

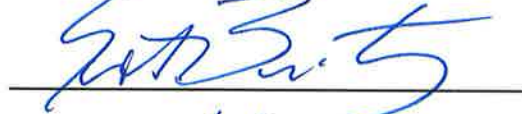


SEWER SYSTEM MANAGEMENT PLAN AUDIT

PREPARED BY

Reviewed and Approved By:

Scott Buenting, Interim Public Works Director



Date: 5/3/23

Jeff Cook, Wastewater Collections Superintendent



Date: 5-3-23



3230 Arena Blvd Suite #245,
Sacramento, CA 95834
916.606.5275
FischerCompliance.com

Jeff Cook
Collection System Superintendent
City of Antioch
Public Works Department
1201 W 4th Street
Antioch, CA 94509-1005

March 31, 2023

Dear Jeff,

We are pleased to present the 2023 Sewer System Management Plan (SSMP) Audit for the City of Antioch (Attachment 1).

The SSMP Audit revealed the City is in full compliance with Provision D.13(x) of the SSS WDRs. The Audit also shed light on many City successful work programs in place. When comparing the City spill performance metrics with other collection systems in the Central Valley Regional Water Board area and throughout the State, the City performs near the top.

Detailed document reviews incorporating USEPA/Water Board inspection standards, an onsite "simulated" compliance inspection, and interviews with management and field staff were relied on for generating final findings and best practice recommendations in the report.

We look forward to supporting the City with its ongoing training, work program/process improvements, and implementation of the SSMP Audit findings to comply with both the existing and new anticipated Sanitary Sewer Systems Waste Discharge Requirements (SSS WDRs) Order.

Sincerely,

James Fischer, P.E.
Principal, Credentialed U.S. EPA NPDES Compliance Inspector

Attachment 1 (2023 Sewer System Management Plan Audit)

CERTIFICATE

OF COMPLETION

City of Antioch

**Sanitary Sewer Systems Waste Discharge Requirements
SSMP AUDIT (2018-2023)**

- *Regulatory review, agency expectations and compliance best practices.*
- *Regional Water Quality Control Board inspector expectations.*
- *Completion of State Water Board Pre-Inspection Questionnaire*
- *Completion of Compliance Evaluation Inspection (CEI).*
- *Findings/Best Practice Recommendations for further improving agency program effectiveness, compliance, and resilience.*



James Fischer

James Fischer, PE (NPDES Compliance Inspector)
03/31/2023

Table of Contents

Table of Contents

1.0 EXECUTIVE SUMMARY	1-1
1.1 Audit Goals, Description, and Procedures.....	1-2
1.2 Audit Findings.....	1-3
2.0 REGULATORY BACKGROUND.....	2-1
2.1 SWRCB Requirement.....	2-1
2.2 U.S. Environmental Protection City Sewage Spill Initiative.....	2-1
3.0 COLLECTION SYSTEM INFORMATION	3-1
4.0 SPILL PERFORMANCE, TRENDS AND BENCHMARKS	4-1
4.1 Spills during Audit Period (3/31/2018 – 3/31/2023)	4-2
5.0 AUDIT APPROACH AND PROCEDURES.....	5-1
5.1 2018-2023 AUDIT FINDINGS.....	5-2
6.0 AUDIT CONCLUSIONS	6-1

List of Tables

Table 1-1: Summary of Key SSS WDRs Requirements for SSMP Audits	1-1
Table 1-2: Quick reference guide for SSMP Audit findings.....	1-3
Table 5-1: List of key information/data sources relied on for SSMP Audit	5-1
Table 5-2: Summary of 2023 Audit Findings (Compliance)	5-2
Table 5-3: Summary of SSMP Audit Best Practices Recommendations	5-3

List of Figures

Figure 3-1: City of Antioch sewer system map boundary area.....	3-1
Figure 3-2: CIWQS party record information for City.....	3-2
Figure 3-3: Historic enforcement data for agencies in Region 5S since 2010	3-3
Figure 4-1: Definition of Spill Categories	4-1
Figure 4-2: City Spill data “dashboard” spill information during SSMP Audit period (2018-2023)	4-2
Figure 4-3: City Spill data “dashboard” spill information during SSMP Audit period (2018-2023)	4-3
Figure 5-1: Summary of Steps of Standard Inspection Procedures	5-1

