶29) (completed)

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

#### 3.8.2 Highland Park GI Demonstration Project (¶30) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

# 3.9 Agawela Drive Stream Restoration – SEP (¶31-37) (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 10 submitted July 30, 2018.

### 3.10 Reporting Requirements (¶38-40)

Compliance with Section IX of the CD requires the City to submit the following reports on a calendar schedule:

- Quarterly Reports (¶38), including detailed information on Chattanooga's SSOs, CSO discharges and bypasses at the MBEC;
- <u>Annual Work Progress Reports (¶39)</u>, including CD deliverable milestones achieved in the last 12 months and projections for activities anticipated to be completed in the following 12 months; and
- <u>Annual Reports (¶40)</u>, including trends and analyses of the results of the Chattanooga CD programs including CMOM and SSO reduction programs.

To date, the following reports have been submitted to the EPA:

- Quarterly Reports 1 41;
- Semi-Annual Work Progress Reports 1 13;
- Annual Work Progress Report 14 16; and
- Annual Reports 1 10.

The following reports will be submitted to the EPA during (or shortly after) the next Reporting Period:

- Quarterly Reports 42 45;
- Annual Work Progress Report 17, and

- Annual Report 11.

## 3.11 Stipulated Penalties (¶46-55)

There were no demands for stipulated penalties from EPA during this Report Period.

This page is intended to be blank.

## 4. Additional Work (¶39)

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

In addition to the work progress achieved in accordance with the CD as described in the previous sections, the City continued to implement remedial and improvement efforts under the existing Capital Improvement Program during the Reporting Period. The work described below is aimed at assessing and improving Chattanooga's Interceptor Sewer System ("ISS"). While not required by the CD, these projects directly impact Chattanooga's on-going effort to reduce and eliminate SSOs.

## 4.1 201 Facility Plan Update (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 7 submitted January 25, 2017.

## 4.2 Citico Pump Station and CSOTF Upgrades (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

# 4.3 South Chick Pump Station Phase II and Spring Creek Pump Station Upgrades (completed)

This project has been completed. See Annual Work Progress Report No. 14 submitted February 02, 2021.

## 4.4 Carter Street Sewer Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

## 4.5 MBWWTP-Control Room Upgrades (completed)

This project has been completed. See Semi-Annual Work Progress Report No.12 submitted July 31, 2019.

## 4.6 MBWWTP - Detritors Rehabilitation (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 11 submitted January 29, 2019.

## 4.7 Implementation of CD GI Projects in the CSS (completed)

This project has been completed. See Semi-Annual Work Progress Report No.13 submitted January 31, 2020.

# 4.8 Friar's Branch-South Chick Creek 5 Interceptor Rehabilitation (completed)

This project has been completed. See Annual Work Progress Report No. 14 submitted February 02, 2021.

# 4.9 Citico Pump Station Reliability Improvements (completed)

This project has been completed. See Annual Work Progress Report No. 14 submitted February 02, 2021.

# 4.10 MBWWTP Secondary Clarifier Upgrades and Additions (completed)

This project has been completed. See Semi-Annual Work Progress Report No.12 submitted July 31, 2019.

## 4.11 CSOTF Study (completed)

This project has been completed. See Semi-Annual Work Progress Report No. 8 submitted July 26, 2017.

## 4.12 South Chickamauga Interceptor Improvements – Phase 1 (completed)

This project has been completed. See Annual Work Progress Report No. 14 submitted February 02, 2021.

# 4.13 Focused SSES and Rehabilitation-South Chickamauga Creek 1 – Phase 2 (completed)

This project has been completed. See Annual Work Progress Report No. 15 submitted February 2, 2022.

## 4.14 Critical Pump Station Improvements Master Plan (completed)

This study has been completed. See Annual Work Progress Report No. 15 submitted February 2, 2022.

# 4.15 Lupton Drive Chronic SSO Elimination Project (completed)

This project has been completed. See Annual Work Progress Report No. 15 submitted February 2, 2022.

