MAYOR
JIMMIE SMITH
(P) 601.485.1927
(F) 601.485.1911

COUNCILMEMBERS
GEORGE M. THOMAS
Ward 1

DWAYNE DAVIS
Ward 2

JOSEPH NORWOOD
Ward 3

ROMANDE GAIL WALKER
Ward 4

TYEASHA "TY" BELL LINDSEY
Ward 5

COUNCIL CLERK:
(P) 601.485.1959
(F) 601.485.1913

CITY DEPARTMENTS:

Chief Administrative Officer:
(P) 601.485.1929
(F) 601.485.1911

Community Development:
(P) 601.485.1910
(F) 601.485.1913

Finance and Records:
(P) 601.485.1946
(F) 601.485.1979

Fire:
(P) 601.485.1822
(F) 601.485.1035

Homeland Security:
(P) 601.484.6890
(F) 601.484.6895

Parks and Recreation:
(P) 601.485.1802
(F) 601.485.1851

Police:
(P) 601.485.1841
(F) 601.484.6832

Public Works:
(P) 601.485.1920
(F) 601.485.1864

601 23rd Avenue
Post Office Box 1430
Meridian, MS 39302-1430
www.meridianms.org

FEBRUARY 29, 2024

Case No. 3:19-cv-00427-DPJ-FKB

EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611
Re: DOJ No. 90-5-1-1-11167

Chief, NPDES Permitting and Enforcement Branch
Water Protection Division
U.S. Environmental Protection Agency, Region 4
ATTN: Mr. John C. Goodwin
61 Forsyth Street, S.W.
Atlanta, GA 30303

Chief, Environmental Compliance and Enforcement Division
Office of Pollution Control
Mississippi Department of Environmental Quality
P.O. Box 2261
Jackson, MS 39225-2261

Re: City of Meridian, Mississippi – EPA Consent Decree
Annual Report No. 4

Dear Ladies and Gentlemen:

Please find enclosed the City of Meridian's Annual Report No. 4, as required in Section IX of the Consent Decree. Should you have any questions, please contact me.

Sincerely,

David M. Hodge, P.E., Director
Public Works Department
City of Meridian

Enclosure
Cc: Honorable Jimmie Smith, Mayor
David M. Ruhl, P.E., RPG Program Manager, Waggoner Engineering Inc.

Wastewater System Consent Decree
Meridian, Mississippi

Annual Report No. 4

February 29, 2024

311 27th Avenue, Meridian, MS 39301
P: 601.485.1920 | F: 601.485.1864

City of Meridian
Wastewater Consent Decree Program

Annual Report No. 4
January 2023 through December 2023

February 29, 2024

Prepared for:

City of Meridian

Department of Public Works

311 27th Ave.

Meridian, MS 39301

Prepared by:

Waggoner Engineering, Inc.
2211 5th Street, Suite 107
Meridian, MS 39301

City of Meridian, Mississippi
Annual Report No. 4
January 2023 through December 2023

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.

Jimmie Smith, Mayor
City of Meridian

2/28/24
Date

Annual Report No. 4
January 2023 through December 2023

Contents Page

1.0 Introduction 1-1
1.1 Overview 1-1
1.2 Authority to Promulgate 1-1
1.3 Consent Decree Requirements for Annual Report 1-1

2.0 Summary of Sanitary Sewer Overflows 2-1
2.1 Sanitary Sewer Overflows 2-1
Table 2-1 2022 Sanitary Sewer Overflows 2-3
Table 2-2 2023 Sanitary Sewer Overflows 2-10
Figure 2-1 Number of Sanitary Sewer Overflows 2-16
Figure 2-2 Volume from Sanitary Sewer Overflows 2-17
Figure 2-3 Duration of Sanitary Sewer Overflows 2-18
Figure 2-4 Causes of Sanitary Sewer Overflows 2-19
Figure 2-5 Location and Frequency of 2023 Sanitary Sewer Overflows 2-20

3.0 Summary of WWTP and WCTS Projects and Activities 3-1
3.1 Early Action Capital Improvement Project 3-1
3.2 Highway 80 Trunk Line 3-3
3.2.1 Highway 80 Trunk Line Work Plan 3-4
3.2.2 Highway 80 Trunk Line Rehabilitation Plan 3-4
3.2.3 Highway 80 Trunk Line Phase 2 Rehabilitation Project 3-4
3.3 Wastewater Collection and Transmission System 3-5
3.3.1 Sewerbasin Prioritization Work Plan 3-5
3.3.2 Sewerbasin Prioritization Report 3-5
3.3.3 Repair of 54-inch diameter Sanitary Sewer Interceptor 3-5
3.3.4 West Meridian Trunk Line Phase 1 Rehabilitation 3-6
3.3.5 Sanitary and Storm Sewer Rehabilitation Annual Contract 3-6
3.4 Chronic SSO Advanced Remote Monitoring Program 3-7
3.4.1 Chronic Sanitary Sewer Overflow List 3-7
3.4.2 Updated Chronic Sanitary Sewer Overflow List 3-7
3.4.3 Chronic SSO Advanced Remote Monitoring Program 3-8

4.0 Capacity, Management Operations and Maintenance Programs 4-1
4.1 Sewer Overflow Response Plan 4-1
Table 4-1A Implementation Schedule for Specific SORP Tasks 4-3
Table 4-1B Annual SORP Performance Measures 4-3
4.2 Emergency Response Plan 4-4
Table 4-2A Implementation Schedule for Specific ERP Tasks 4-5
Table 4-2B Annual ERP Performance Measures 4-6
4.3 Sewer Mapping Program 4-6

Table 4-3A Implementation Schedule for Specific SMP Tasks 4-8
Table 4-3B Annual SMP Performance Measures 4-9
4.4 Gravity Sewer System Operations and Maintenance Program 4-9
Table 4-4A Implementation Schedule for Specific GSSO&MP Tasks 4-11
Table 4-4B Annual GSSO&MP Performance Measures 4-12
4.5 Pump Station & Force Main Operations & Preventative Maintenance Program 4-13
Table 4-5A Implementation Schedule for Specific PS&FMO&PMP Tasks 4-14
Table 4-5B Annual PS&FMO&PMP Performance Measures 4-16
4.6 Legal Support Program 4-16
Table 4-6A Implementation Schedule for Specific LSP Tasks 4-17
4.7 Information Management System (IMS) Program 4-18
Table 4-7A Implementation Schedule for Specific IMS Program Tasks 4-18
Table 4-7B Annual IMS Program Performance Measures 4-19
4.8 Fats, Oils, and Grease (FOG) Control Program 4-19
Table 4-8A Implementation Schedule for Specific FOG Program Tasks 4-23
Table 4-8B Annual FOG Program Performance Measures 4-24
4.9 Financing and Cost Analysis Program 4-24
Table 4-9A Implementation Schedule for Specific FCA Program Tasks 4-25
Table 4-9B Annual FCA Program Performance Measures 4-25

5.0 Progress Schedule 5-1

1.0 Introduction

The Meridian Consent Decree requires the development and submittal of reports to demonstrate continuing compliance with the US Environmental Protection Agency, the US Department of Justice, and the Mississippi Department of Environmental Quality. The Consent Decree outlines standard requirements for work in Meridian Wastewater Consent Decree projects and includes the requirements for project deliverables that will provide consistency and uniformity in execution of the work.

1.1 Overview

On August 6th, 2019, the City of Meridian, Mississippi (City) entered into a Consent Decree (CD) with the United States Environmental Protection Agency (EPA), the State of Mississippi Department of Environmental Quality (MDEQ) and the United States Department of Justice (USDOJ) to address deficiencies within the City's wastewater collection and transmission system (WCTS), with the goal of eliminating sanitary sewer overflows (SSOs) and achieving continued compliance, in full, with the Clean Water Act (CWA), the Mississippi Air and Water Pollution Control Act (MAWPCL) and the National Pollution Discharge Elimination System (NPDES) Permit.

One of the ongoing requirements of the EPA Consent Decree is to submit periodic reports to demonstrate continuing compliance. This report covers the reporting period from January 2022 to December 2022. The specific reporting requirements of the CD are described below.

1.2 Authority to Promulgate

The City retained Waggoner Engineering, Inc., Neel-Schaffer, Inc. and Kimley-Horn and Associates, Inc. to assist the City in addressing the requirements of the Consent Decree. Accordingly, Waggoner Engineering, Inc. prepared this Annual Report with input from the City and its various contractors to fulfill the requirements of Section IX ¶ 26 (b) set forth in the CD.

1.3 Consent Decree Requirements for Annual Report

As stated in the Consent Decree Section IX ¶ 26 (b), the Annual Report shall be submitted beginning two (2) Months after the first full Calendar Year following the Effective Date of this Consent Decree, and two (2) Months after each subsequent Calendar Year until termination of the Consent Decree, the City shall submit to EPA for review and approval an Annual Report. Each Annual Report shall cover the most recent applicable Calendar Year and shall include, at a minimum:

1) *A summary of the CMOM Programs implemented or modified pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established.*

2) *A trends analysis of the number, volume, duration, and cause of the City's SSOs for the previous two Calendar Years updated to reflect the SSOs that occurred during the previous twelve (12)-Month period except that the first Annual Report shall only include the first twelve (12) Months.*

2.0 Summary of Sanitary Sewer Overflows

The City has developed a multi-phased Sewer System Evaluation and Rehabilitation (SSER) program to evaluate and rehabilitate their existing Wastewater Collection and Transmission System (WCTS) as required under the Consent Decree. The SSER program approach focuses on prioritizing the assessment, analysis, and rehabilitation of the WCTS infrastructure by identifying structural defects, capacity issues, and other conditions associated with infiltration and inflow (I/I) that result in wet weather capacity related sanitary sewer overflows (SSOs). The primary objective of the Consent Decree is elimination of SSOs within the WCTS. The Consent Decree defines an SSO as, "any discharge of wastewater to waters of the United States or the State from the City's Sewer System through a point source not specified in any NPDES permit, as well as any overflow, spill, or release of wastewater to public or private property from the Sewer System.

2.1 Sanitary Sewer Overflows

As defined in the Consent Decree, a "Sanitary Sewer Overflow" or "SSO" shall mean any discharge of wastewater to waters of the United States or the State from the City's Sewer System through a point source not specified in any NPDES permit, as well as any overflow, spill, or release of wastewater to public or private property from the Sewer System that may not have reached waters of the United States or the State, including all Building Backups.

Table 2.1 lists Sanitary Sewer Overflows in the system from January 2022 through December 2022.

The City experienced a total of seventy-nine (79) SSOs from January 2022 through December 2022 with an estimated total duration of 722 hours and estimated total volume of 8.8 million gallons.

Table 2.2 lists Sanitary Sewer Overflows in the system from January 2023 through December 2023.

The City experienced a total of sixty-three (63) SSOs from January 2023 through December 2023 with an estimated total duration of 1,148 hours and an estimated total volume of 14.3 million gallons. More than 8.6 million gallons and 684 hours were due to a pipe break on Highway 45 N. There were no reported SSOs in September or October 2023.

Figure 2-1 lists Number of Sanitary Sewer Overflows in the system by month from January 2022 through December 2023.

The City implemented the Chronic SSO remote monitoring program in 2022. There were 79 SSOs reported in 2022 and 63 were reported in 2023. The monitoring site with the most frequent SSO events (20) in 2023 was SSO-7 at 181 65th Ave. Several pipe failures were discovered on the West Meridian Trunk Line downstream of this location with sinkholes beginning to develop. Repairs to a 54" interceptor were completed on August 19, 2023. The design and specifications of the West Meridian Trunk Line Phase 1 repairs/rehabilitation are 100% complete and awaiting finalization at the time of this report.

Chronic SSO monitoring locations 2, 3 and 4 are located on the Highway 80 Trunk Line. In 2022, chronic SSOs 2 and 3 experienced one (1) and two (2) overflows respectively, and none in 2023. Chronic SSO 4 experienced two (2) overflows in 2022 and six (6) in 2023. The Highway 80 Trunk Line Phase 2 Rehabilitation Project includes rehabilitation or replacement of approximately 6,725 linear feet of existing 24-inch diameter pipe along the Highway 80 Trunk Line. The project has been divided into two phases. Phase 2-A which included replacement of approximately 1,550 linear feet was completed on March 29, 2023. Phase 2-B will rehabilitate approximately 5,175 linear feet through replacement or cured in place pipe lining. Design, drawings and specifications for Phase 2-B are 100% complete and a permit application has been submitted to MDOT. Both projects were incorporated into the Highway 80 Trunk Line Rehabilitation Plan which was submitted to the EPA for approval on January 20, 2023. As of this reporting period, no comments have been received.

Figure 2-2 lists Volume from Sanitary Sewer Overflows by month in the system from January 2022 through December 2023.

In 2023, the number of SSOs decreased, however, the volume increased by 5,525,071 gallons.

A pipe failure in Sowashee Creek at 3202 Hwy 45 N. contributed to 59% of the total estimated overflow volume in during this reporting period. A bypass pump has been installed while designs for a permanent fix are underway.

SSO-7, 181 65th Avenue, made up approximately 32% of all SSOs in 2023.

Figure 2-3 lists Duration of Sanitary Sewer Overflows by month in the system from January 2022 through December 2023.

As would be anticipated with the increase in the volume of SSOs, the duration of SSOs increased by 380 hours.

Figure 2-4 lists Causes of Sanitary Sewer Overflows in the system from January 2022 through December 2022 and January 2023 through December 2023.

In both 2022 and 2023, the majority of SSOs were caused by excessive rainfall entering the system through inflow and infiltration. At the time of this report, the City has submitted the Highway 80 Trunk Line Rehabilitation Plan for approval and has created the Sewer Basin Prioritization Report to evaluate the geographical location and the severity of inflow and infiltration that enters the City's sanitary sewer system. Once these areas have been prioritized, the City will proceed with necessary repairs/rehabilitation of the system.

Figure 2-5 lists Locations of Sanitary Sewer Overflows in the system from January 2023 through December 2023.

During this reporting period, there were sixty-three (63) SSOs at twenty-one (21) separate locations. Six (6) SSOs at three (3) locations were on the Highway 80 Trunk Line, twenty (20) SSOs occurred at the 65th Avenue location on the West Meridian Trunk Line and six (6) SSOs occurred at the Sowashee Creek pipe break at 3202 Highway 45 N. Five (5) SSOs were reported at lift stations. The remaining SSOs were located in the remainder of the system.