List of Abbreviations

Cal-OSHA	California Office of Occupational Safety and Health Administration
CIP	Capital Improvement Project
CIWQS	California Integrated Water Quality System
FOG	Fats, Oil and Grease
LRO	Legally Responsible Official
MGD	Million gallons per day
OERP	Overflow Emergency Response Plan
OES	State Office of Emergency Services
RWQCB	Regional Water Quality Control Board, Central Valley
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSO WDR	Sanitary Sewer Overflow Waste Discharge Requirements
SWRCB	State Water Resources Control Board
WDR	General Waste Discharge Requirements

List of Appendices

APPENDIX 1 – Compliance Evaluation Inspection Report	i
APPENDIX 2 – Detailed Audit Findings and Best Practice Recommendations.....	ii
APPENDIX 3 – List of all Spills Certified by City (2018 to present)	iii
APPENDIX 4 – Spill Performance Data and Other Metrics	iv

1.0 EXECUTIVE SUMMARY

To comply with Sanitary Sewer Systems Waste Discharge Requirements¹ (hereafter, SSS WDRs) mandated by the California State Water Resources Control Board for sewer systems, this report summarizes the Sewer System Management Plan (SSMP) Audit conducted by [Fischer Compliance LLC](#) for the City of Antioch (City) from March 2018 through March 2023.



This Audit report meets and exceeds the minimum requirements specified in the SSS WDRs.

The SSS WDRs are the strictest regulations in the country for sanitary sewer collection systems requiring a proactive approach for operations, maintenance, and management to reduce or eliminate sanitary sewer overflows (SSOs). Provision D.13(x) of the SSS WDRs requires periodic Audits at least every two years measuring SSMP effectiveness and compliance with the regulations. To adequately evaluate SSMP effectiveness and compliance, information required under Provision D.13(ix) was also utilized to support Audit findings.

Table 1-1: Summary of Key SSS WDRs Requirements for SSMP Audits

Key SSS WDRs Requirements	
Provision D.13(x)	“SSMP Program Audits - As part of the SSMP, the City shall conduct periodic internal Audits, appropriate to the size of the system and the number of SSOs. At a minimum, these SSMP Audits must occur every two years and a report must be prepared and kept on file. This SSMP Audit shall focus on evaluating the effectiveness of the SSMP and the City compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.”
Provision D.13(ix)	<p>“Monitoring, Measurement, and Program Modifications”</p> <ul style="list-style-type: none"> a) <i>Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.</i> b) <i>Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.</i> c) <i>Assess the success of the preventative maintenance program.</i> d) <i>Update program elements, as appropriate, based on monitoring or performance evaluations; and</i> e) <i>Identify and illustrate SSO trends, including frequency, location, and volume.</i>

¹ Order Nos. 2006-003-DWQ and 2013-0058-EXEC available for download at: https://www.waterboards.ca.gov/water_issues/programs/sso/#general

1.1 Audit Goals, Description, and Procedures

The City current SSMP outlines the site-specific elements for management, maintenance, and operations of the City sanitary sewer collection system to protect public health and the environment through minimizing sanitary sewer overflows (SSOs) to comply with the SSS WDRs. The purpose of the Audit is to review the SSMP effectiveness and compliance including related work programs to determine the City level of compliance with the SSS WDRs. To ensure objective findings and outcomes, the Audit focused on review of the following critical elements and information provided by the City:

- Pre-Inspection desktop review.
- Pre-Inspection conference.
- Compliance Evaluation Inspection including interviews and asset inspections incorporating standards and inspection procedures utilized by U.S. EPA and the Water Boards² (see APPENDIX 1).
- Completed Water Board “Pre-Inspection Questionnaire.”
- Current City SSMP.
- Previous City SSMP Audit findings.
- Evidence and documentation of SSMP and Amended Monitoring and Reporting Program (MRP) implementation.