## 4.16 Brainerd Golf Course Pump Station Safety Upgrade

This project involves making improvements to the East Brainerd Golf Course Pump Station., including the replacement and upgrade of the pump station and force main and relocating it to a manageable area off of the golf course. Additionally, approximately 1,400 linear feet of 8-inch gravity sewer will be installed. The upgrades will allow the station to increase its capacity, performance and reliability and help to reduce sanitary sewer overflows in the area. The NTP for professional services was issued in September 2017 and TDEC approval was received on February 13, 2019. This project was bundled with the PS Improvements – Hixson 2 (section 4.17), the Selected Pump Station Safety Upgrades (section 4.41), and the Central Avenue Sewer Improvements (section 4.44) projects, and will be bid, and constructed as one construction contract. The construction started in the second half of 2023 and is expected to be completed in the second half of 2025.

## 4.17 Pump Station Improvements – Hixson 2

This project involves improvements associated with converting the Hixson PS 2 from a canned station to a submersible station. A few of the main components of the project include upsizing the capacity to 13 MGD and replacing the force main. The upgrades will provide the station with better accessibility and allow the station to increase its capacity, performance and reliability, helping reduce sanitary sewer overflows in the area. The NTP for professional services was issued in January 2020. The final design was completed in August 2021. This project was bundled with the Brainerd Golf Course PS Safety Upgrade (section 4.16), the Selected Pump Station Safety Upgrades (section 4.41), and the Central Avenue Sewer Improvements (section 4.44) projects, and will be bid, and constructed as one construction contract. The construction started in the second half of 2023 and is expected to be completed in the second half of 2025.

## 4.18 Wet Weather Combined Sewer Storage – Phase 1, 2 & 3 (completed)

This project will construct Phase 1, 2 & 3 of wet weather storage system at the Hamm Rd site, which will store peak wet weather flows, reduce flows to the West Bank Overflow, and meet the future capacity needs of the area. The NTP for professional services was issued in November 2017. The construction began in the first half of 2021 and was completed in September 2023.

## 4.19 CSOTF Improvements - Phase 1

This project stemmed from the CSO Treatment Facility ("CSOTF") Optimization Plan, which was a three-phased approach to maximizing the use of storage and treatment in 7 CSOTFs within the City's sewer system. This project implements the first phase and included upgrades to manual controls and addition of equipment for automation and remote control of the CSOTFs. The NTP

for professional services was issued on November 16, 2018. This project, the CSOTF Equipment Replacement Program (in section 4.20), and the LTCP – AOP Implementation (see section 3.5.2) projects were bundled together, bid, and are being constructed as one construction contract. The NTP for professional services was issued in November 2018. The design was completed in the first half of 2021 and the construction was completed in September 2023.

## 4.20 CSOTF Equipment Replacement Program

This project involves the replacement of the fine screens at both the Central Avenue and Citico CSOTFs. The existing fine screens are reaching the end of their useful service life and need replacement. This project, the CSOTF Improvements Phase 1 (in section 4.19), and the LTCP – AOP Implementation (in section 3.5.2) projects were bundled, bid, and are being constructed as one construction contract. The NTP for professional services was issued in January 2020. The construction started in November 2021 and is anticipated to be completed in the first half of 2024.

## 4.21 Dobbs Branch Basin Improvements – Phase 1

This project involves the rehabilitation of up to 100,000 LF of 8-inch to 24-inch sanitary sewers in the Dobbs Branch sub-basins 3 and 4. The project began with the development of construction documents that provided for the rehabilitation for certain sewer segments and associated manholes. Pipeline rehabilitation methods will include cured-in-place-pipe ("CIPP"), point repairs, pipe bursting, and/or open cut replacement. The design also includes the rehabilitation of up to 400 manholes within the sewer basin through the installation of a watertight spray-on liner. A smoke testing investigation of the 138,000 LF basin will be performed to identify illicit connections. Tabulated and ranked data will be provided to the City for execution outside the contract. The NTP for professional services was issued in September 2018. The design was completed in October 2019. The construction began in the first half of 2020 and is expected to be completed in the first half of 2024.