Table 2-1 Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No.4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
1	181 65th Ave	1/9/22 3:00 PM	Manhole	5.50	49,500	Okatibbee Creek	Excessive Rain	0.84
2	3136 Parkway Blvd	1/9/22 4:35 PM	Manhole	1.67	5,000	Magnolia Creek	Excessive Rain	0.84
3	181 65th Ave	1/15/22 7:00 PM	Manhole	25.00	225,000	Okatibbee Creek	Excessive Rain	1.47
4	181 65th Ave	1/19/22 10:35 PM	Manhole	23.00	207,000	Okatibbee Creek	Excessive Rain	1.18
5	I-20/59	1/20/22 10:35 AM	Manhole	2.00	18,000	Sowashee Creek	Excessive Rain	1.18
6	I-20/59	2/1/22 10:51 AM	Manhole	5.00	7,500	Sowashee Creek	Bypass Pump Failure	0.00
7	I-20/59	2/3/22 12:52 PM	Manhole	4.13	37,200	Sowashee Creek	Bypass Pump Failure	3.01
8	I-20/59	2/3/22 1:29 PM	Manhole	1.52	36,400	Sowashee Creek	Bypass Pump Failure	3.01
9	181 65th Ave	2/3/22 1:30 PM	Manhole	20.00	240,000	Okatibbee Creek	Excessive Rain	3.01
10	3136 Parkway Blvd	2/3/22 12:25 PM	Manhole	0.75	1,125	Magnolia Creek	Excessive Rain	2.83
11	118 Hwy 11/80 (Cracker Barrel)	2/3/22 12:30 PM	Manhole	13.00	19,500	Sowashee Creek	Excessive Rain	3.01

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
12	East WWTP Hwy 45 N	2/3/22 1:50 PM	Manhole	5.00	15,000	Sowashee Creek	Excessive Rain	2.83
13	Sowashee Street	2/3/22 12:25 PM	Manhole	2.83	17,000	Sowashee Creek	Excessive Rain	2.83
14	125 Hwy 11/80 Old Stribling Equipment	2/3/22 2:00 PM	Manhole	5.00	82,500	Sowashee Creek	Excessive Rain	3.46
15	Old Hwy 80 W Lift Station #2	2/25/22 8:54 AM	Lift Station	0.53	800	Okatibbee Creek	Lift Station Failure	0.00
16	181 65th Ave	3/15/22 10:10 AM	Manhole	4.50	54,000	Okatibbee Creek	Excessive Rain	1.15
17	I-20/59	3/15/22 10:56 AM	Manhole	5.07	76,000	Sowashee Creek	Excessive Rain / Bypass Pump Failure	1.15
18	22nd Ave S. / North Frontage Rd	3/15/22 1:02 PM	Manhole	5.97	17,900	Sowashee Creek	Excessive Rain	1.15
19	181 65th Ave	3/15/22 4:00 PM	Manhole	8.08	97,000	Okatibbee Creek	Excessive Rain	1.15
20	22nd Ave S. / North Frontage Rd	3/18/22 9:00 AM	Manhole	2.00	18,000	Sowashee Creek	Excessive Rain	1.17
21	118 Hwy 11/80 (Cracker Barrel)	3/18/22 9:35 AM	Manhole	0.67	2,000	Sowashee Creek	Excessive Rain	1.17

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
22	I-20/59	3/22/22 5:00 PM	Manhole	23.50	1,410,000	Sowashee Creek	Excessive Rain	2.94
23	118 Hwy 11/80 (Cracker Barrel)	3/22/22 5:45 PM	Manhole	10.50	6,300	Sowashee Creek	Excessive Rain	2.94
24	Sowashee Street	3/22/22 6:00 PM	Manhole	4.33	6,500	Sowashee Creek	Excessive Rain	2.94
25	18th Ave / North Frontage Rd	3/22/22 6:00 PM	Manhole	9.50	57,000	Sowashee Creek	Excessive Rain	2.94
26	181 65th Ave	3/22/22 5:01 PM	Manhole	6.97	83,600	Okatibbee Creek	Excessive Rain	2.94
27	40th Ave / 26th St	3/22/22 6:00 PM	Manhole	4.75	14,250	Sowashee Creek	Excessive Rain	2.94
28	36th St / Parkway Blvd	3/22/22 6:20 PM	Manhole	4.42	13,250	Magnolia Creek	Excessive Rain	2.94
29	36th St / Parkway Blvd	3/30/22 8:35 PM	Manhole	0.33	1,000	Magnolia Creek	Excessive Rain	1.39
30	181 65th Ave	3/30/22 9:05 PM	Manhole	4.75	57,000	Okatibbee Creek	Excessive Rain	1.39
31	118 Hwy 11/80 (Cracker Barrel)	3/30/22 9:35 PM	Manhole	0.92	1,375	Sowashee Creek	Excessive Rain	1.39
32	Sowashee Street	3/30/22 8:55 PM	Manhole	1.42	4,250	Sowashee Creek	Excessive Rain	1.39
33	I-20/59	3/31/22 3:45 PM	Manhole	16.75	603,000	Sowashee Creek	Excessive Rain	1.39
34	I-20/59	4/4/22 10:20 AM	Manhole	2.42	50,750	Sowashee Creek	Bypass Pump Failure	0.00

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
35	I-20/59	4/5/22 6:15 AM	Manhole	16.92	406,080	Sowashee Creek	Excessive Rain	1.57
36	118 Hwy 11/80 (Cracker Barrel)	4/5/22 8:10 AM	Manhole	7.67	19,740	Sowashee Creek	Excessive Rain	1.57
37	Sowashee Street	4/5/22 8:20 AM	Manhole	1.75	21,000	Sowashee Creek	Excessive Rain	1.57
38	181 65th Ave	4/5/22 9:49 AM	Manhole	6.85	82,200	Okatibbee Creek	Excessive Rain	1.57
39	I-20/59	4/7/22 6:45 PM	Manhole	2.58	54,180	Sowashee Creek	Excessive Rain / Bypass Pump Failure	0.00
40	I-20/59	4/13/22 10:55 PM	Manhole	5.83	139,920	Sowashee Creek	Excessive Rain	1.21
41	181 65th Ave	4/13/22 10:40 PM	Manhole	9.33	111,960	Okatibbee Creek	Excessive Rain	1.21
42	I-20/59	4/16/22 3:05 PM	Manhole	11.17	268,000	Sowashee Creek	Excessive Rain	1.00
43	118 Hwy 11/80 (Cracker Barrel)	4/16/22 3:15 PM	Manhole	5.58	38,500	Sowashee Creek	Excessive Rain	1.00
44	181 65th Ave	4/16/22 3:20 PM	Manhole	24.42	146,500	Okatibbee Creek	Excessive Rain	2.47
45	36th St / Parkway Blvd	4/16/22 3:20 PM	Manhole	1.00	6,000	Magnolia Creek	Excessive Rain	1.00
46	40th Ave / 26th St	4/16/22 3:35 PM	Manhole	0.75	2,250	Sowashee Creek	Excessive Rain	1.00

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No.4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
47	36th St / Parkway Blvd	4/17/22 10:25 AM	Manhole	1.17	7,000	Magnolia Creek	Excessive Rain	1.47
48	40th Ave / 26th St	4/17/22 10:30 AM	Manhole	1.42	4,250	Sowashee Creek	Excessive Rain	1.47
50	Sowashee Street	4/17/22 10:45 AM	Manhole	1.75	5,250	Sowashee Creek	Excessive Rain	1.47
51	118 Hwy 11/80 (Cracker Barrel)	4/17/22 10:55 AM	Manhole	5.75	34,500	Sowashee Creek	Excessive Rain	1.47
52	181 65th Ave	4/18/22 3:20 PM	Manhole	10.58	63,000	Okatibbee Creek	Excessive Rain	2.47
53	I-20/59	4/19/22 4:45 PM	Manhole	0.50	10,500	Sowashee Creek	Excessive Rain	1.47
54	I-20/59	4/24/22 12:50 AM	Manhole	0.92	19,250	Sowashee Creek	Bypass Pump Failure-Blockage	0.00
55	I-20/59	6/5/22 1:20 AM	Manhole	8.75	131,250	Sowashee Creek	Bypass Pump Failure	0.00
56	20th St / College Dr	6/16/22 2:36 PM	Manhole	97.40	584,400	Okatibbee Creek	Debris / Grease / Roots	0.00
57	Lower Bounds Rd. Lift Station	6/24/22 2:30 PM	Lift Station	1.00	1,500	Loper Creek	Lift Station Failure	0.00
58	I-20/59	7/1/22 8:20 PM	Manhole	2.67	40,000	Sowashee Creek	Excessive Rain	0.67

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
59	I-20/59	7/21/22 8:20 PM	Manhole	5.58	83,750	Sowashee Creek	Excessive Rain	3.15
60	18th Ave / North Frontage Rd	7/21/22 11:05 PM	Manhole	1.42	8,500	Sowashee Creek	Excessive Rain	3.42
61	Newell Rd	8/5/22 12:30 PM	Manhole	10.40	62,400	Unknown Tributary Branch	Debris / Roots	0.00
62	Hwy 39N-Northwood East Apt	8/12/22 2:30 PM	Lift Station	2.00	6,000	Unknown Tributary Branch	Lift Station Failure	0.00
63	61st Court Lift Station	8/16/22 10:20 AM	Lift Station	2.67	16,000	McClemore Branch	Power Outage	0.00
64	I-20/59	8/23/22 2:45 PM	Manhole	34.33	309,000	Sowashee Creek	Excessive Rain	5.60
65	18th Ave / North Frontage Rd	8/24/22 8:50 AM	Manhole	10.17	61,000	Sowashee Creek	Excessive Rain	5.60
66	36th St / Parkway Blvd	8/24/22 8:15 AM	Manhole	5.58	50,250	Magnolia Creek	Excessive Rain	5.60
67	40th Ave / 26th St	8/24/22 8:35 AM	Manhole	6.33	38,000	Sowashee Creek	Excessive Rain	5.60
68	181 65th Ave	8/24/22 12:00 PM	Manhole	19.00	285,000	Okatibbee Creek	Excessive Rain	5.60
69	118 Hwy 11/80 (Cracker Barrel)	8/24/22 9:20 AM	Manhole	11.58	104,250	Sowashee Creek	Excessive Rain	5.60

Table 2-1 Continued Sanitary Sewer Overflows January 2022 through December 2022 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**LOCATION**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
70	Sowashee Street	8/24/22 8:40 AM	Manhole	5.08	45,750	Sowashee Creek	Excessive Rain	5.60
71	10th Ave/B Street	8/24/22 9:00 AM	Manhole	2.25	6,750	Sowashee Creek	Excessive Rain	5.60
72	406 45th St	8/24/22 2:55 PM	Manhole	4.08	36,750	Newell Tributary Branch	Excessive Rain	5.60
73	Sowashee Street	8/26/22 6:35 PM	Manhole	1.42	12,750	Sowashee Creek	Excessive Rain	1.58
74	I-20/59	8/26/22 7:15 PM	Manhole	3.83	34,500	Sowashee Creek	Excessive Rain	1.58
75	I-20/59	9/6/22 4:30 AM	Manhole	2.75	4,125	Sowashee Creek	Bypass Pump Failure	0.00
76	I-20/59	9/9/22 8:15 PM	Manhole	4.83	43,500	Sowashee Creek	Excessive Rain	0.58
77	John C. Stennis Dr. / Rabbit Dr.	12/3/22 6:00 AM	Broken Pipe	84.00	836,640	Wright Creek/ Sucarnochee River	Broken Force Main	0.00
78	181 65th Ave	12/14/22 3:00 PM	Manhole	5.83	52,500	Okatibbee Creek	Excessive Rain	2.59
79	36th St / Parkway Blvd	12/14/22 3:50 PM	Manhole	0.33	500	Robbin's Branch / Sowashee Creek	Excessive Rain	2.59

Table 2-2 Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**CHRONIC SSO**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (Meridian NWS) (inches)**
1	7	1/4/23 2:20 AM	Manhole	1.75	21,000	Okatibbee Creek	Excessive Rain	1.00
2	7	1/8/23 8:34 AM	Manhole	9.35	112,200	Okatibbee Creek	Excessive Rain	1.16
3	3202 Hwy 45 N.	1/16/23 1:00 PM	Broken Pipe	669.50	8,435,700	Sowashee Creek	Broken Pipe	0.00
4	8Th Pl. Lift Station	1/16/23 6:52 PM	Lift Station	0.27	80	None	Lift Station Failure	0.00
5	7	1/21/23 9:45PM	Manhole	12.08	145,000	Okatibbee Creek	Excessive Rain	1.38
6	7	1/24/23 11:45 PM	Manhole	12.83	154,000	Okatibbee Creek	Excessive Rain	1.01
7	7	1/29/23 7:00 PM	Manhole	21.33	256,000	Okatibbee Creek	Excessive Rain	1.46
8	5	1/29/23 7:00 PM	Manhole	2.33	28,000	Sowashee Creek	Excessive Rain	1.46
9	7	2/2/23 5:20 AM	Manhole	15.92	191,000	Sowashee Creek	Excessive Rain	1.55
10	10	2/2/23 4:07 PM	Manhole	14.88	267,900	Okatibbee Creek	Excessive Rain	1.47
11	7	2/9/23 3:30 PM	Manhole	14.25	183,825	Okatibbee Creek	Excessive Rain	1.15

Table 2-2 Continued Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**CHRONIC SSO**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (inches)**
12	7	2/11/23 1:55 PM	Manhole	23.42	251,000	Okatibbee Creek	Excessive Rain	1.85
13	4	2/11/23 4:40 PM	Manhole	8.50	76,500	Sowashee Creek	Excessive Rain	1.85
14	8	2/11/23 5:05 PM	Manhole	0.25	750	Robbins Branch, Sowashee Creek	Excessive Rain	1.85
15	4	2/13/23 8:35 PM	Manhole	2.92	966	Sowashee Creek	Excessive Rain	1.85
16	4	2/16/23 1:35 PM	Manhole	66.00	700,920	Sowashee Creek	Excessive Rain	4.39
17	7	2/16/23 3:10 PM	Manhole	32.50	390,000	Okatibbee Creek	Excessive Rain	4.39
18	8	2/16/23 3:25 PM	Manhole	6.33	38,000	Robbins Branch, Sowashee Creek	Excessive Rain	4.39
19	9	2/16/23 3:30 PM	Manhole	25.75	38,625	Gallagher Creek, Sowashee Creek	Excessive Rain	4.39
20	1	2/16/23 8:30 PM	Manhole	12.92	7,750	Sowashee Creek	Excessive Rain	4.39
21	5	2/16/23 8:35 PM	Manhole	2.33	3,640	Sowashee Creek	Excessive Rain	4.39
22	3212 11th Pl.	3/2/23 8:30 AM	Broken Pipe	146.00	876,000	Robbins Branch, Sowashee	Broken Pipe	0.00

Table 2-2 Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**CHRONIC SSO**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (inches)**
23	3202 Hwy 45 N.	3/10/23 1:30 PM	Manhole	1.50	18,000	Sowashee Creek	Bypass Pump Failure	0.00
24	3202 Hwy 45 N.	3/14/23 2:35 PM	Manhole	1.08	13,000	Sowashee Creek	Bypass Pump Failure	0.00
25	7	3/17/23 2:15 PM	Manhole	1.08	13,000	Okatibbee Creek	Excessive Rain	0.69
26	8	3/26/23 7:25 PM	Manhole	0.58	3,500	Robbins Branch, Sowashee Creek	Excessive Rain	1.32
27	9	3/26/23 7:45 PM	Manhole	0.08	250	Gallagher Creek, Sowashee Creek	Excessive Rain	1.32
28	4	3/26/23 8:15 PM	Manhole	0.75	6,750	Sowashee Creek	Excessive Rain	1.32
29	7	3/26/23 8:55 PM	Manhole	10.42	80,000	Okatibbee Creek	Excessive Rain	1.32
30	3202 Hwy 45 N.	3/28/23 11:32 AM	Manhole	1.72	20,600	Sowashee Creek	Bypass Pump Failure	0.00
31	8	4/3/23 5:35 AM	Manhole	.50	1,470	Robbins Branch, Sowashee Creek	Excessive Rain	2.02
32	4	4/3/23 5:40 AM	Manhole	2.33	8,960	Sowashee Creek	Excessive Rain	2.02

Table 2-2 Continued Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi								
COUNT	**CHRONIC SSO**	**DATE / TIME BEGAN**	**SOURCE**	**ESTIMATED DURATION (hours)**	**ESTIMATED VOLUME (Gallons)**	**STATE WATERS AFFECTED**	**CAUSE**	**RAINFALL (inches)**
33	7	4/3/23 5:55 AM	Manhole	11.33	136,000	Okatibbee Creek	Excessive Rain	2.02
34	3202 Hwy 45 N.	4/3/23 7:30 AM	Manhole	8.00	120,000	Sowashee Creek	Excessive Rainfall	2.02
35	4	4/7/23 2:40 PM	Manhole	18.83	80,250	Sowashee Creek	Excessive Rainfall	2.46
36	7	4/7/23 3:15 PM	Manhole	45.25	268,250	Okatibbee Creek	Excessive Rainfall	2.46
37	8	4/8/23 7:20 AM	Manhole	1.42	8,500	Robbins Branch, Sowashee Creek	Excessive Rainfall	2.46
38	9	4/8/23 6:15 AM	Manhole	1.25	4,125	Gallagher, Sowashee Creek	Excessive Rainfall	2.46
39	7	4/13/23 1:50 PM	Manhole	12.25	268,250	Okatibbee Creek	Excessive Rainfall	0.78
40	7	5/12/23 10:50 PM	Manhole	0.67	8,000	Okatibbee Creek	Excessive Rainfall	1.31
41	7	6/16/23 10:50 PM	Manhole	1.90	23,000	Okatibbee Creek	Excessive Rainfall	0.68
42	7	6/19/23 2:30 AM	Manhole	12.25	147,000	Okatibbee Creek	Excessive Rainfall	3.23
43	8	6/19/23 2:05 AM	Manhole	2.10	12,500	Robbins Branch, Sowashee Creek	Excessive Rainfall	3.23