² See <https://www.epa.gov/compliance/compliance-inspection-manual-national-pollutant-discharge-elimination-system>

1.2 Audit Findings



The completion of the Audit revealed the City is in full compliance with Provision D.13(x) of the SSS WDRs.

A quick reference guide for all Audit findings is presented in Table 1.2, below.

Table 1-2: Quick reference guide for SSMP Audit findings

Audit Findings Quick Reference				
Element	Compliant?	Effective?	Quick Reference	
1.0 Goals	Yes	Yes	Appendix 2 (page 4)	
2.0 Organization	Yes	Yes	Appendix 2 (page 17)	
3.0 Legal	Yes	Yes	Appendix 2 (page 10)	
4.0 O/M	Yes	Yes	Appendix 2 (page 12)	
5.0 Design	Yes	Yes	Appendix 2 (page 15)	
6.0 OERP	Yes	Yes	Appendix 2 (page 17)	
7.0 FOG	Yes	Yes	Appendix 2 (page 20)	
8.0 SECAP	Yes	Yes	Appendix 2 (page 22)	
9.0 Monitoring	Yes	Yes	Appendix 2 (page 25)	
10.0 Audits	Yes	Yes	Appendix 2 (page 27)	
11.0 Communication	Yes	Yes	Appendix 2 (page 29)	
12.0 SSMP Implementation	Yes	Yes	Appendix 2 (page 31)	
13.0 Training/SOPs	Yes	Yes	Appendix 2 (page 33)	
14.0 Spill Violations	Yes	Yes	Appendix 2 (page 35)	
15.0 Spill Notification	Yes	Yes	Appendix 2 (page 38)	
16.0 Spill Reporting	Yes	Yes	Appendix 2 (page 41)	
17.0 Spill Monitoring	Yes	Yes	Appendix 2 (page 43)	

2.0 REGULATORY BACKGROUND

This section identifies the goals that the City has established for its SSMP. The summarized requirements for the goals element of the SSMP:

2.1 SWRCB Requirement

The California Water Boards is charged with preserving, enhancing, and restoring the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses of water quality. The Water Boards utilize the SSS WDRs as the primary regulatory tool for regulating publicly owned sewer systems part of its [Sanitary Sewer Overflow Reduction Program \(SSORP\)](#) mandated by the California Legislature. For addressing noncompliance, the [State Water Board's Water Quality Enforcement Policy](#) is used by the state and regional water board staff as necessary to address noncompliance.

SSMP Audits play a KEY role in the Water Board statewide prioritizations for compliance inspections, audits, and individual enforcement actions for addressing noncompliance. Historic examples of compliance inspections, audits, and enforcement actions are available on the [SSORP library](#). "Self-reporting" data including individual spill reports certified by the City covered under the SSS WDRs is hosted in the [California Integrated Water Quality Management System \(CIWQS\)](#) online. Additional [detailed compliance and enforcement reports](#) are also available online in addition to the individual [SSO data "flat files."](#)

2.2 U.S. Environmental Protection City Sewage Spill Initiative

The United States Environmental Protection Agency (U.S. EPA) is charged with enforcing the [federal Clean Water Act](#). Since California has taken the lead with implementation of its own regulations for addressing SSOs, the U.S. EPA relies on the SSS WDRs as the primary tool for evaluating compliance with the federal Clean Water Act. Historic records for collection system compliance inspections, compliance and enforcement cases and other information can be found using U.S. EPA's [Enforcement and Compliance History Online \(ECHO\)](#):

SSMP Audits play significant importance to U.S. EPA staff with implementation of a [National Enforcement Initiative](#) for collection systems to keep raw sewage out of the nation's waters.

3.0 COLLECTION SYSTEM INFORMATION

The City owns and operates sanitary sewer collection system (collection system) serving a population of approximately 103,078 and includes a total of 41,686 sewer connections. The collection system consists of 311.5 miles of gravity sewer mains, 177.25 miles of sewer service laterals, 7 miles of pressure (“force main”) sewers, and 1 sewage lift station.

The City is regulated by the State Water Board (Order Nos. 2006-003-DWQ its accompanying Amended Monitoring and Reporting Program, Order No. 2013-0058-EXEC). For more specific detailed information about City operations, management, and compliance, refer to **APPENDIX 1**. Figure 3-1 below provides an overview of the current sewer service area collection system map.