## 4.22 Dobbs Branch Basin Improvements - Phase 2

This project involves the rehabilitation of up to 100,000 LF of 8-inch to 24-inch sanitary sewers in the Dobbs Branch sub-basins 5 and 6. The project began with developing construction that provided for the rehabilitation for certain sewer segments and associated manholes. Pipeline rehabilitation methods will include CIPP, point repairs, pipe bursting, and/or open cut replacement. The design also includes the rehabilitation of up to 400 manholes within the sewer basin through the installation of a watertight spray-on liner. A smoke testing investigation of the 137,000 LF basin will be performed to identify illicit connections. Tabulated and ranked data will be provided to the City for execution outside the contract. The NTP for professional services was issued in November 2018. The design was completed in October 2019, and the construction is expected to be completed in the first half of 2024.

# 4.23 Wet Weather Storage Phase 4 – South Chickamauga Pump Station

This project will construct 10 MG of wet weather storage near the South Chickamauga PS located off N. Hawthorne St. The project will store peak wet weather flows, reduce the risk of SSOs,

and aid in meeting future capacity requirements. The project will also increase reliability in the event of power or mechanical failures. The NTP for professional services was issued in February 2019. The design was completed in September 2022. This project is now currently on hold.

## 4.24 Citico Pump Station Improvements

This project involves capital improvements to the Citico PS, including the following upgrades and improvements: (1) New motor control center ("MCC"), (2) New pumps, motors, and drives, (3) The wet well cleaned and coated, (4) Replace 72-inch slide gate and three open channel slide gates, (5) Additional security, structural and electrical upgrades. These improvements are designed to improve the capacity, performance, and reliability of the station, as well as reduce the risk of SSOs in the area. The NTP for professional services was issued in October of 2019. The design was completed in November 2021, and the construction started in the second half of 2022 and is expected to be completed in the second half of 2024.

## 4.25 Riverview Park/CGCC Chronic SSO Elimination Project

This project involves the rehabilitation or upsizing of sanitary sewer pipe and associated manholes located in the Riverview Park and Chattanooga Golf and Country Club area. The project involves rehabilitating or replacing the manholes and gravity sewer segments (8-inch to 15-inch diameter) immediately upstream and downstream of this location. The NTP for professional services was issued in November 2019. The bid process was completed in February 2021. Most of the construction has been completed; due to the golf course schedule, the construction was delayed and is expected to be completed in the first half of 2024. This project is now currently on hold.

## 4.26 South Chick Creek 2, 3, & 4 Interceptor Rehab

This project involves the evaluation and rehabilitation of approximately 7,850 LF of gravity interceptor pipeline and 16 associated manholes in the South Chickamauga Creek sub-basins 3 and 4. The pipeline rehabilitation will consist of the 72-inch Friar Branch Interceptor from the first manhole downstream of Friars Branch PS, downstream to the junction box on the 84-inch diameter interceptor. The NTP for professional services was issued in July 2019. Additional to the project, the rehabilitation includes 27 manholes and the junction chamber structure, and repair aging sewer infrastructure. The new NTP for professional services was issued in January 2019. The design was completed in October 2021. The construction started in the first half of 2022 and is anticipated to be completed in the first half of 2024.

## 4.27 Tiftonia Pump Station 1 Safety Upgrade

This project involves improvements associated with converting Tiftonia PS 1 from a "canned" station to a submersible station. The upgrades will provide the station with better accessibility and allow the station to increase its capacity, performance and reliability, helping reduce SSOs in the area. This project is now currently on hold.

## 4.28 ISS Capacity Improvements - Creekside Preserve

This project includes a SSES on approximately 700 linear feet of pipe to identify areas to reduce I/I and the design and construction of a new submersible grinder PS. The NTP for professional

services was issued in January 2020, and the design was completed in the second half of 2022. This project was bundled with the Big Ridge #5 Pump Station Improvements (section 4.36) project, and will be bid, and constructed as one construction contract. The construction is anticipated to start in the first half of 2024 and be completed in the first half of 2025.