Table 2-2 Continued Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi										
COUNT	**CHRONIC SSO**	**SOURCE**	**START**	**END**	**DURATION (Minutes)**	**GALLONS**	**WATERS IMPACTED**	**CAUSE**	**RAINFALL**	**REPORT**
44	9	Manhole	6/19/23 2:15 AM	6/19/23 4:30 AM	135	4,050	Gallagher, Sowashee Creek	Excessive Rain	3.23”	Yes
45	6	Manhole	6/19/23 2:30 AM	6/19/23 3:21 AM	66	3,500	Sowashee Creek	Excessive Rain	3.23”	Yes
46	5	Manhole	6/19/23 3:05 AM	6/19/23 3:35 AM	20	4.,000	Sowashee Creek	Excessive Rain	3.23”	Yes
47	N/A	Broken Pipe	6/29/23 11:30 AM	6/29/23 7:00 AM	450	23,500	Shearers Branch, Sowashee Creek	Roots, Tree	0	Yes
48	8	Manhole	07/13/23 12:40 PM	07/13/23 12:55 PM	15	1,500	Robbins Branch, Sowashee Creek	Excessive Rain	1.65”	Yes
49	7	Manhole	07/13/23 12:55 PM	07/13/23 7:45 PM	410	82,000	Okatibbee Creek	Excessive Rain	1.65”	Yes
50	7	Manhole	07/14/23 5:55 PM	07/15/23 12:15 AM	380	76,000	Okatibbee Creek	Rain		Y/N**
51	7	Manhole	07/15/23 5:10 PM	07/15/23 7:10 PM	120	24,120	Okatibbee Creek	Rain		Y/N**
52	Lift Station 1 (NAS Meridian Main Gate)	Lift Station	07/31/23 7:00 AM	07/31/23 7:48 AM	48	7,200	Rabbit Creek	Rain, Power Outage, LS Failure	1”	Yes
53	3502 Dale Dr.	Bypass Pump	08/16/23 2:08 PM	08/16/23 2:43 PM	35	1,750	Sowashee Creek	Pump Failure	0	Yes
54	Loper Creek Lift Station	Lift Station	08/24/23 7:40 AM	08/24/23 8:15 AM	35	3,500	Loper Creek	Pump Failure	0	Yes
55	3502 Dale Dr.	Bypass Pump	11/06/23 3:13 PM	11/06/23 3:40 PM	27	4,050	Sowashee Creek	Pump Blockage	0	Yes
56	3502 Dale Dr.	Bypass Pump	11/07/23 2:00 PM	11/07/23 3:00 PM	60	3,000	Sowashee Creek	Pump Blockage	0	Yes

Table 2-2 Continued Sanitary Sewer Overflows January 2023 through December 2023 Annual Report No. 4 City of Meridian, Mississippi										
COUNT	**CHRONIC SSO**	**SOURCE**	**START**	**END**	**DURATION (Minutes)**	**GALLONS**	**WATERS IMPACTED**	**CAUSE**	**RAINFALL**	**REPORT**
57	Northwood	Lift Station	11/08/23 8:15 AM	11/8/23 8:40 AM	35	7,000	Sowashee Creek	Lift Station Failure	0	Yes
58	12th Ave., 47th St.	Gravity Main	11/20/23 7:30 AM	11/21/23 2:00 PM	1,850	457,500	Gallagher Creek	Pipe Collapse	0	Yes
59	4120 58th Pl.	Manhole	11/20/23	11/20/23	90	1,350	Unknown Ditch	Blockage Debris	0	Yes
60	Chip Pickering Dr.	Force Main	11/30/23 8:00 AM	11/30/23 3:00 PM	420	40,740	Small Branch into Rabbit Creek	Broken Pipe	0	Yes
61	6613 N. Hills St.	Gravity Main	12/12/23 12:42 PM	12/12/23 4:30 PM	228	79,800	Okatibbee Creek	Broken Pipe	0	Yes
62	6900 Old Hwy 80 W	Manhole	12/17/23 2:04 PM	12/17/23 3:20 PM	76	22,800	Sowashee Creek	Lift Station Failure	0	Yes
63	Sweet Gum Bottom Rd. Lift Station	Lift Station	12/22/2023 8:00 AM	12/22/2023 10:47 AM	167	14,195	Unknown Tributary Branch	Lift Station Failure	0	Yes

Number of Sanitary Sewer Overflows and Rainfall
January 2022 through December 2023
Annual Report No. 4
City of Meridian, Mississippi

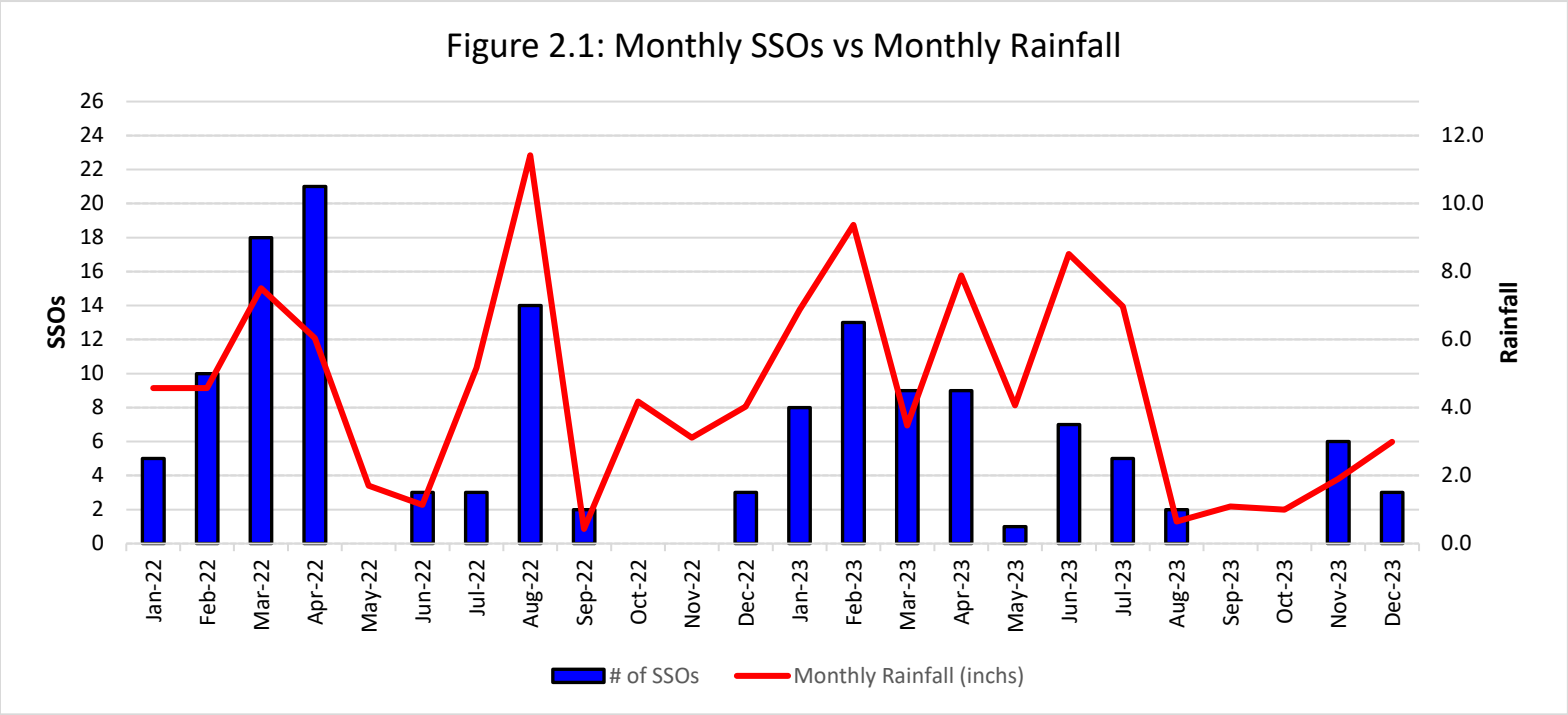


Figure 2-2
Volume from Sanitary Sewer Overflows and Rainfall
January 2022 through December 2023
Annual Report No. 4
City of Meridian, Mississippi

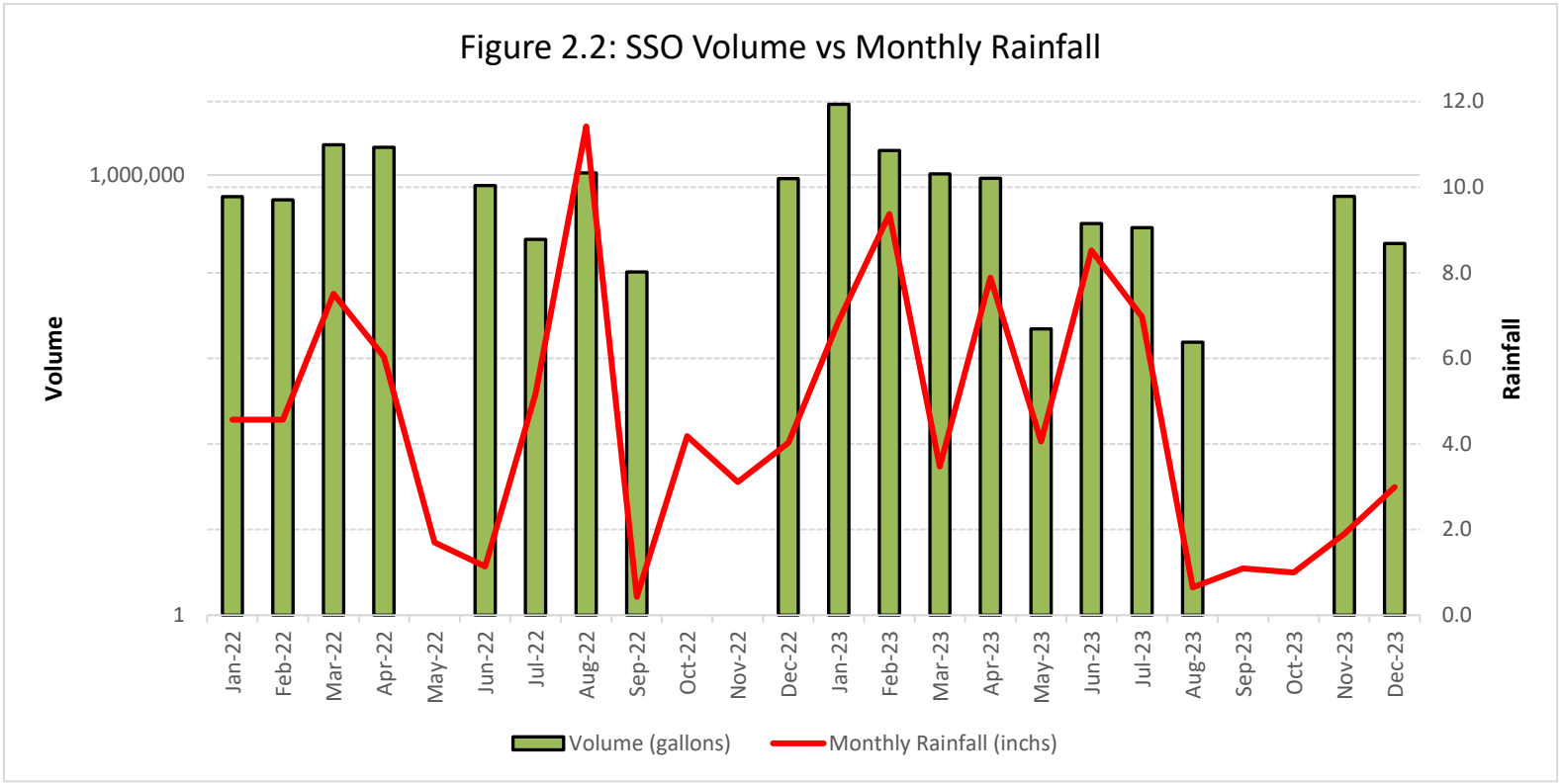


Figure 2-3
Duration of Sanitary Sewer Overflows and Rainfall
January 2022 through December 2023
Annual Report No. 4
City of Meridian, Mississippi

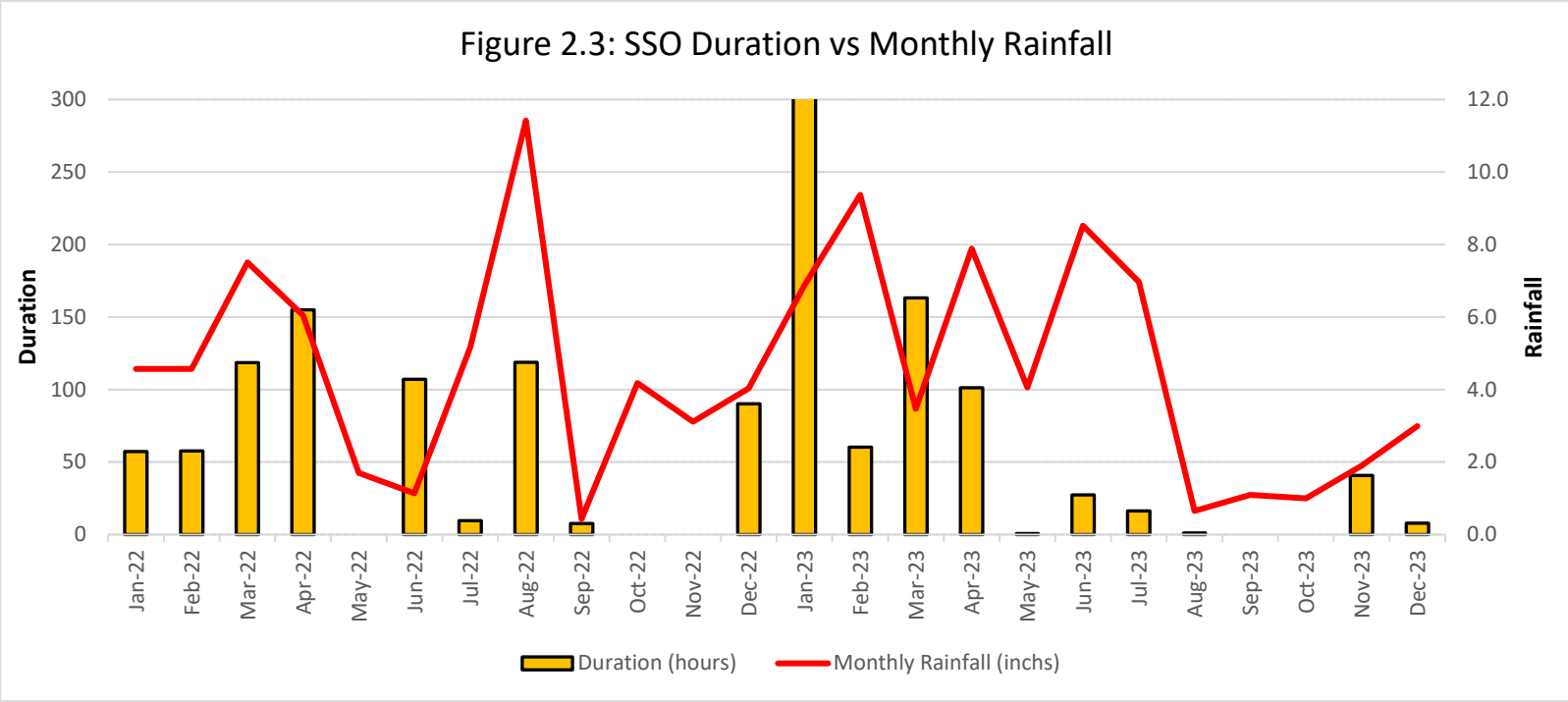
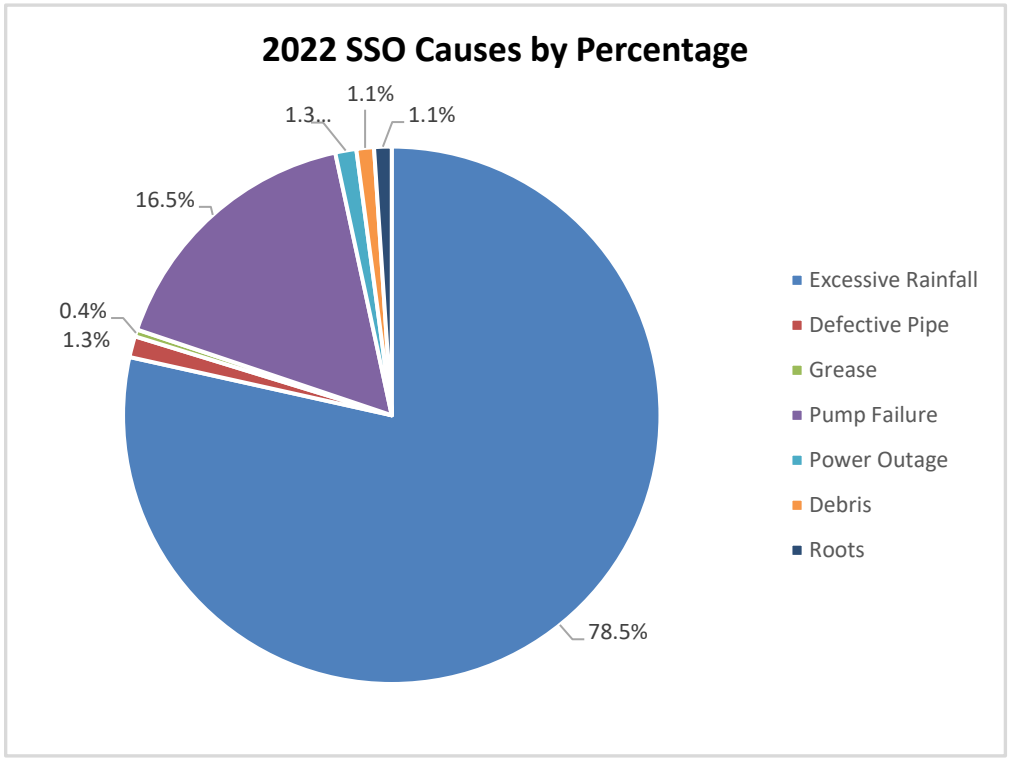