Figure 3-1: City of Antioch sewer system map boundary area.

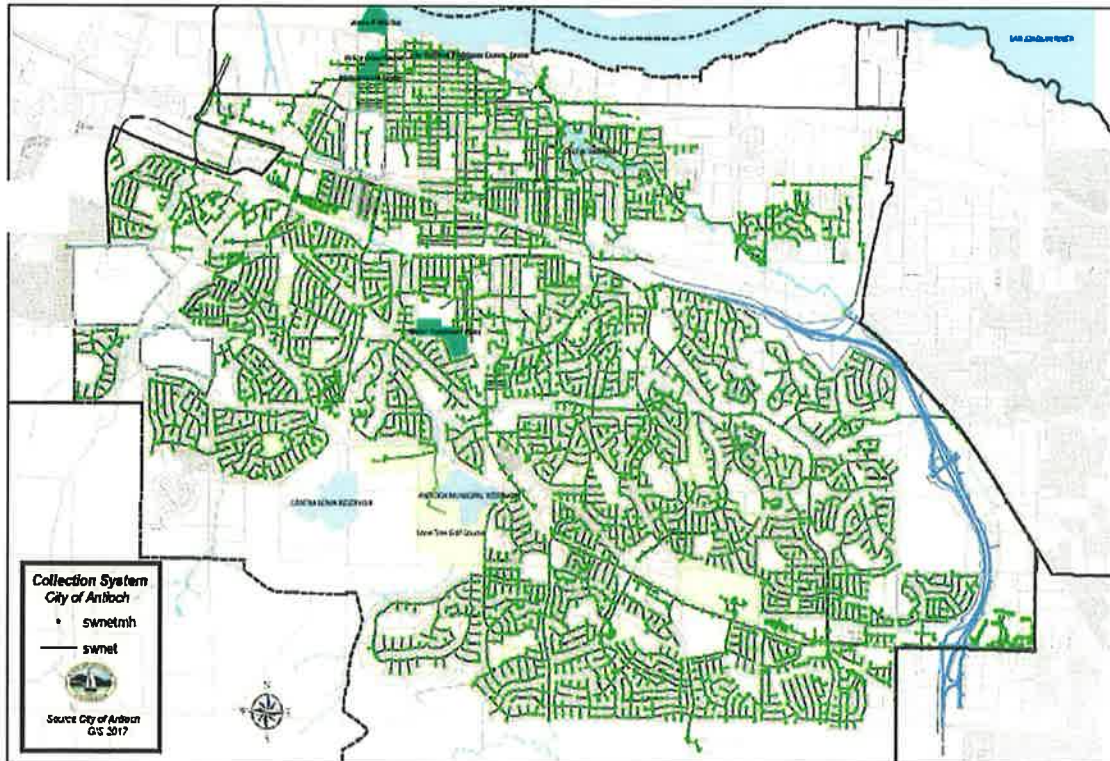


Figure 3.2 below provides an overview of current CIWQS party record information for City.

Figure 3-2: CIWQS party record information for City

Facility At-A-Glance Report

[VIEW PRINTER FRIENDLY VERSION]

[EXPORT THIS REPORT TO EXCEL]

SEARCH CRITERIA:

[REFINE SEARCH]

[NEW SEARCH]

[GLOSSARY]

DRILLDOWN HISTORY:

[BACK TO FACILITY LIST]

Place ID 631493

Region	Place ID	Place Name	General Information Place Type	Place Address	Place County
5S	631493	City Of Antioch CS	Collection_System	Antioch, CA, 94531	Contra Costa