## 4.29 Wet Weather Storage Phase 6 - Hixson Pump Station 1

This project will construct 5 MG of wet weather storage near the Hixson 1 PS and will store peak wet weather flows to meet the future capacity requirements. The NTP for professional services was issued in December 2019, and the design was completed in the first half of 2023. The construction began in the second half of 2023 and is expected to be completed in the second half of 2025.

## 4.30 Tiftonia Pump Station 2 Safety Upgrade

This project includes converting the Tiftonia 2 PS from a "canned" PS to a submersible PS as well as the assessment of the sewer force main for rehabilitation or replacement. This project was previously bundled with the ISS Capacity Improvements – Creekside Preserve (section 4.28) and the Big Ridge #5 Pump Station Improvements (section 4.36) projects. This project will likely be bundled with Winterview PS and Basin Improvements (section 4.44) and Tiftonia PS #3 Improvements (section 4.45), and will be bid, and constructed as one construction contract. The construction is anticipated to start in the first half of 2024 and be completed in the first half of 2026.

## 4.31 MBWWTP SCADA Master Plan - Phase 1 - 3

This project involves the development of the initial phase of a comprehensive SCADA System 5-year Master Plan for the City of Chattanooga Waste Resources Division. The Engineer will prepare a report which compiles all findings, analyses, SOP's, and other recommendations to provide SCADA and Operational Technology planning for the City's wastewater and collections systems. The NTP for professional services was issued in December 2019. Phases 1 and 2 of the project have been completed. This project is currently on-hold to allow the City to select their preferred sets of standards for implementation in Phase 3.

# 4.32 MBWWTP Improvements – Centrifuge Upgrades (completed)

This project includes the preliminary design for the installation of one existing, pre-purchased centrifuge which is located between Centrifuge Building 1 & 2 at the MBWWTP. The NTP for professional services was issued in June 2020. The design was complete in March 2022 and the construction was completed in January 2023.

### 4.33 Citico Force Main Rehabilitation

This project includes construction scope to replace the 30" force main exiting the Citico PS, located on the south side of the Tennessee River near Citico Creek along Riverside Drive. The force main is approximately 1,600 linear feet spanning the Tennessee River to discharge into a manhole on the north side of the river located on Constitution Drive. Replacement involves

installing a new 48-inch diameter force main pipe across the river using cut and cover construction methods. The planning phase is estimated to be completed in the first half of 2024, and the design is expected to be finalized in the second half of 2024.

## 4.34 Mountain Creek Pump Station Improvements (completed)

This project has been completed. See Annual Work Progress Report No. 16 submitted January 31, 2023.

## 4.35 Big Ridge #5 Pump Station Improvements

This project includes of improvements to the Big Ridge ("BR") #5 PS. The improvements include a new PS. The NTP for professional services was issued in March 2021. The design was completed in the first half of 2023. This project was bundled with the ISS Capacity Improvements – Creekside Preserve (section 4.28) project, and will be bid, and constructed as one construction contract. The construction is anticipated to start in the first half of 2024 and be completed in the first half of 2025.

## 4.36 Big Ridge #2 Pump Station Improvements

This project includes improvements to the Big Ridge #2 PS. The control panels show signs of H2S corrosion and are an early candidate for replacement. After replacement, consideration should be given to relocating the electrical equipment rack and canopy as the rack is too close to the wet well, which is non-compliant with NFPA 820. Other upgrades include the installation of bypass pump connection on force main, new pumps, VFDs and discharge piping, the repair of spalled concrete at effluent pipe penetration in wet well and improving the support for PVC conduit hanging into wet well. The NTP for professional services was issued in January 2022. The project's scope was revised in the second half of 2023 to address deficiency in PS capacity. The planning phase is expected to be completed in the first half of 2024, and the design is expected to be finalized in the second half of 2024.

## 4.37 Highland Park Pump Station Improvements

This project includes improvements to the Highland Park wet weather PS. These include the full rehabilitation of the PS, replacement of pumps with VFDs, replacement of all electrical and MCC, new discharge piping, new safety grating, and wet well lining. The NTP for professional services was issued in January 2022. The design was completed in the second half of 2023. The construction is anticipated to start in the first half of 2024.