Figure 2-4
Causes of Sanitary Sewer Overflows
January 2022 through December 2023
Annual Report No. 4
City of Meridian, Mississippi



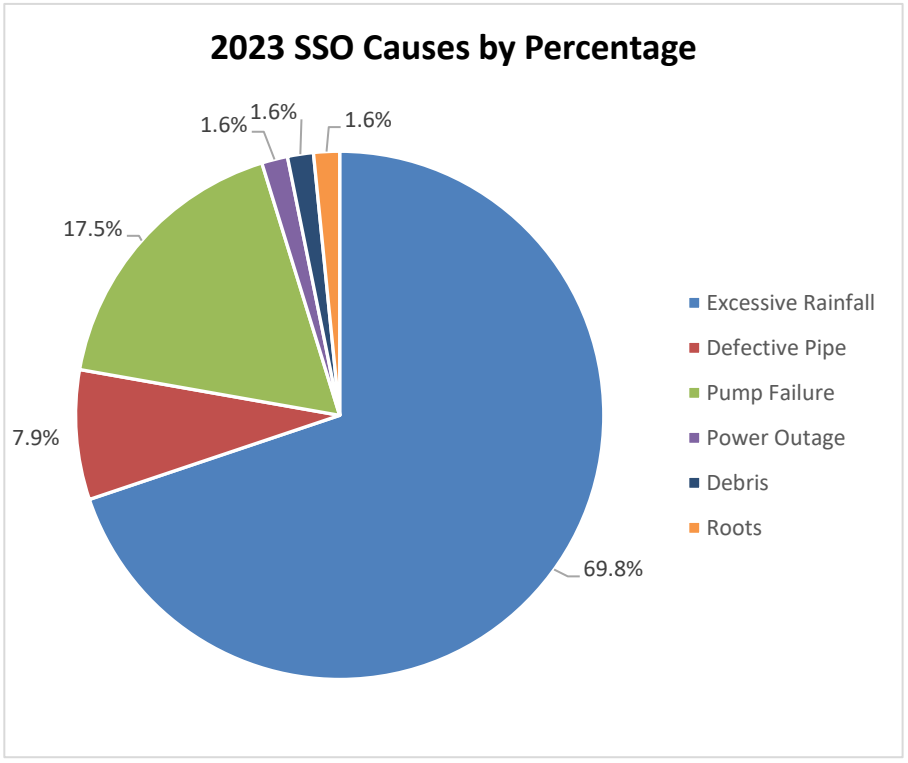
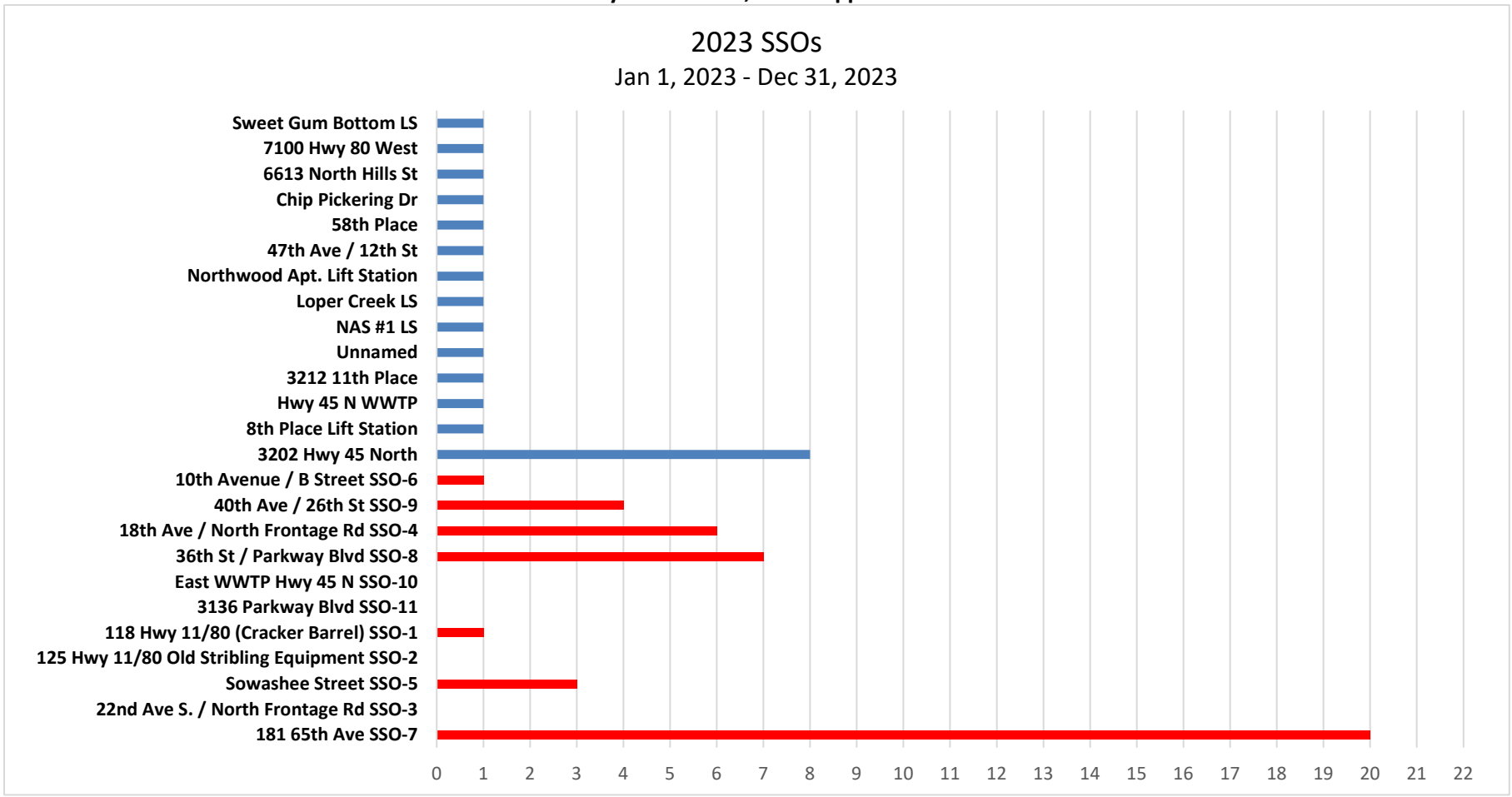


Figure 2-5
Location and Frequency of 2023 Sanitary Sewer Overflows
January 2023 through December 2023
Annual Report No. 4
City of Meridian, Mississippi



** Locations in red are monitored Chronic SSO sites. Locations in blue are other sites that had overflow activity.*

3.0 Summary of WWTP and WCTS Projects and Activities

The South Wastewater Treatment Plant Rehabilitation Plan was prepared to fulfill the requirements set forth in the Consent Decree. The city is required to develop and implement a Sewer Treatment System Correction Action Plan for the South Wastewater Treatment Plant (WWTP) to address deficiencies in the City's wastewater collection and transmission system with the goal of elimination of SSOs. The following sections briefly overview the Projects and Activities performed during this reporting period (January 1, 2023 – December 31, 2023) and planned activities for the subsequent reporting period (January 1, 2024 - December 31, 2024).

3.1 Early Action Capital Improvement Project

The Consent Decree requires the implementation of a Sewer Treatment System Correction Action Plan (STSCAP) for the South Wastewater Treatment Plant (WWTP). The purpose of the STSCAP is to provide a plan for the construction of improvements. The STSCAP was submitted to EPA and MDEQ in August 2020 for review and approval. The STSCAP was approved by EPA and MDEQ on May 3, 2021.

The following sections address the Early Action Capital Improvement Project activities for the reporting period (January 1, 2023 – December 31, 2023) and planned activities for the subsequent reporting period (January 1, 2024 - December 31, 2024).

During this reporting period:

- **South WWTP Improvements Phase 1A Project**
  - Completed following project phases:
    - Final design phase
    - Bid phase
      - Advertised Project
      - Received bids from three construction companies
      - Awarded contract
      - Executed contract documents
  - Initiated project's construction phase
    - Issued Notice to Proceed
    - Conducted Pre-Construction meeting
    - Contractor began submittal process
- **South WWTP Equalization Basins Cleanout Project**
  - Completed following project phases:
    - Final design phase
    - Procurement phase
      - Advertised RFP
      - Received proposals from three national residual management companies
      - Conducted formal evaluation of received proposals
      - Awarded contract to the firm receiving the highest evaluation ranking
      - Executed contract documents

- Initiated construction phase
  - Issued Notice to Proceed
  - Conducted Pre-Construction meeting
  - Contractor initiated following construction activities
    - Began construction of staging, processing, & loading area
    - Contractor continued work associated with procurement of land application sites

- Rebuilt influent pump #2
- Repaired drive coupling, shear pin. And timers on grit removal system
- Replaced the conduit and conductors for influent pumps 1, 2, and 3 from the VFDs to the junction boxes
- Completed repairs on #2 screen and screenings compactor to keep units operational
- Cleared blockages in 4 MGD Clarifiers No. 2 return activated sludge lines
- Replaced a failed section of 4 MGD Clarifier No.1 effluent collection trough
- Removed sludge and debris from the 9 MGD Primary Clarifiers #1, #2, #3, and #4
- Repaired/rebuilt return activated sludge and waste activated sludge pumps as required
- Installed interim suction headers into five 9MGD first and second stage
- Removed waste activated sludge from digestors and discharged into the EQ Basins to be included in biosolids removal, to provide storage of waste activated sludge until new belt press is installed
- Removed and replaced plug valve on digester No. 1
- Digester blower #3 and motor rebuilt and reinstalled
- Aeration blower #3 motor rebuilt and reinstalled
- Installed two new belt-press influent sludge pumps
- Repaired and replaced wear items on existing sludge belt press
- Repaired existing sludge belt conveyor system. A new sludge conveyor system will installed as part of the Phase 1A project
- Bioassay/Whole effluent toxicity (WET) testing was completed for both the South WWTP and East Meridian WWTP
- Copper chemical Translator study was completed

As discussed in Semi-Annual Report No. 6., a letter was sent by the City on June 15, 2022 to the United States Environmental Protection Agency (EPA) and the Mississippi Department of Environmental Quality (MDEQ) proposing modifications to the scope and schedule of the approved South Wastewater Treatment Plant (SWWTP) Rehabilitation Plan (Rehab Plan). This letter's objective was to outlay the ongoing Total Maximum Daily Load (TMDL) study being conducted by the MDEQ to determine new nutrient limits for Total Nitrogen and Phosphorous. MDEQ provided the City with a draft NPDES permit for review in December 2023. The City reviewed and returned the draft to MDEQ and anticipates MDEQ submitting the draft to the EPA for consideration and approval in the first quarter of 2024. In the interim, the City is committed to continuous improvements at the WWTP to meet its current NPDES permit requirements.

The City will continue to evaluate the feasibility of a new wastewater treatment plant that can

accommodate the City's anticipated future flows, growth in residential, commercial, and industrial users, and anticipated changes to the future NPDES permit limits. Additionally, the City is looking at property needed to accommodate a new facility. The following actions in the past 12-month period have resulted in continued improvements in meeting the WWTP's NPDES permit limits. Items discussed in Annual Report No. 6 but not completed as a result of the proposed modifications above include the following:

- None

During the next reporting period:

- **South WWTP Equalization Basins Cleanout Project**
  - Completion of construction activities
    - Solids removal from Cells 2, 3, & 4
    - Disposal of solids
    - Restoration of construction site
  - Projected 2024 construction benchmark dates
    - Substantial completion – September 2024
    - Final completion – October 2024
- Complete small, bundled, bid packages or issue purchase orders to address intermediate needs at the South WWTP and to remain in compliance with the NPDES permit
- **South WWTP Improvements Phase 1-A Project**. This project will install new equipment in three (3) first and three (3) second stage clarifiers at the 9MGD plant, retrofit of the two fine screens from ¼" bar screens to 6 mm punch plate screens, retrofit of screenings compactor, installation of a new sludge belt filter press system and corresponding sludge belt conveyor, installation of a new coagulant feed system for 4MGD and 9MGD plants, installation of a new 4-inch water main, and installation of the third influent pump
- Removal of sludge and debris from the 9 MGD Primary Clarifiers #5-8 provide improved treatment
- Modify the 9MGD waste activated sludge system to prevent damage to pumps, sludge overflows, and simplify operations for operators
- Continue evaluating, cleaning, and rehabilitating equipment at the South WWTP to improve plant performance
- Begin construction for remote monitoring system of key processes at the WWTPs
- Remove and replace the bushings and supports on the grit removal screw shaft and realign to reduce stress on the previous operations

3.2 Highway 80 Trunk Line

The Consent Decree requires work to be performed on the Highway 80 Trunk Line. The Highway 80 Trunk Line Work Plan was approved by EPA and MDEQ on January 21, 2021. The City will assess the Highway 80 Trunk Line to determine the location and extent of structural, capacity, or infiltration and inflow issues within the system. Several techniques will be employed to assess the capacity and condition of the existing Trunk Line. The evaluation will include flow and rainfall monitoring to estimate the quantity of infiltration and inflow (I/I) entering the Highway 80 Trunk Line from contributing sewerbasins. Video inspection of the existing pipe and manholes may be performed; however, the city may proceed with

rehabilitation and/or replacement of sections of the existing Trunk Line where imminent structural failure is suspected based on input from operations and maintenance staff, historical information, and initial field investigations. Additional technologies and methodologies may be considered for inspection and evaluation at the discretion of the City.

3.2.1 Highway 80 Trunk Line Work Plan

The Highway 80 Trunk Line Work Plan included methodologies and procedures for monitoring, evaluating, and assessing the Highway 80 Trunk Line. The city received approval from EPA for the Highway 80 Trunk Line Work Plan on January 21, 2021.

3.2.2 Highway 80 Trunk Line Rehabilitation Plan

The Highway 80 Trunk Line Rehabilitation Plan included flow and rainfall monitoring, estimation of infiltration and inflow, condition assessment of the Trunk Line, and development of the rehabilitation plan. Highway 80 Trunk Line Rehabilitation Project, Phase 1 (Complete), Highway 80 Trunk Line Rehabilitation Project, Phase 2-A (Under Construction) and Highway 80 Trunk Line Rehabilitation Project, Phase 2-B (Design Phase) will be incorporated into the Highway 80 Trunk Line Rehabilitation Plan.

During this reporting period:

- Completed the Highway 80 Trunk Line Rehabilitation Plan and submitted for Agency review
- Approved by the EPA and MDEQ in a December 13, 2023 letter with no comments

During the next reporting period:

- Continue to work on projects for rehabilitation of the Hwy 80 Trunk Line

3.2.3 Highway 80 Trunk Line Phase 2 Rehabilitation Project

The Highway 80 Trunk Line Phase 2 Rehabilitation Project includes rehabilitation or replacement of approximately 6,725 linear feet of the existing 24-inch diameter Highway 80 Trunk Line. The project has been divided into two phases. Phase 2-A includes replacement of approximately 1,550 linear feet and Phase 2-B will rehabilitate approximately 5,175 through replacement or cured-in-place pipe lining.

During this reporting period:

- Phase 2-A
  - Completed construction of Phase 2-A on March 29, 2023
- Phase 2-B
  - Completed design documents and continued to negotiate with property owners to acquire easements

During the next reporting period:

- Phase 2-B
  - Acquire easements
  - Advertise for bids and begin construction

3.3 Wastewater Collection and Transmission System (WCTS)

The Consent Decree requires work to be performed on the Wastewater Collection and Transmission System (WCTS). The City of Meridian has developed a phased approach for prioritizing assessment, analysis, and rehabilitation of the existing WCTS as required under the Consent Decree. This phased approach will facilitate identification, prioritization, and rehabilitation of structural defects, capacity issues, and problems that allow infiltration and inflow(I/I) into the WCTS.

3.3.1 Sewerbasin Prioritization Work Plan

The Sewerbasin Prioritization Work Plan includes methodologies and procedures for estimating Infiltration and Inflow within each Sewerbasin and for assessing the capacity of the WCTS in areas with known capacity related SSOs. EPA and MDEQ approved the City's Sewerbasin Prioritization Work Plan on January 21, 2021.