Related Parties

Party	Party Type	Party Name	Role	Classification	Relationship Start Date	Relationship End Date
528060	Person	Jeffrey Don Cook	Is Onsite Manager For		02/22/2022	
630147	Person	Gonzalo Ramos	Is Onsite Manager For		01/10/2022	
621933	Person	Gage Dunwell	Is A Data Submitter For		02/18/2021	12/28/2021
621934	Person	Christine Reposo	Is A Data Submitter For		02/18/2021	
559246	Person	Toby Beach	Is A Data Submitter For		10/22/2019	10/12/2020
580820	Person	Jon Blank	Is Onsite Manager For		07/18/2018	10/22/2019
573478	Person	John Adams	Is Onsite Manager For		01/29/2018	11/10/2020
569410	Person	Kurt DeJavier	Is A Data Submitter For		11/07/2017	02/20/2019
559253	Person	Tyler Bartholomew	Is A Data Submitter For		09/12/2016	01/11/2018
559246	Person	Toby Beach	Is A Data Submitter For		09/12/2016	11/07/2017
501353	Person	Ron Bernal	Is Onsite Manager For		02/01/2016	04/05/2017
554042	Person	Alexander Ortega	Is A Data Submitter For		12/22/2015	09/12/2016
528060	Person	Jeffrey Don Cook	Is Onsite Manager For		10/08/2014	01/22/2022
541698	Person	Sonja Johnson	Is A Data Submitter For		07/09/2013	09/12/2016
533321	Person	Mike Bechtoldt	Is Onsite Manager For		04/23/2012	11/10/2020
533320	Person	Tim Coley	Is Onsite Manager For		04/23/2012	04/05/2017
528802	Person	Brandon Chalk	Is Onsite Manager For		11/03/2011	02/26/2018
526142	Person	Cleveland Porter	Is Onsite Manager For		03/04/2011	04/05/2017
440571	Person	Tanya Erick	Is A Data Submitter For		10/10/2007	07/09/2013
395717	Person	Michelle Walker	Is A Data Submitter For		08/24/2007	02/20/2019
395503	Person	Roger Clarke	Is Onsite Manager For		08/23/2007	09/30/2011
370379	Person	Tom Sains	Is Onsite Manager For		03/22/2007	04/23/2012
369848	Person	Karen Rios	Is A Data Submitter For		03/20/2007	08/02/2012
369301	Person	Phil Barlow	Is A Data Submitter For		03/15/2007	04/23/2012
366799	Person	Pat Scull	Is Onsite Manager For		03/12/2007	03/09/2009
168540	Organization	Antioch City	Owner	City Agency	04/05/2006	
123248	Person	Phillip L Harrington	Is Onsite Manager For		04/05/2006	04/23/2012

Total Related Parties: 27

Regulatory Measures

Reg Measure ID	Reg Measure Type	Region	Program	Order No.	WDID	Effective Date	Expiration Date	Status	Amended?
301611	Enrollee - WDR	5S	SSOMUNILRG	2008-0003-DWQ	5SSO10890	03/12/2007		Active	N

Total Reg Measures: 1

Violations

Violation ID	Occurred Date	Violation Type	(-) Violation Description	Corrective Action	Status	Classification	Source
Report displays most recent five years of violations. Refer to the Interactive Violation Report for more data.							

Total Violations: 0

Priority Violations: 0

*Click the "(-) Violation Description" link to expand and contract the violation description.

*As of 5/20/2010, the Water Board's Enforcement Policy requires that all violations be classified as 1, 2 or 3, with class 1 being the highest. Prior to this, violations were simply classified as Yes or No. If a 123 classification has been assigned to a violation that occurred before this date, that classification data will be displayed instead of the Yes/No data.

Figure 3-4 displays the CIWQS “Interactive Violations Report” providing historic enforcement action information since 2010 for collection system agencies within the Central Valley Regional Water Quality Control Board (Region 5, Sacramento (S)) in the State Water Board online CIWQS public database³.