## 4.38 Lookout Creek Sewer Basin Master Plan (completed)

This project has been completed. See Annual Work Progress Report No. 16 submitted January 31, 2023.

### 4.39 MBWWTP Wet Weather Response Team (completed)

This project has been completed. See Annual Work Progress Report No. 16 submitted January 31, 2023.

## 4.40 Selected Pump Station Safety Upgrades

This project will involve the evaluation, design and construction of PSs located at Murray Hills #5, off Webb Road and Brainerd Manor located off Moore Road, near the airport. The existing stations are "can" stations. The NTP for professional services was issued in July 2018. The design was completed in the first half of 2022. This project was bundled with the Brainerd Golf Course PS Safety Upgrade (section 4.16), the Pump Station Improvements – Hixson 2 (section 4.17), and the Central Avenue Sewer Improvements (section 4.44) projects, and will be bid, and constructed as one construction contract. The construction began in the second half of 2023 and is expected to be completed in the second half of 2025.

## 4.41 23rd Street Pump Station Improvements

This project includes making capital improvements to the 23rd Street PS within the screening room, dry well, wet well, and electrical room The NTP for professional services was issued in March 2021. The design is being finalized to include the completed 23<sup>rd</sup> St. Bypass vault design and bid these together. The construction is anticipated to start in the second half of 2024.

# 4.42 Influent Pump Station Improvements (IPS Screen Bypass)

This project includes the addition of a bypass system to allow for flow through the Influent Pump Station ("IPS") and to the MBEC process during blinding conditions of the IPS screen, as well as the replacement of the bar screens. The NTP for professional services was issued in May 2021. The design was completed in the second half of 2023, and the construction is anticipated to start in the first half of 2024.

# 4.43 Central Avenue Sewer Improvements (Prev. Lupton City Sewer Rehab)

The purpose of this project is to abandon a damaged 18" sewer line between manholes S167C067 and S167C068 that crosses the Southern Cellulose facility at Central Avenue and East 42nd Street through the installation of a small PS. The NTP for professional services was issued in June 2020. The design was completed in September 2022. This project was bundled with the Brainerd Golf Course PS Safety Upgrade (section 4.16), the PS Improvements – Hixson 2 (section 4.17), and the Selected Pump Station Safety Upgrades (section 4.40) projects, and will be bid, and constructed as one construction contract. The construction began in the second half of 2023 and is expected to be completed in the first half of 2026.

## 4.44 Winterview Pump Station and Basin Improvements

This project includes upgrades to the Winterview PS. The NTP for professional services was issued in January 2022. The design began in December 2022. The project will likely be bundled with Tiftonia PS #2 Improvements (section 4.30) and Tiftonia PS #3 Improvements (section 4.45), and will be bid, and constructed as one construction contract. The design has been finalized. The project is currently on hold to be part of this bundle.

### 4.45 Tiftonia Pump Station #3 Improvements

This project involves improvements to the Tiftonia #3 PS to include a replacement pump station with submersible pumps, potential capacity upgrade, control panel with associated electrical, SCADA, wet well, and valving. The existing station will be demolished, and the existing gravity flow will be routed to the new station. The NTP for professional services was issued in October 2022. The design is estimated to begin in the first half of 2023 and be completed in the second half of 2023. The project will likely be bundled with Tiftonia PS #2 Improvements (section 4.30) and Winterview PS and Basin Improvements (section 4.44), and will be bid, and constructed as one construction contract. Construction is expected to begin in the first half of 2024.

## 4.46 South Chickamauga Pump Station Improvements

This project involves improvements to the South Chick Creek Pump Station that will include are new pumps, motors, controls, electrical, SCADA, rake bar, sluice gates, air scrubber, and HVAC. The NTP for professional services was issued in November 2022. The planning started in January 2023. The construction is anticipated to start in the first half of 2025.

### 4.47 Green Infrastructure – Lincoln Park

This project includes improvements to water quality control measures for roadways and landscaping, such as bioswales, green pavers, vegetation, a "green" or living wall as a noise barrier for the railyard. This project is currently on hold.

This page is intended to be blank.

## Appendix A Project Schedules Gantt Chart































































































