3.3.2 Sewerbasin Prioritization Report

This work includes flow and rainfall monitoring, estimation of base infiltration and rainfall dependent infiltration and inflow, updates to existing GIS data, capacity evaluation of major sanitary sewer gravity mains, and development of the Sewerbasin Prioritization Report to be submittal by January 21, 2024.

During this reporting period:

- Completed analysis of flow and rain data and needs for additional flow and rainfall monitoring to accurately categorize the sewerbasins.
- Completed preparation of RDII model
- Completed hydraulic capacity evaluation
- Completed draft report
- Received approval of the Hwy 80 Trunk Line Rehab Plan on December 13, 2023

During the next reporting period:

- Submit Sewerbasin Prioritization Report for agency review

3.3.3 Repair of 54-Inch Diameter Sanitary Sewer Interceptor

The Repair of 54-Inch Diameter Sanitary Sewer Interceptor Project included replacing a segment of the existing interceptor south of I-20/59 that was damaged due to creek bank erosion along Sowashee Creek.

During this reporting period:

- Completed construction on August 19, 2023

3.3.4 West Meridian Trunk Line Phase 1 Rehabilitation

The West Meridian Trunk Line Phase 1 Rehabilitation Project includes realignment of a reinforced concrete gravity sewer pipe, with diameters of 24-inch and 30-inch, which conveys wastewater from the western-most portions of the City of Meridian to the 54-inch diameter interceptor pipe near 49th Avenue, south of Sowashe Creek. Two major collapses have occurred along this portion of the West Meridian Trunk Line and other sink holes are beginning to develop along the existing alignment. These collapses contribute to Chronic overflows at SSO-7 located at 181 65th Avenue.

During this reporting period:

- Completed 100% design drawings and specifications
- Completed and received approval of MDOT permits
- Completed easement documents and negotiating with property owners to acquire easements prior to bidding

During the next reporting period:

- Continue negotiations with property owners to acquire easements required to begin construction
- Advertise for bids and begin construction

3.3.5 Sanitary and Storm Sewer Rehabilitation Annual Contract

The Sanitary and Storm Sewer Rehabilitation Annual Contract will be used to perform open cut and trenchless rehabilitation of gravity sanitary sewer mains and manholes.

During this reporting period:

- Completed construction of Work Orders 1 and 2, which included gravity sanitary sewer rehabilitation in the Medical District at the following streets:
  - 18th Avenue from 6th Street to 14th Street
  - 19th Avenue from 6th Street to 14th Street
  - 20th Avenue from 9th Street to 14th Street
  - Constitution Avenue from Front Street to 14th Street
  - Repair of one offset joint at the intersection of D Street and 23rd Avenue
- The following is a summary of the sanitary sewer rehabilitation completed under the annual contract during this reporting period:
  - Open cut replacement of approximately 470 linear feet of 8-inch diameter gravity sewer main
  - Cured in place pipe lining (CIPPL) of approximately 8,910 linear feet of 8-inch diameter gravity sewer
  - Repair of one offset joint of 36-inch diameter gravity sewer interceptor

- The Sanitary and Storm Sewer Rehabilitation Annual Contract was rebid and awarded to a Contractor

During the next reporting period:

- Begin construction of Work Order 1 under the new Sanitary and Storm Rehabilitation Annual Contract

3.4 Chronic SSO Advanced Remote Monitoring Program

The Consent Decree requires a Chronic Sanitary Sewer Overflow (SSO) Advanced Remote Monitoring Program which includes compiling a list of Chronic SSO locations in the WCTS which has experienced more than one wet-weather capacity-related SSO in the previous twelve months.

3.4.1 Chronic Sanitary Sewer Overflow List

The City of Meridian was required to submit an initial Chronic SSO List to the EPA and MDEQ in August 2020 for review and approval (approved January 2021) and an Updated Chronic SSO List EPA and MDEQ for review and approval in February 2021(approved June 2021). Upon approval of the Updated Chronic SSO List, the City of Meridian implemented the Chronic SSO Advanced Remote Monitoring System. The Updated Chronic SSO List was submitted in June 2022 and June 2023 and will continue to be submitted each year thereafter for the duration of the Consent Decree.

3.4.2 Updated Chronic Sanitary Sewer Overflow List

The City of Meridian prepared and submitted the second Updated Chronic Sanitary Sewer Overflow List for review and approval on June 29, 2022. The Updated Chronic Sanitary Sewer Overflow List included updating the previously approved Updated Chronic SSO List and added two (2) additional reported sanitary sewer overflows that met the definition of a Chronic SSO.

During this reporting period:

- Prepared the Updated Chronic Sanitary Sewer Overflow List and submitted for agency review on June 21, 2023
- Received approval of the 2023 Updated Chronic Sanitary Sewer Overflow List in a letter from the EPA and MDEQ on December 13, 2023.
- Reported SSO occurrences as per the approved SORP and CD requirements

During the next reporting period:

- Continue to report SSOs per the approved SORP and CD requirements
- Prepare and submit the 2024 Updated Chronic SSO List as required by the Consent Decree in June 2024

3.4.3 Chronic SSO Advanced Remote Monitoring Program

Subsequent to the approval of the 2021 Updated Chronic Sanitary Sewer Overflow (SSO) List on June 30, 2021, the City of Meridian implemented the Chronic SSO Advanced Remote Monitoring System and began remotely monitoring nine (9) locations identified in the List.

During this reporting period:

- Continued monitoring, recording, and notifying City staff of full pipe, surcharge, and overflow conditions identified by the monitors installed at locations identified in the approved 2023 Updated Chronic SSO List
- Included Remote Monitoring alarm logs in Semi Annual Reports 7 and 8 as required in the Consent Decree

During the next reporting period:

- Continue recording and reporting all surcharge conditions identified by the monitors on subsequent Semi Annual and Annual Reports as required by the Consent Decree
- Include Remote Monitoring alarm logs in Semi Annual Reports 9 and 10 as required in the Consent Decree
- Continue implementation of remote Monitoring Program

4.0 Capacity, Management, Operations and Maintenance Programs

The City will develop and implement effective Capacity, Management, Operations, and Maintenance (CMOM) programs, prepared based on the guidance provided by the EPA. The aggregate CMOM is comprised of separate programs developed to address deficiencies within specific elements of the City of Meridian's WCTS. Each of the respective Program deliverables is intended to be used by the City of Meridian as guidelines for the implementation of a defined set of procedures to satisfy the long-term requirements of EPA and promote compliance with the Clean Water Act (CWA).

The Consent Decree requires the City to implement various programs to properly address capacity and to maintain, operate and manage sanitary wastewater collection, transmission, and treatment systems, and respond to SSO events.

The following sections briefly overview the CMOM activities performed during this reporting period (January 1, 2023 – December 31, 2023) and planned activities for the subsequent reporting period (January 1, 2024 – June 30, 2024).

4.1 Sewer Overflow Response Plan (SORP)

The Consent Decree requires the development and implementation of a Sewer Overflow Response Plan (SORP). The SORP is a component of the City's comprehensive CMOM Programs and is intended to establish standardized procedures for the City of Meridian Public Works Department staff to follow in the event of a sanitary sewer overflow (SSO). The procedures prescribed in the SORP comprise specific documentation/reporting and response measures to convey pertinent and practical SSO information with the goal of minimizing the impact of SSO events to public health and the environment. The objective of the SORP is to provide a plan for responding to, cleaning up, and minimizing the impact of SSOs in a timely manner. The Program was approved by EPA on September 14, 2020 and implemented September 2021.

During this reporting period:

- Training
    - SORP Program Orientation
        - On 2/1/2023, conducted SORP Program orientation training for Public Work Department's new Line Maintenance's Secretary
        - On 7/26/2023, conducted SORP Program orientation training for Public Work Department's new Line Maintenance's Secretary
        - Training included one-on-one orientation guidance on the SORP & SSO reporting and documentation procedures
- Maintained the current Excel spreadsheet training matrix, which lists Public Works staff and the training completed by each staff member. Tracking system to be maintained until IMS Program is fully implemented
- Continued refinement of Program-related SOPs (based on training activities and

feedback from field staff)

- Continued to manually track and document performance measures
- Continued review process of SORP document for potential revisions to original plan approved in 2020

During the next reporting period:

- Training
  - Conduct SORP-related training, as required, for Public Works staff, which shall be based upon knowledge based and past training of personnel
    - New employee training
      Conduct SORP Program training for all new Department employees whose roles involve SSO response and/or reporting
    - Existing staff training
      Annual refresher class for Department staff who have already successfully completed their required Sewer Overflow Response Training (which shall incorporate SSO volume estimating module using the SSO simulation unit, constructed in 2022 for the program training)
  - Addition of supplemental training curriculum (as appropriate) associated with SORP response and reporting activities
  - Continue maintaining Excel-based tracking matrix, which lists Public Works staff and the training completed by each staff member, until the training log can be incorporated into the City's IMS platform
- As appropriate, continue refinement of Program-related SOPs (based on training activities and feedback from field staff)
- Continue to manually track and document performance measures
- Periodic review, evaluation, and revision of SORP Program document
  - SORP Program document shall be updated to account for circumstantial changes within both the wastewater industry as well as the Public Works Department
  - Evaluate the overall effectiveness of the plan and any associated SOPs to determine whether the objectives set forth by the Consent Decree are being met; and based upon evaluation, update the program documents accordingly
  - Any amendments or revisions made to this plan shall be recorded in the Summary of Revisions to the SORP matrix, which is included on Page III of the document. Furthermore, within 14 days of the formal updates, the City shall provide a copy of the amended document to EPA and MDEQ, along with placing it on the Program's Public Document Repository (PDR)

Table 4-1A. Implementation Schedule for Specific SORP Tasks

Date of Implementation	Task	Activity
Immediately upon EPA approval of the SORP	Initiation of SORP training & implementation	Completed & Training Ongoing
Within 12 months of EPA approval of the SORP	Completion of SORP's SOP development	Completed (2021)
Concurrently with the development of the Pump Station and Force Main Operations and Preventative Maintenance Program, due within 18 months of the Effective Date of the Consent Decree (i.e. 2/6/2021)	Develop list of pump station SSOs having been recorded as overflowing more than once in the previous twelve (12) Months	Completed (2021)
	Develop list of potential SSO locations in the event of a Pump Station failure	Completed (2021)

Table 4-1B. 2023 Annual SORP performance measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Compliance with Regulatory Agency Reporting of SSOs	On-time compliance for submittal of 24-hour oral notification of confirmed SSO to MDEQ	(# of notifications completed within 24-hrs. / ∑ # of reports per year) * 100	100%	93%
	On-time compliance for submittal of 5-day follow-up written report of confirmed SSO to MDEQ	(# of follow-up written reports / ∑ # of reports per year) * 100	100%	75%
SSO Response Training	All personnel involved in SSO response, reporting, & record keeping participate in annual SORP training	(# of employees trained / ∑ # of employees with SSO responsibilities) * 100	100%	100%
Periodic Evaluation of SORP	Annual review, evaluation, and revision, as necessary, to SORP	Value	Once per Year	Completed
Frequency of SSOs	Track the number of annual SSOs per 100 miles of WCTS system	(Number of SSOs/100 mi. of sewer) / year	Trend	17.6
Average SSO Volume	Track the average SSO release volume per 100 miles of WCTS system annually	(Volume of overflow/ # of SSOs / 100 mi. of sewer) / year	Trend	63,222

4.2 Emergency Response Plan (ERP)

The Consent Decree requires the development and implementation of an Emergency Response Plan (ERP). The purpose of the ERP is to provide a plan for responding to routine and catastrophic emergencies. Routine emergencies include such situations as overflowing manholes, line breaks, pump station failure, etc. Catastrophic emergencies include situations such as floods, tornadoes, or other natural events. The Program was approved by EPA on September 14, 2020. Per the approved report, implementation of the Program was to be achieved by September 2021.

During this reporting period:

- Training
  - Daily morning safety "toolbox talks"/safety briefing
  - Mississippi Damage Prevention Summit (ACTS/MS811)
    - Specific Lines Maintenance staff members attended summit
    - Focus of summit was bringing together industry stakeholders with the objective of collaboratively improving means for protecting city and/or state's underground facilities, while making communities safer places to live and work.
  - CPR training
    - Specific Lines Maintenance staff members participated in CPR training
  - Highway Safety Training
    - Group of Lines Maintenance field staff participated in highway safety training
  - Scheduled updated training to be conducted by City's Public Safety Department
- Continued refinement of SOPs related to emergency response activities based on training activities
- Continued manually tracking and documenting performance measures until IMS Program is fully implemented, at which time, the IMS can begin being utilized for tracking established performance measures.
- Continued to manually track and document performance measures
- Continued review process of ERP document for potential revisions to original plan approved in 2020

During the next reporting period:

- Training
  - Staff to participate in training to be conducted by City's Public Safety Department
  - Continue maintaining Excel-based tracking matrix, which lists Public Works staff and the training completed by each staff member, until the training log can be incorporated into the City's IMS platform
- As appropriate, continue refinement of Program-related SOPs (based on training activities and feedback from field staff)

- Continue to manually track and document performance measures
- South WWTP's Risk Management Program (RPM) to be revised and resubmitted to EPA
- Periodic review, evaluation, and revision of ERP Program document
  - ERP Program document shall be updated to account for circumstantial changes within both the wastewater industry as well as the Public Works Department
  - Evaluate the overall effectiveness of the plan and any associated SOPs to determine whether the objectives set forth by the Consent Decree are being met, and update the program documents accordingly
  - Any amendments or revisions made to this plan shall be recorded in the Summary of Revisions to the ERP matrix, which is included on Page III of the document. Furthermore, within 14 days of the formal updates, the City shall provide a copy of the amended document to EPA and MDEQ, along with placing it on the Program's Public Document Repository (PDR)

Table 4-2A. Implementation Schedule for Specific ERP Tasks

Task	Date of Completion	Activity
Procurement and installation of video conferencing system in Public Works Complex Conference Room	Within 6 months of EPA approval	Completed (2021)
ERP SOP development	Within 12 months of EPA approval	Completed (2021)
Initiation of ERP training & implementation	Within 12 months of EPA approval *	Completed (2021) & training activities ongoing
All program elements implemented/in-place	18 months from EPA approval of plan	Completed (2021)

* Initiation of SORP training & implementation (for SSO events) is scheduled to begin immediately upon EPA's approval of the SORP

Table 4-2B. Annual ERP Performance Measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Adherence to SORP's Performance Measures	Due to the interrelationships/ commonalities between the two plans, successful adherence of SORP's listed performance measures will promote effectiveness of ERP.	Value	See SORP	Achieved
Routine Evaluation of ERP	Annual review, evaluation, and revision, as necessary, to ERP	Value	Once per Year	Completed
ERP Orientation	Orientation of new employees to include basic ERP training module	(# of new employees trained / ∑ # of new employees hired) * 100	100%	100%
ERP Training	All personnel involved in ERP procedures participate in annual ERP training	(# of employees trained / ∑ # of employees with ERP responsibilities) * 100	100%	100%
Conformance with EPA's RMP Requirements	South WWTP's RMP to be revised and resubmitted to EPA every five years	Value	Every Five Years	TBD*

** Next scheduled revision and submittal of South WWTP's RMP set for 4/1/2024*

4.3 Sewer Mapping Program

The Sewer Mapping Program is a component of the City's comprehensive CMOM programs and is intended to establish standardized procedures for the City of Meridian Public Works Department staff to follow in updating the City's GIS-based sewer mapping system. The program shall provide for the maintenance of a comprehensive inventory of WCTS components and assets, including relevant attributes, catalogued by service area. As part of the comprehensive CMOM programs development and implementation, the City will utilize the GIS platform as the basis of its forthcoming Information Management System (IMS) to provide real-time, visual information for planning and scheduling system maintenance and operations. The Consent Decree requires the implementation of a Sewer Mapping Program. The Program was approved by EPA on September 14, 2020 and was implemented by March 14, 2022.

During this reporting period:

- Continued the refinement of the Sewer Mapping Program's SOPs based on staff training and progress of IMS
- Completed the database of commercial FOG generating facilities
- Initiated Program training and begin tracking and recording data related to Program's

performance measures
- Conducted training for Public Works Department personnel on utilization of the ArcGIS software and added additional license for additional access
- Launched the constructed geodatabase via the City's ArcGIS Online platform to begin connecting and sharing content across the organization.
- Added additional collection system data and as-built drawing information
- Implemented field data collection process
- Continued field data collection activities
- The City procured additional GIS software licenses (Esri ArcGIS)
- Continued populating the Program's data dictionary which establishes the standardized structure for capturing information such as the size, length, and material of the assets, as well as service status, age, maintenance, and assessment activities.
- Continued the process of locating and digitizing the City's existing record drawings
- Updated and validated an electronic pump station dataset
- Conducted training for Public Works Department personnel on utilization of the ArcGIS software on the following topics:
    - Collection of WCTS asset coordinate data
    - Incorporation of field data into geodatabase
    - Checking and validation of data
- Continued with development of Meridian's WCTS geodatabase by completing the following activities:
    - Locating and collection of attribute data for WCTS assets
    - Updating database of commercial FOG generating facilities
- Updated focal easement area layer in GIS

During the next reporting period:

- Continue refinement of the Sewer Mapping Program's SOPs based on staff training and implementation of computerized work order management system (Cityworks)
- Add new commercial FOG generating facilities to database as they are identified
- Continue tracking and recording data related to Program's performance measures
- Expand training for Public Works Department personnel on utilization of mobile ArcGIS software
- Expand the City's ArcGIS Online platform connecting and sharing additional content across the organization
- Add rehabilitation and replacement projects to GIS

Table 4-3A Implementation Schedule for Specific Sewer Mapping Program Tasks

Task		Date of Completion	Activity
Procurement of GIS software		Within 6 months of EPA approval	GIS software package selected. 3/15/2021
Finalization of Data Dictionary		Within 9 months of EPA approval	Data Dictionary finalized. 6/15/2021
System capabilities for integrating electronic maps showing locations of following:	Surface streets/ addresses	Within 12 months of EPA approval	Completed 9/15/2021
	Surface water bodies		Completed 9/15/2021
	Political boundaries		Completed 9/15/2021
Development of standardized project specifications for inclusion in City's construction documents		Within 12 months of EPA approval	Completed 9/15/2021
Development of Sewerbasin layer		Within 12 months of EPA approval	Completed 9/15/2021
Sewer Mapping Program SOP development		Within 18 months of EPA approval	SOP's developed 3/2022
Creation of a FOG establishments layer		Within 18 months of EPA approval	FOG data loaded into GIS 3/2022, new facilities will be added as they are permitted.
Electronic mapping of each basin in the WCTS		*	Basins identified based on available data and as built. Basin boundaries will be validated during Sewer System Evaluation
All Program elements implemented/in-place		18 months from EPA approval of plan	Program in-place for addition of new construction and data collected during the sewer evaluation program for priority basins.

***As part of the implementation phase, assets located within each respective Sewerbasin will be captured over time using the prioritization methodology defined within the Sewer Basin Prioritization Work Plan and Sewerbasin Prioritization Report**

Table 4-3B. Annual Sewer Mapping Program performance measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
# of Record Drawings Backlogged	Number of new record drawings to be incorporated into GIS system database during report period	Value	25	65 sets of record drawings
# of New WCTS Assets Backlogged	Number of new WCTS assets not incorporated into GIS system database within 60 days of their activation in the field	Value	0	2
Average Change Time	The average time from the receipt of data indicating new sewer assets and the sewer network being updated to display those assets	Average of days between new data being received and it being added to the system	60 days	< 30 days
# (or %) of Sewer Mains Mapped	Number of lines mapped/ updated per year	Value (or # Linear Feet Mapped / ∑ Linear Feet in System)	—	Start 2024
Training Hours	Number of hours spent every year on continuing GIS education, per employee	# of training hours logged by GIS Staff / # of GIS Staff	40 hrs.	App. 250 hrs /38 employees/includes Cityworks& GIS

4.4 Gravity Sewer System Operations and Maintenance Program

The Consent Decree requires the development and implementation of a Gravity Sewer System Operations and Maintenance Program. The purpose of the Gravity Sewer System Operations and Maintenance Program is to provide a plan for preventative operations and maintenance (O&M) in order to reduce the occurrence of gravity sewer blockages and/or line deterioration, specifically those of which contribute to potential SSO events. The Program was approved by EPA on May 3, 2021. Per the approved report, implementation of the Program was to be achieved by May 2022.

During this reporting period:

- Training
  - Sewer Corrosion Degradation Identification and Control training
    - Conducted training related to gravity sewer system corrosion control (*Identification of Potential Sulfide and Corrosion Degradation*).
    - Focus of workshop was on identification of potential sulfide and corrosion degradation of gravity sewer assets
    - Training led by National Association of Corrosion Engineers (NACE) - certified instructor

        - Course attended by 22 Lines Maintenance field staff
    - City's new portable CCTV unit (CUES C550 Flexitrax)
        - One day of manufacturer representative-led training on operation of unit
        - Field-training
            - Field training module was conducted over a three-day period
            - Led by an industry expert in pipeline inspection & trenchless rehabilitation
            - Training provided CCTV and associated Vactor truck crews with supervised hands-on/real-world pipeline inspection training
            - Focal learning objectives included proper operation and SOPs related to video inspection of pipelines (specifically, as it applied to utilizing the CUES C550 Flexitrax unit).
            - Total number of participants – Six lines maintenance staff participated in the field training
        - City crew continues in-house CCTV training with designated gravity lines in areas unimpeded with traffic.

- Gravity sewer system O&M resources
    - **Portable Pipeline Video Inspection System** (portable CCTV unit)
        - Executed procurement of portable CCTV sewer inspection unit
        - City purchased the CUES C550 Flexitrax for inspection of lines from 6" to 18" in diameter
        - The purchased to provide field personnel ability to conduct comprehensive video inspections of the internal conditions of gravity piping
        - Unit utilization
            - Lines Maintenance staff member designated and assigned to operate the portable CCTV unit
            - Staff member began field training on unit in October 2023
            - As the staffer becomes more confident operating the unit, it is being utilized with more frequency in performing gravity line inspection activities

- Focal easements
    - City began clearing focal gravity system easements
        - Clearing is being performed using the City's new skid-steer drum mulcher
        - Additional clearing is being performed by contracted easement clearing service

- Updated design standards
    - As part of the amendments to the City's Water & Sewers Ordinance, updated the City's requirements for water & sewer piping design to adhere to modern industry standards
    - Amended ordinance was approved and adopted by City Council during this reporting period

- Continued manually tracking and documenting performance measures until IMS Program is fully implemented.
- Continued refinement of Program-related SOPs (based on training activities and feedback from field staff)
- Continued review process of Gravity Sewer System Operations and Maintenance Program document for potential revisions to original 2021 approved plan

During the next reporting period:

- Portable CCTV unit
  - Conduct follow-up field training for Public Works staff on safe and effective operations of the unit
  - Public Works staff to increase frequency with which unit is utilized for identification of potential "problem areas" within the City's gravity sewer system
- Training
  - Addition of supplemental training curriculum (as appropriate) associated with the operation and maintenance of the gravity sewer system
- Continue refinement of SOPs related to gravity sewer system operations and maintenance procedures based on training activities
- Continue updating/refining City's gravity sewer design standards.
- Continue manually tracking and documenting performance measures until IMS Program is fully implemented, at which time, the IMS can begin being utilized for tracking established performance measures
- Finalize and submit revisions to 2021 Gravity Sewer System Operations and Maintenance Program plan

Table 4-4A. Implementation Schedule for Specific Gravity Sewer System O&M Tasks

Task	Date of Required Implementation	Activity
Development of City's GS design standards	Within 6 months of EPA approval	Completed (2023)
Location of Focal Easements	Within 9 months of EPA approval	Completed (2022)
Initiation of program training & implementation	Within 12 months of EPA approval	Completed
SOP development	Within 12 months of EPA approval	Completed (2022)
All program elements implemented	12 months from EPA approval of Program	In Progress*

***** *All Program elements will be implemented upon EPA's approval of the Sewer Group Evaluation Plan.*

Table 4-4B. Gravity Sewer System O&M Program Annual Performance Measures

Performance Measure	Description	Trigger	Calculation	Target Annual Value	Actual Annual Value
Linear Footage of Gravity Sewer Line Cleaned	Linear footage of gravity sewer pipe cleaned annually	Corrective	Value	Reduction in Annual Trend	App. 68,000
		Preventive	Value	6.67%*	TBD 2024***
Linear Footage of Gravity Sewer Line Inspected	Linear footage of gravity sewer pipe inspected annually	Corrective	Value	Reduction in Annual Trend	App. 21,600
		Preventive	Value	6.67%*	TBD 2024***
Number of Manholes Cleaned/Maintained	Number of manholes cleaned/maintained annually	Corrective	Value	Reduction in Annual Trend	App. 225
		Preventive	Value	6.67%*	TBD 2024***
Number of Manholes Inspected	Number of manholes inspected annually	Corrective	Value	Reduction in Annual Trend	App. 225
		Preventive	Value	6.67%*	TBD 2024***
Easement Footage Inspected	Linear footage of easements inspected	NA	Value	1/5 of Linear Footage**	25,603
Easement Footage Cleared	Linear footage of easements cleared		Value	1/5 of Linear Footage**	25,603
SSOs per Mile of Gravity Sewer	Number of annual SSOs per mile of gravity sewer piping		(# of SSOs) / ∑ mi. of GS pipe	Reduction in Annual Trend	0.17
Routine Evaluation of Program	Annual review, evaluation, & revision to Program (as required)		Value	Once per Year	Completed

** Based on running annual average over the previous three years.*

*** Based on running annual average over the previous five years.*

**** Cleaning and/or inspection of WCTS assets located within Sewer Group 3, as determined in the forthcoming Sewerbasin Prioritization Report, will be addressed as part of the CMOM's Gravity Sewer System Operations and Maintenance Program (see following description). As part of the Consent Decree-required Sewer Group Evaluation Report and Rehabilitation Plan, the WCTS service area is to be divided into discrete sewerbasins. Then, based upon identified rehabilitative needs, the sewerbasins will be assigned classification within Sewer Groups 1, 2, or 3. As described in the Gravity Sewer System Operations and Maintenance Program plan, once the WCTS is delineated into final sewerbasins and a classification of Sewer Group 1, 2, or 3 is assigned, the City will initiate the process of scheduling and performing routine cleaning systematically by sewerbasin on gravity lines within Sewer Group 3 (i.e., starting at the upstream portion of the basin and working downstream). Cleaning and/or inspection of WCTS assets located within Sewer Group 3 will be addressed as part of this Program and the procedures as described herein.*

4.5 Pump Station and Force Main Operations and Preventative Maintenance Program

The Consent Decree requires the development and implementation of a Pump Station and Force Main Operations and Preventative Maintenance Program. The purpose of the Pump Station and Force Main Operations and Preventative Maintenance Program is to facilitate proper operation and maintenance activities associated with the Pump Stations and Force Mains within the WCTS. Per the approved report, implementation of the Program was to be achieved by May 2022.

During this reporting period:

- Training
  - ***Sewer Corrosion Degradation Identification and Control*** training
    - Conducted training related to pump station and force main corrosion control (Recognizing Possible Corrosion Degradation to WCTS Assets Caused by Hydrogen Sulfides or Other Corrosives)
    - Focus of workshop was on identification of potential sulfide and corrosion degradation of pump station/force main system assets
    - Training led by National Association of Corrosion Engineers (NACE) - certified instructor
    - Course attended by 22 Lines Maintenance field staff
  - New staff training
    - City continued field training of new Lift Station Technician.
- **Pump stations wireless remote monitoring systems**

  Objective of the project is to provide Public Works staff the ability to actively monitor the operational conditions at each location remotely (digital alarm inputs), as well as collect station-specific trend data at to be analyzed.
  - Completed the project's design phase
  - Completed the project's bid/procurement phase
    - Recommendation to Award submitted to City, following which, City Council City Council approved entering agreement with recommended contractor. The construction contract was signed in December 2023
      - Project comprises furnishing, installation, and commissioning of a complete wireless remote monitoring system
      - Locations where units are scheduled for installation include 45 wastewater pump stations (classified as either "medium" or "high" risk locations) and four locations at the South WWTP
- **Portable self-priming bypass pumps**
  - Initiated process for procuring the manufacturer-offered remote monitoring and control subscription service plan for the City's four new Godwin self-priming bypass pumps
  - Each pump's factory-installed onboard PrimeGuard 2 controller (a fully programmable microprocessor engine control system), when paired with Xylem/Godwin's Field Smart Technology (FST) subscription service, converts the controller into an advanced cloud-based telemetry system. Once

activated, the telemetry system would allow City personnel the ability to monitor and control these four newest Godwin bypass pumps remotely

- The telemetry system utilizes real-time pump and engine performance data that is capable of alerting appropriate City staff of potential pump issues via text messaging, email, and/or interactive phone call notifications

- Focal easements
  - City began clearing focal easements
    - Clearing is being performed using the City's new skid-steer drum mulcher
    - Additional clearing is being performed by contracted easement clearing service
- Continued refinement of SOPs related to pump station and force main operations and maintenance procedures based on training and field-related activities
- Continued manually tracking and documenting performance measures until IMS Program is fully implemented, at which time, the IMS can begin being utilized for tracking established performance measures
- Continued review process of Pump Station and Force Main Operations and Preventative Maintenance Program document for potential revisions to original 2021 approved plan

During the next reporting period:

- **Pump stations wireless remote monitoring systems**
  - Project construction
    - Initiate construction activities
    - Complete construction activities with monitors installed on all pump stations classified as "High" or "Medium" risk by Fall 2024
  - City to begin utilizing remote monitoring system as part of its typical operations and maintenance activities.
- Training
  - Wireless remote monitoring system
    - As part of the project's construction phase, Public Works staff to receive three full days of onsite training on the system and its web-based interface (as of construction completion)
    - Staff shall receive **two additional days** of onsite training at intervals approximately three- & six-months following construction's final completion
  - Wastewater pump school
    - Formal training workshop to be conducted by industry expert(s) in O&M of wastewater pumps (and pump stations)
    - Course modules to include pump station features; how pump stations function; & maintenance & troubleshooting
    - Participants shall include, at a minimum, Lines Maintenance Pump Station technicians and Lines Maintenance Supervisor
- Addition of supplemental training curriculum associated with the operation and maintenance of the pump station and force main system

- Continue refinement of SOPs related to pump station and force main operations and maintenance procedures based on training and field-related activities
- Continue manually tracking and documenting performance measures until IMS Program is fully implemented, at which time, the IMS can begin being utilized for tracking established performance measures
- Continue updating/refining City's pump station and force main design standards
- Finalize and submit revisions to original Pump Station and Force Main Operations and Preventative Maintenance Program document (approved in 2021)

Table 4-5A. Implementation Schedule for Specific PS/FM O&PM Program Tasks

Program Task	Date of Required Implementation	Activity
Development of City's PS and FM design standards	Within 6 months of EPA approval	Completed (2023)
Classification of each PS as "high, medium, or low risk"	Within 9 months of EPA approval	Completed (2022)
Initiation of program training & implementation	Within 12 months of EPA approval	Initiated June 2022
SOP development	Within 12 months of EPA approval	Completed (2022)
Development/implementation of remote monitoring system component	Phased implementation*	See previous summary
All program elements implemented/in-place	12 months from EPA approval of plan	All components in progress

* *Task comprises evaluation and selection of the most appropriate remote monitoring system for Meridian's system (taking into consideration interface/compatibility with forthcoming IMS). Evaluation phase included pilot testing of different units. Upon selection of the monitoring system, "high" & "medium" risk stations to be prioritized to equipped with remote monitoring devices. Evaluation & selection of system – Completed; design and bid phase – Completed.*

Table 4-5B. Pump Station and Force Main O&PM Program Annual Performance Measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Linear Footage of FM Inspected	Linear footage of force main pipe inspected annually (surface inspection)	Value	33.3%*	** Value to be tracked using IMS
SSOs per Mile of FM	Number of annual SSOs per linear mile of force main piping	(# of SSOs) / ∑ miles of FM	Reduction in Annual Trend	0.03
SSOs per Pump Station	Number of annual SSOs per number of pump stations	(# of SSOs) / ∑ # of PS	Reduction in Annual Trend	0.08
Percentage of Pump Station-Related SSOs	Number of annual SSOs resulting from PS malfunctions	(# of SSOs from PS malfunctions / ∑ # annual SSOs events) * 100	Reduction in Annual Trend	7.9%
Percentage of Force Main-Related SSOs	Number of annual force main-related SSOs per mile of force main	((# of SSOs from FM SSOs / ∑ miles of FM) / ∑ # annual SSOs events) * 100	Reduction in Annual Trend	0%
Unscheduled Pump Station Maintenance	Number of UNPLANNED pump station maintenance activities based on issued work orders	Value	Reduction in Annual Trend	** Value to be tracked using IMS
Force Main System Report Generation	Generation of reports listing equipment problems/status of work orders generated during prior Month	Value	**	**
Routine Evaluation of Program	Annual review, evaluation, and revision, as necessary, to Program	Value	Once per Year	Completed
Pump Station and Force Main System Training	All personnel involved in procedures participate in annual training	(# of employees trained / ∑ # of employees with FM responsibilities) * 100	100%	100%/ 3 employees

** Based on running annual average over the previous three years.*

*** KPI data to be generated upon City's full implementation of the IMS component of CMOM*

4.6 Legal Support Program

The Consent Decree requires the implementation of a Legal Support Program. The purpose of the Legal Support Program is to provide a means for the development and enforcement of rules and regulations with respect to (FOG) control and Private Laterals. The Program was approved by EPA on May 3, 2021. Per the approved report, implementation of the Program was to be achieved by October 2022.

During this reporting period:

- **Amendments to *Chapter 25 Water and Sewers* of the City of Meridian's Code of Ordinances**
  - Completed development of amendments to the City's Water and Sewer Ordinance, specifically as they apply to the following:
    - Rules and Regulations Program
    - Grease Control
    - Private Lateral
  - Amended Chapter 25 successfully adopted by City Council (June 2023)

- Per City's Ordinance Municode webpage, the updated Ch 25 Water and Sewers ordinance shown under ADOPTED ORDINANCES NOT YET CODIFIED
- Following adoption, implementation phase initiated

- **Chapter 25 Supplementary documents**
  These supplemental documents are intended to provide guidance in assisting customers with adherence to the amended ordinances; as well as the supporting the City in taking fair, consistent, and equitable enforcement actions against violators of the City of Meridian's Water and Sewers Ordinances.

  The supplemental documents are as follows:
  - FOG Management and Enforcement Response Guide (FMERG) &
  - Private Lateral Enforcement Response Guide (PLERG)

  - Statuses of supplemental documents
    - Both documents successfully developed
    - Documents currently in the implementation phase
- As part of the Chapter 25 amendment process, specific minimum sewer system design requirements were updated so as to adhere to modern industry standards for sewer system rehabilitation and construction.
- Maintained the current Excel spreadsheet training matrix, which lists Public Works staff and the training completed by each staff member
- Continued review process of Legal Support Program document for potential revisions to original 2021 approved plan

During the next reporting period:

- Continue implementation of updated ordinance procedures
- Maintain the current Excel spreadsheet training matrix, which lists Public Works staff and the training completed by each staff member
- Continue refinement of SOPs related to the Legal Support Program and based on training and field-related activities
- Continue manually tracking and documenting progress
- Finalize and submit revisions to original Legal Support Program document (approved in 2021)

Table 4-6A. Implementation Schedule for Legal Support Tasks

Program Task	Date of Completion	Activity
Development of amended Water and Sewers Ordinance	Within six (6) months of EPA and MDEQ approval of the FOG Control Program	Completed
Adoption of amended Water and Sewers Ordinance by City Council	Within twelve (12) months of EPA and MDEQ approval of the FOG Control Program	Completed

4.7 Information Management System (IMS) Program

The Consent Decree requires the development and implementation of an Information Management System (IMS) Program. The purpose of the Information Management System (IMS) Program is to provide City Managers and supervisors guidance and reporting capabilities for Management, Operations and Maintenance activities. The Program was approved by EPA on October 15, 2021 and is to be implemented by October 15, 2023.

During this reporting period:

- Prioritized and developed business processes for IMS
- Conducted final preliminary evaluation of required IMS software
- Initiated and completed procurement process of IMS Software
- Continued development of IMS Configuration/Programming
- Coordinated and conducted follow-up workshop(s) with the City of Meridian staff
- Coordinate integration of City's GIS software and Cityworks work order management system
- Conducted additional meetings with Meridian personnel to adapt the City's current work order process for effective Cityworks use
- Configure and install Cityworks software and identified system administrators and provided training
- Began development of requisitions and work order process for priority activities

Table 4-7A. Implementation Schedule for Specific IMS Program Tasks

Program Task	Date of Completion
Initiation of Selection/Procurement of IMS Software	IMS Package selected 2/2022
Development of IMS Configuration/Programming	12/2022 configuration and programing
Staff Training Program Component Developed	System Administrator trained 12/2022 User training scheduled 4/2023
All program elements implemented/in-place *	24 months from EPA/MDEQ approval
GIS mapping component implemented	GIS and Cityworks data base integration 01/23, full operation by August 5, 2023

* *All IMS Program components with exception of the GIS mapping component anticipated 10/2023*

Table 4-7B. Key IMS Program Performance Indicators

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Average number of days to enter new assets into the IMS	The City will track the time from submittal of an as-built drawing to the time that the asset information is entered into the IMS.	Days from as-built submittal to asset entry	60 days or less	< 30 days
Average number of days to enter IMS inaccuracy report data into the IMS	The City will track the time from submittal of a GIS inaccuracy report to the time that the correction is made into the IMS.	Days from inaccuracy report submittal to data entry.	60 days or less	N/A; TBD 2024
Annual Training	At a minimum, all Public Works staff whose role requires interfacing with Program software will participate in annual "refresher" training.	Value	100%	100%
Routine Evaluation of Program	Annual review, evaluation, & revision to Program (as required)	Value	Once per Year	Completed

4.8 Fats, Oils, and Grease (FOG) Control Program

The Consent Decree requires the development and implementation of a Fats, Oils, and Grease (FOG) Control Program. The purpose of the FOG Control Program is to provide a plan to address Fats, Oils, and Grease in the WCTS. The Program was approved by EPA on October 15, 2021. Per the approved report, implementation of the Program was to be achieved by October 2022.

During this reporting period:

- **Initial round of FSE site visits/inspections**
  - Routine visits/inspections
    - FOG Coordinator continued with first cycle/series of visiting City's FSEs to provide them with FOG program requirements (and offer support for achieving compliance with program's requisites).
    - Approximate number of FSEs inspected in 2023 was 170.
  - Support of non-compliance establishments
    - Five FSEs identified as non-compliant with City's ordinance/FMERG requirements
    - FOG Coordinator provided support for remediating/reconciling issue(s) and achieving compliance with program
    - Conducted necessary follow-up visits to (and tracking of) non-compliant FSEs
    - Via support from FOG Coordinator, each of five FSEs were brought back into compliance
- **Training**

  Midwest Fats, Oils, & Grease Conference & Training

  As part of the FOG Control Program implementation, remained attentive of FOG-

related industry training opportunities for the City's FOG Coordinator. One of the focal opportunities identified was the Midwest Fats, Oils, & Grease Conference & Training (September 27th & 28th, 2023, in Columbus, Ohio).

The conference included numerous technical sessions and expert panels discussing topics that included the latest technology in the areas of grease removal devices; FOG management software; successful FOG control programs presented by the municipalities that implemented them; and general municipal F.O.G. management (e.g., FOG enforcement; grease removal device sizing & cleaning frequency; BMPs; inspection procedures, etc.).

Public Works Department personnel who participated in the two-day event were the following:

- FOG Coordinator and
- Lines Maintenance Supervisor.

- Certified FOG Pumper/Hauler
  - Identified additional "certified pumper" (certified through the Mississippi Department of Health (MSDH)) to service FOG control devices operated by Meridian's FSEs
  - As necessary, FOG coordinator has two MSDH-certified pumper/hauler companies that may be recommended to FSEs for maintenance of FOG control devices on recurrent basis.

- Continued development of "living inventory" of commercial FOG generators located on Meridian's WCTS, including creation of a GIS map illustrating the City's current food service establishments (FSEs)

- Continued refinement of electronic, ArcGIS-based FOG inspection form for use during visits to commercial FOG generating facilities

- **FOG management software**
  - Evaluation phase
    - Identified FOG-centric software package to support implementation of Meridian's FOG Program.
    - Coordinated a demonstration of FOG management software for City of Meridian.

    Software overview
    - The software is a turn-key, cloud based, platform developed to provide municipalities with a means to automate and manage all aspects of their FOG program (and is currently being utilized by numerous municipalities across the country).
    - Software provides the following capabilities:
      - Electronic cleaning record submission
      - Detailed FOG generator profiles
      - Mobile inspection capabilities
      - Automatic alerts
      - Electronic sewer overflow documentation
  - Based on the demonstration and assessment of the software, the City

elected to purchase the software package.

- As of the end of this reporting period, the City has initiated procurement of the software.

- **FOG Public Outreach**
  - Developed final draft of the *CMOM Public Outreach Plan* (for calendar year 2024), which includes the following information:
    - Recommendation for City to secure an annual plan with a media design firm to provide public outreach, campaign, educational, and promotional content related to the City's Consent Decree programs, specifically, FOG and WCTS compliance. The criteria for prospective firms was specialized knowledge and background in development and implementation of utility and local municipality outreach solutions related to wastewater issues, such as prevention of FOG (& other prohibited materials) contributions into the WCTS. A nationally recognized media firm, which specializes in municipal public works & utilities environmental compliance outreach, was vetted/evaluated as part of this process.
    - Recommended budget for Year 2024's public outreach/initiative activities, specifically as it applies to FOG.
    - Basic outreach program for commercial customers (e.g., FSEs)
    - Education/initiatives related to non-FSE customers public education/initiatives
      - Outreach themes
      - Outreach campaign materials
  - Initiated preliminary outreach activities for focal commercial FOG generators identified as part of the FOG Characterization Study.
- FOG Characterization Study-related activities
  - Outlined plan to begin inspection activities of "hot spot" locations as identified in the FOG Characterization study. These locations comprise approximately 19,000 linear feet of the City's gravity sewer pipe.
  - Based on findings from the gravity sewer line inspections, chronic FOG source and remediation plan will be refined, as necessary, and implemented accordingly.
  - Continued developing plan for confirming and remediating chronic FOG sources that are contributing to "hot spot" areas within the WCTS; specifically, those associated with multi-family residential customers
- FOG Management & Enforcement Response Guide (FMERG)
  - Completed final draft FMERG, which will serve as the guideline for regulatory inspection and enforcement of commercial FOG generators
- Maintenance of the current Excel spreadsheet training matrix, which lists Public Works staff and the training completed by each staff member
- Continued refinement of SOPs related to the FOG and based on training and field-related activities
- Continued manually tracking and documenting performance measures

- Continued review process of FOG Control Program document for potential revisions to original 2021 approved plan

During the next reporting period:

- Continued implementation phase activities - Continue with recurrent facility inspection program of City's FSEs
- **FOG software**
  - City anticipates the procurement of the FOG management software to be completed during this next reporting period.
  - Upon procurement of software, it shall immediately be implemented as part of the FOG program activities. The following is a list of implementation activities:
    - Onboarding process of software
      - Software developer/distributor will conduct a kickoff meeting with the City, which would ultimately serve as the orientation training session.
      - Following the initial training module, the FOG Coordinator and City would have continued access to the software developer staff for any technical or software interface questions, issues, or additional training (as needed).
      - Incorporation of Meridian's existing FSE locations (and additional facility data) into their system making it immediately ready for City's use.
    - Begin utilizing FOG software for FOG-related inspection activities
- **FOG Public Outreach**

  Procurement and implementation of recommendations from the Public Outreach Plan, which may include, but is not limited to, the following:
  - Procure services of recommended media design agency
  - Select the design/theme for first round of public outreach/educational materials
  - Begin distributing Consent Decree-related outreach/educational materials (digital, print, or combination based upon reception)
  - Develop and prepare material specifically for distribution to FSEs (as part of FOG Coordinator's required activities)
- Continue refinement of "living" list (including the electronic database) of commercial establishment FOG generators
- Initiate CCTV inspection of identified FOG hotspots (as described in the FOG Characterization Study)
- Continue implementation activities associated with staffing (technical/legal) and equipment requirements for Program's execution
- **Training**
  - Continue to actively seek out industry-sponsored FOG control training opportunities for which the FOG Coordinator may participate
  - Addition of supplemental training curriculum (as appropriate) associated

with FOG control requisites as described in the FOG Control Program

- Maintain the current Excel spreadsheet training matrix, which lists Public Works staff and the training completed by each staff member
- Continue refinement of SOPs related to the FOG and based on training and field-related activities
- Continue manually tracking and documenting performance measures
- Finalize and submit revisions to original FOG Control Program document (approved in 2021)

Table 4-8A. Implementation Schedule for Specific FOG Program Tasks

Program Task	Date of Completion	Activities
Perform FOG Characterization Study	Within 12 months of EPA/MDEQ approval	Completed (2022)
Establishment of staffing (technical/legal) & equipment requirements	Within 16 months of EPA/MDEQ approval	Completed
Development of design and construction standards	Within 18 months of EPA/MDEQ approval	Completed
Development of a "living" list of commercial establishment FOG generators (which is to include a description of their FOG generating processes & estimated average quantity of FOG generate daily)	Within 18 months of EPA/MDEQ approval	Living List Development Completed
Establishment of a FOG Control Program training component	Within 18 months of EPA/MDEQ approval	Completed with training ongoing
Development of compliance and construction inspection protocols	Within 18 months of EPA/MDEQ approval	Completed
Enactment of the FOG Ordinance	Within 24 months of EPA/MDEQ approval	Completed
Development of FOG control device BMPs	Within 24 months of EPA/MDEQ approval	Completed
Development of compliance assistance program for FOG generators	Within 24 months of EPA/MDEQ approval	Completed
Development of a public education/outreach component targeting non-commercial/residential customers	Within 24 months of EPA/MDEQ approval	Outreach plan completed
All program elements implemented/in-place	Within 24 months of EPA/MDEQ approval	All components in progress

Table 4-8B. 2023 Annual FOG Control Program Annual Performance Measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Number of SSOs due to FOG	The annual number of FOG-related SSOs	Value	Reduction in Annual Trend	0
Number of Inspections per Year for Each FSE	Upon full implementation, each listed FSE should be routinely inspected (including FOG control device) by City staff no less than once every two years.	Each FSE inspected ≥ once / every 2 years	100%	TBD 2024*
Current Commercial Establishment FOG Generator List	The City will review and update its list of commercial establishment FOG generators (including permitted FSEs) on an annual basis.	Value	Once per Year	Completed
Resolution of Non-Compliance	The City will track resolution of commercial FOG generators determined to be out of compliance with Program/ordinance.	Value	100%	100%
Program Training	All personnel involved in FOG Control Program complete the required training curriculum.	Value	100%	100%
Routine Evaluation of Program	Annual review, evaluation, and revision, as necessary, to the Program. As part of this evaluation, the need for additional personnel will be assessed based on the Program's workload.	Value	Once per Year	Completed

** To be determined upon full implementation of the FOG Control Program. For Year 2023, FOG Coordinator conducted routine inspections on approximately 170 FSEs.*

4.9 Financing and Cost Analysis Program

The Consent Decree requires the development and implementation of a Financing and Cost Analysis Program. The purpose of the Financing and Cost Analysis Program is to provide a process that routinely reviews and updates all financial components of operating and maintaining a Sewer system which includes annual budgets, capital improvement expenditures, etc. The Program was approved by EPA on October 15, 2021 and is to be implemented by October 15, 2022.

During this reporting period:

- Initiated the formal development of the Financing and Cost Analysis Program FY 2023 and projections FY2024
- Coordinated and conducted Financing and Cost Analysis Program kickoff workshop with the City of Meridian staff
- Continue Financing and Cost Analysis Program implementation.
- Obtained additional program funding from ARPA

During the next reporting period:

- Implementation of the Financing and Cost Analysis Program annual re-evaluating the overall PCD Program budget based on the most current information
- Re-evaluate User rate structure needs for future bond programs
- Establish future capital budget requirements

Table 4-9A. Implementation Schedule for Specific Financing & Cost Analysis Program Tasks

Program Task	Date of Implementation Initiation
Budget and Cost Analysis Component	Budget and cost analysis completed for FY 23 10/2022. Additional funding obtained from ARPA in 2022.
CIP Financing Component	CIP financing to be evaluated on an annual basis. CIP projected for FY 2023 & 2024.
Life Cycle Cost Analysis Process Development	Implementation to be performed as part of the IMS Program implementation.
Adequacy of Customer Rates Evaluation	Customer rate increases (water/wastewater) enacted by the 2019 amendment to City Ordinances 25-40 & 25-41 to be reevaluated on annual basis.
FOG Control Program Related Fees Established	FOG Control Program enforcement and fees related to FOG Control Program established as part of its implementation phase.
All Program elements implemented/in-place	12 months from EPA approval of Program.*

** Depending on the approval date of this document, implementation of specific tasks may have already been initiated. Budgeting and planning components to be evaluated and assessed on a continual basis. Significant financial planning updates to be included as part of the City's Annual Report (pursuant to 26.b of the Consent Decree).*

Table 4-9B. Annual Financing and Cost Analysis Program Performance Measures

Performance Measure	Description	Calculation	Target Annual Value	Actual Annual Value
Meeting Minimum Required Debt Service Coverage Ratio (DCR)	Debt service coverage ratio measures the system's ability to pay its long-term debts. The minimum DCR will be as defined per City's bond covenant.	Value	≥ Minimum DCR	> 1.25
Adequate Financing for CMOM - Identified Capital Costs	City's capital improvement planning should be adequate to finance projects and O&M equipment identified as part of the CMOM programs	Value	Fully Funded	App. 250 Thousand
Financing for SSO-Related CIP Projects	City's capital improvement planning should be adequate to finance projects associated with Sewer Groups 1 & 2	Value	Fully Funded	App. 9.3 Million
Routine Evaluation of Customer Rates	Annual review, evaluation, and revision (if necessary) to customer rates	Value	Once per Year	9% increase in 2023; Reviewing rates versus 2021 Certified Audit
Routine Program Evaluation	Annual review, evaluation, and revision (as necessary), to Program	Value	Once per Year	Completed

5.0 Consent Decree Progress Schedule

A Gantt chart indicating the overall progress of Consent Decree required activities and milestones is shown on the following pages.

City of Meridian Sewer Consent Decree Schedule (OBJECTIVE: Eliminate Sanitary Sewer Overflows, Achieve and Maintain Full Compliance with the CWA, the MAWPCL, and the NPDES Permits)

CD ASPECTS | **CD Tasks** | **Years 1 through 8 (of 19)**

Consent Decree Effective Date: August 6, 2019

Calendar Year	2019	2020	2021	2022	2023	2024	2025	2026	2027
Fiscal Year/Current CITY GSA Contract (Grey)	2019	2020	2021	2022	2023	2024	2025	2026	2027
Month	Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M							

Program Management (PrG)

PrG Management, Reports, and Meetings

- Semi-Annual Reports (Due Jan 31, 20XX and July 31, 20XX) — 1, 2, 3, 4, 5, 6, 6Rev, 7, 8a, 9, 10, 11, 13, 14
- Annual Reports (Due Feb 28, 20XX) — 1, 2, 3a, 4, 5, 6
- Consent Decree Monthly Meetings
- Quarterly Council Mtg CD Updates — Q; CH
- Quarterly EPA/MDEQ CD Updates (Began in 2023) — Q
- Biweekly Team Meetings, between Consent Decree Monthly Mtgs (WCTS, WWTP, CMOM)

Wastewater Collection and Transmission System (WCTS)

Hwy 80 Trunk Line Sewer System Evaluation And Rehabilitation

- **Draft/Submit Highway 80 Trunk Line Work Plan** — 12 mo. | 5th
- EPA Review & Approval — 5 mo. | 21st
- **Draft/Submit Highway 80 Trunk Line Rehabilitation Plan** — 24 mo. | 21st
- EPA Review & Approval — 13th
- Rehabilitation Plan Implementation - Design & Construction Projects — Design & Construction of Highway 80 Trunk Line Rehabilitation (42 months)
- - Phase 1 Highway 80 Trunk Line Repair Project (SC , Warranty expired) — Design | Bid | Construction
- - Phase 2-A Highway Trunkline Repair Project (SC Feb 28, 2023, Warranty Period to Feb 28, 2024) — Design | Bid | Construction
- - Phase 2-B Highway 80 Trunkline Repair Project (100% Design, Acquiring Easement (FWD)) — Design | Bid | Construction
- - Phase 3 Highway 80 Trunkline Repair Project (In Planning)

12/31/2023

SewerBasin Studies

- **Draft/Submit Sewerbasin Prioritization Work Plan** — 12 mo. | 5th
- EPA Review & Approval (3) — 5 mo. | 21st
- **Draft/Submit Sewerbasin Prioritization Report** — 36 mo. | 21st
- Develop / Update Sewer System Map (30 months) — 30 mo.
- Sewerbasin Flow Monitoring (24 months minimum) — 24 mo. Minimum
- Rainfall Monitoring (24 months minimum) — 24 mo. Minimum
- Prioritize Sewerbasins (6 months) — 6 mo.
- Prepare Prioritization Report (3 months) — 5 mo.
- EPA Review & Approval (3 months) — 3 months

Sewer Group Evaluation Plan — 12 months

- EPA Review & Approval (3 months) — 3 months
- Sanitary Sewer Evaluation Survey — Sewer Group 1 and 2 Evaluation Survey (24 months) >>>>
- Pump Station Evaluations — Pump Station Evaluation Survey (24 months) >>>>

Evaluate Sewer Groups 1 and 2 — Sewer Group 1 and 2 Evaluation (24 months) >>>>

Draft/Submit Sewerbasin Evaluation Report & Rehabilitation Plan (12 months following Sewer Group Evaluation Plan)

- EPA Review & Approval (3 months)
- Rehabilitation Plan Implementation

Rehabilitation Plans for each Sewer Group

- Design & Construction of Improvements-Sewer Group 1 (144 Months after effective date: Aug 5, 2031)
- Draft/Submit Rehabilitation Report Sewer Group 1 (12 Months following completion of SG1 remedial measures)
- Design & Construction of Improvements-Sewer Group 2 (216 Months after effective date: Aug 5, 2037)
- Draft/Submit Rehabilitation Report Sewer Group 2 (12 Months following completion of SG2 remedial measures)

Other Sewerbasin Design and Construction Projects

- - 24-inch B Street and 22nd Avenue Sewer Improvements Project (21st to 23rd avenue) (FC/SC 09/22/2023, in Warranty Period) — Design | Bid | Construction
- - 54-Inch Sewer Line Replacement (SC 7/27/2023, in Warranty Period) — Design | Bid | Construction
- - Annual Term Contract - Work Order No. 1 Medical District (SC 8/30/2023, in Warranty Period) — Design | Bid | Construction
- - West Meridian Phase 1 Trunkline Repair Project (100% Design, Acquiring Easements (Pilot, Greenfield Env.) — Design | Bid | Construction
- - Annual Term Contract - Work Order No. 2, D Street Sewer Repair (Completed 10/2023, Warranty Period to 10/2023) — Design | Con.
- - Eastern Garden Pump Station Project (Conducting Survey, Geotech, NEPA, and Property Acq. for Design) — Design | Bid | Construction
- - Annual Term Rebid Contract - 2 Years (Bidding) — Design | Bid | Issue Work Orders for Construction/Complete all Work Order Projects by August, 2026
- - West Meridian Phase 2 Trunkline Repair Project (In Planning/CDBG Grant Awarded)
- - Industrial Park Gravity Sewer Repairs (In Planning)
- - Miscellaneous Projects (Focal Easements Clearing, B Street Eval, Newell/Old Hwy 45 Access Road, Trunkline CCTV/Scan/Cleaning Contract, Other)

Chronic SSO Advanced Remote Monitoring Program

- Develop Initial SSO List w/ proposed remote monitoring locations — 12 mo. | 5th
- EPA Review & Approval (3 months) — 21st
- Submit Updated Chronic SSO List w/ proposed remote monitoring locations — 18 mo. | 5th
- EPA Review & Approval (3 months) — 30th
- Installation of Remote Monitoring Equipment — 6 mo. | 30th
- Submit Updated Annual Chronic SSO Lists — 1, 2, 3, 4, 5
- EPA Review & Approval — 13th

| | | | | | | | |

City of Meridian Sewer Consent Decree Schedule (OBJECTIVE: Eliminate Sanitary Sewer Overflows, Achieve and Maintain Full Compliance with the CWA, the MAWPCL, and the NPDES Permits)

CD ASPECTS | **CD Tasks** | **Years 1 through 8 (of 19)**

Consent Decree Effective Date: August 6, 2019

Calendar Year: 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027

Fiscal Year/Current CITY GSA Contract (Grey): 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027

Month: Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M

Month No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92

Year No. 1 2 3 4 5 6 7

Wastewater Treatment Plants (WWTPs)

Sewer Treatment System Corrective Action Plan (STSCAP)

SWWTP

- Draft/Submit Plan — 12 mo. — 5th
- EPA Review & Approval — 3rd
- Design & Construction of STSCAP (42 Months from Approval) — On Hold: Awaiting TMDL Study Results
- STSCAP On-Hold, as per City Letter Issued to DOJ/EPA/MDEQ on June 15, 2022) — 15th
- - SWWTP O&M Assistance (Clear Water Solutions) — Various O&M
- - Miscellaneous SWWTP Plant Repairs and Improvements (Pumps, Blowers, Piping, Valves, Line Cleaning and Septage Station Plan, Grit Chamber Conveyance system Rehab, Power Monitor, EQ 4 Curtain, EQ 1 Dewatering/Sump Pump, etc.) — Various O&M
- - SWWTP Phase 1-A Rehab and Upgrades (Clarifier Equipment, Headworks, Belt Press, Coagulant System, SCADA) — Design | Bid | Award | Construction
- SWWTP EQ Basins 2, 3, and 4 Sludge Solids Removal/Dewatering/Off-Site Soil Amendment — Design | Bid | Award/Permits | Construction
- Copper Study (Agreed Order/Meridian Modification Request)
- - WET Testing/Report due Oct. 31, 2023 — 31st
- - Chemical Translator Sampling/Report due Oct. 31, 2023; Submitted to MDEQ — 31st
- - Biological Translator Study (not needed) — 31st
- - MDEQ performing Chemical Translator Study/Draft NPDES Permit with Rationale to submit to EPA — EPA
- - SWWTP Roof Project — Design | Bid | Construction

EWWTP

- EWWTP Upgrades (Headworks, PS, SBR Diffuser Sleeve and Air Valve Replacement) — Design | Bid | Construction
- EWWTP Upgrades (Disinfection System) — Design | Bid | Construction
- EWWTP Upgrades (PLC Software Update) — Aqua Aerobics Eq. Lead Time | Install

JOINT WWTPs

- MS Power Water Use Agreement Revision — Planning | M | M | M | Am. 5 (Final) | M

Capacity, Management , Operations and Maintenance Programs (CMOMs)

CMOM Programs

Draft/Submit Sewer Overflow Response Program (SORP) — 6 mo.

- EPA Review & Approval (3 months) — 14th
- Initiate and Implement SORP Training (Plan) — 14th
- Complete SORP SOPs (Plan) — 12 mo. — 14th
- Develop List of PS SSOs (Plan) — 18 mo. — 6th
- Develop List of potential PS SSOs in the event of Failure (Plan) — 18 mo. — 6th
- Continue Implementation and Annual Updates of SORP — 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Emergency Response Plan (ERP) — 12 mo. — 5th

- EPA Review & Approval (3 months) — 14th
- Procure Video Conferencing at PWD Conference Room (Plan) — 6 mo. — 14th
- Complete ERP SOP (Plan) — 12 mo. — 14th
- Initiate and Implement ERP Training (Plan) — 12 mo. — 14th
- All Program Elements Implemented/In Place — 18 mo. — 14th
- Continue Implementation and Annual Updates of ERP — 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Information Management Systems Program (IMS) — 24 mo. — 2nd

- EPA Review & Approval (3 months) — 15th
- Implement Geographic Information System (GIS) Map of the entire WCTS — 48 mo. — 5th
- EPA Review & Approval GIS Map (3 months) — 13th
- Continue Implementation and Annual Updates of IMS — 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Sewer Mapping Program (SMP) — 12 mo. — 5th

- EPA Review & Approval (3 months) — 14th
- Initiate and Implement electronic mapping of each Basin in the WCTS — 18 mo. — 14th
- Procure GIS Software (Plan) — 6 mo. — 14th
- Finalize Data Dictionary (Plan) — 9 mo. — 14th
- Develop System to include display of Streets/Addresses, Water Bodies, and Political Boundaries (Plan) — 12 mo. — 14th
- Develop Standardize Project Specs for City's Construction Projects (Plan) — 12 mo. — 14th | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up
- Develop Sewer Basin Layer (Plan) — 12 mo. — 14th
- Develop Sewer Mapping SOPs (Plan) — 18 mo. — 14th
- Create FOG establishment Layer (Plan) — 18 mo. — 14th
- Capture assets in the electronic database in Sewer Basin Prioritization Work — 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up
- Track KPIs/Include in Annual Reports (Plan) — 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up | 12 mo. — Up

12/31/2023

City of Meridian Sewer Consent Decree Schedule (OBJECTIVE: Eliminate Sanitary Sewer Overflows, Achieve and Maintain Full Compliance with the CWA, the MAWPCL, and the NPDES Permits)

CD ASPECTS

CD Tasks

Consent Decree Effective Date: August 6, 2019

Years 1 through 8 (of 19)

Consent Decree Year	1	2	3	4	5	6	7	8
Calendar Year	2019	2020	2021	2022	2023	2024	2025	2026	2027
Fiscal Year/Current CITY GSA Contract (Grey)	2019	2020	2021	2022	2023	2024	2025	2026	2027

Month: Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M Ap Ma J Ju Au S O N D Ja F M

Capacity, Management , Operations and Maintenance Programs (CMOMs)

Draft/Submit Gravity Sewer System Operations & Maintenance Program (GSSOMP)
- EPA Review & Approval (3 months) — 18 mo. | 5th | 3rd
- Initiate and Implement GSSOMP — 12 mo. | 3rd
- Develop City's Gravity Sewer Design Standards (Plan) — 6 mo. | 3rd
- Provide Location of FOCAL Easements (Plan) — 9 mo. | 3rd
- Initiate Training (Plan) — 12 mo. | 3rd
- Develop SOPS (Plan) — 12 mo. | 3rd
- All Program Elements Implemented/In Place (Upon Approval of Sewer Group Evaluation Plan) — 12 mo. | 3rd
- Track KPIs/Include in Annual Reports (Plan)

12/31/2023

Draft/Submit Pump Station & Force Main Operations & Maintenance Program (PSFMOMP)
- EPA Review & Approval (3 months) — 18 mo. | 3rd | 3rd
- Develop City's PS and FM Design Standards (Plan) — 6 mo. | 3rd
- Classify each PS by Risk: High, Medium or Low Risk (Plan) — 9 mo. | 3rd
- Initiate Program Training and Implementation Plan (Plan) — 12 mo. | 3rd
- Develop SOPS (Plan) — 12 mo. | 3rd
- Develop/Implement Remote Monitoring System (Plan) — Phased Approach
- - Pump Station Monitoring System Project - Design/Bid/Construction **Review TO this week for CA/RPR** — Design | Bid | Construction
- All Program Elements Implemented/In Place (Plan) — 12 | 3rd
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Fats, Oils & Grease Control Program (FOGP)
- EPA Review & Approval (3 months) — 24 mo. | 5th | 15th
- Perform FOG Characterization Study (Plan) — 12 mo. | 15th
- Establish Staffing (Technical and Legal) and Equipment Requirements (Plan) — 18 mo. | 15th
- Develop Design and Construction Standards (Plan) — 18 mo. | 15th
- Develop "Living" List of FOG generators (Include Process Descriptions and est. average daily FOG generation) (Plan) — 18 mo. | 15th
- Establish FOG Control Training Component (Plan) — 18 mo. | 15th
- Develop Construction and Compliance Inspection protocols (Plan) — 18 mo. | 15th
- Enactment of FOG Ordinance (CD) — 24 mo. | 20th
- Develop FOG control device BMPs (Plan) FMERG — 24 mo. | 15th
- Develop Compliance Assistance Program for FOG Generators (Plan) FMERG — 24 mo. | 15th
- Develop a public education/outreach component targeting non-commercial/residential customers (Plan) FMERG — 24 mo. | 15th
- All Program Elements Implemented/In Place (Plan) — 24 mo. | 15th
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Financing & Cost Analysis Program (FCAP)
- EPA Review & Approval (3 months) — 24 mo. | 5th | 15th
- Process and Schedule of Implementation to Perform Budget and Cost Analysis (CD) — 12 mo. | 15th
- Process and Schedule of Implementation to Evaluate CIP Financing Annually (CD) — 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th
- Process and Schedule of Implementation to Develop Life Cycle Costs Analysis Process as part of IMS Implementation (CD) — 48 mo. | 15th
- Process and Schedule of Implementation to Evaluate Customer Rates (Water/Sewer) Annually (CD) — 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th
- Establish FOG Control Program Fees as per FOG Control Program Implementation (Plan) — 24 mo. | 15th
- All Program Elements Implemented/In Place (CD) — 12 mo. | 15th
- *** Update Significant Financial Planning Elements as part of City's Annual Report (Plan) — 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th | 12 mo. | 15th
- Track KPIs/Include in Annual Reports (Plan)

Draft/Submit Legal Support Program (LSP)
- EPA Review & Approval (3 months) — 18 mo. | 2nd | 3rd
- Develop amended Water and Sewer Ordinance (Plan) — 6 mo. | 3rd
- Adoption of amended Water and Sewer Ordinance by City Council (Plan) — 12 mo. | 3rd | 20th
- PLERG
- All Program Elements Implemented/In Place (CD) — 12 mo. | 3rd | 12 mo. | 3rd | 12 mo. | 3rd | 12 mo. | 3rd
- Track KPIs/Include in Annual Reports (Plan)

Month No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92

Year No. 1 2 3 4 5 6 7