Figure 3-1: Historic enforcement data for agencies in Region 5S since 2010

DRILLDOWN HISTORY: [GO BACK TO SUMMARY] [GO BACK TO REGION DRILLDOWN]					
REGION: 5S - Enforcements					
FACILITY: All - Formal Enforcements					
<u>Enforcement Type</u>	<u>Effective Date</u>	<u>Status</u>	<u>Violation Type</u>	<u>Violation Occurrence Date</u>	<u>Violation ID</u>
13267 Letter	2017-04-12 00:00:00.0	Historical	Sanitary Sewer Overflow/Spill/	2017-01-10 00:00:00.0	1017871
			Sanitary Sewer Overflow/Spill/	2017-02-07 00:00:00.0	1019588
			Sanitary Sewer Overflow/Spill/	2017-02-26 00:00:00.0	1021773
			Sanitary Sewer Overflow/Spill/	2017-03-03 00:00:00.0	1021774
			Sanitary Sewer Overflow/Spill/	2017-02-04 00:00:00.0	1020574
Admin Civil Liability	2015-02-27 00:00:00.0	Historical	Sanitary Sewer Overflow/Spill/	2017-01-11 00:00:00.0	1017880
			Sanitary Sewer Overflow/Spill/	2012-06-01 00:00:00.0	931809
			Sanitary Sewer Overflow/Spill/	2013-05-10 00:00:00.0	947815
			Order Conditions	2016-01-26 00:00:00.0	1003613
			Order Conditions	2016-01-26 00:00:00.0	1003615
Admin Civil Liability	2012-12-04 00:00:00.0	Historical	Deficient Reporting	2016-01-26 00:00:00.0	1003618
			Deficient Reporting	2016-01-26 00:00:00.0	1003619
			Sanitary Sewer Overflow/Spill/	2019-07-24 00:00:00.0	1061691
			Sanitary Sewer Overflow/Spill/	2011-11-09 00:00:00.0	912315
			Sanitary Sewer Overflow/Spill/	2012-03-16 00:00:00.0	921133
Admin Civil Liability	2017-03-20 00:00:00.0	Historical	Sanitary Sewer Overflow/Spill/	2014-01-03 00:00:00.0	961084
			Sanitary Sewer Overflow/Spill/	2012-11-04 00:00:00.0	938854
			Sanitary Sewer Overflow/Spill/	2012-12-12 00:00:00.0	940655
			Order Conditions	2016-01-26 00:00:00.0	1003616
			Sanitary Sewer Overflow/Spill/	2012-03-16 00:00:00.0	921131
Admin Civil Liability	2017-03-20 00:00:00.0	Historical	Sanitary Sewer Overflow/Spill/	2011-10-18 00:00:00.0	911147
			Sanitary Sewer Overflow/Spill/	2012-03-19 00:00:00.0	921151
			Deficient Reporting	2016-01-26 00:00:00.0	1003617
			Sanitary Sewer Overflow/Spill/	2012-12-16 00:00:00.0	940719
			Sanitary Sewer Overflow/Spill/	2012-12-02 00:00:00.0	940656
Admin Civil Liability	2017-03-20 00:00:00.0	Historical	Order Conditions	2016-01-26 00:00:00.0	1003614

³See

https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/ciwqsReportEnforcement.jsp?OWASP_CSRFTOKEN=SWNQ-87XE-YFI8-76QJ-BLTK-LQ6M-EDDI-CLCV

4.0 SPILL PERFORMANCE, TRENDS AND BENCHMARKS

This section discusses provides information for showcasing City spill performance including trends and benchmarking information to allow comparing with other collection systems in the region and state. For background, information obtained from the Amended MRP (Order No. 2013-0058-EXEC⁴) provides definitions of the different spill (SSO) categories shown in Figure 4-1, below.

Figure 4-1: Definition of Spill Categories

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of <u>any volume</u> resulting from an enrollee's sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of <u>1,000 gallons or greater</u> resulting from an enrollee's sanitary sewer system failure or flow <u>condition that do not</u> reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater <u>resulting</u> from blockages or other problems <u>within a privately owned sewer lateral</u> connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be <u>voluntarily</u> reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

⁴ See https://www.waterboards.ca.gov/water_issues/programs/ssso/docs/sanitary-sewer-systems_monitoring-and-reporting_accessible.pdf

4.1 Spills during Audit Period (3/31/2018 – 3/31/2023)

Figure 4-2 below represents a dashboard of City spill during the Audit period (2018-2023). More detailed spill performance reports, visualizations and comparison data are presented in **Appendix 4**.

Figure 4-2: City Spill data “dashboard” spill information during SSMP Audit period (2018-2023)

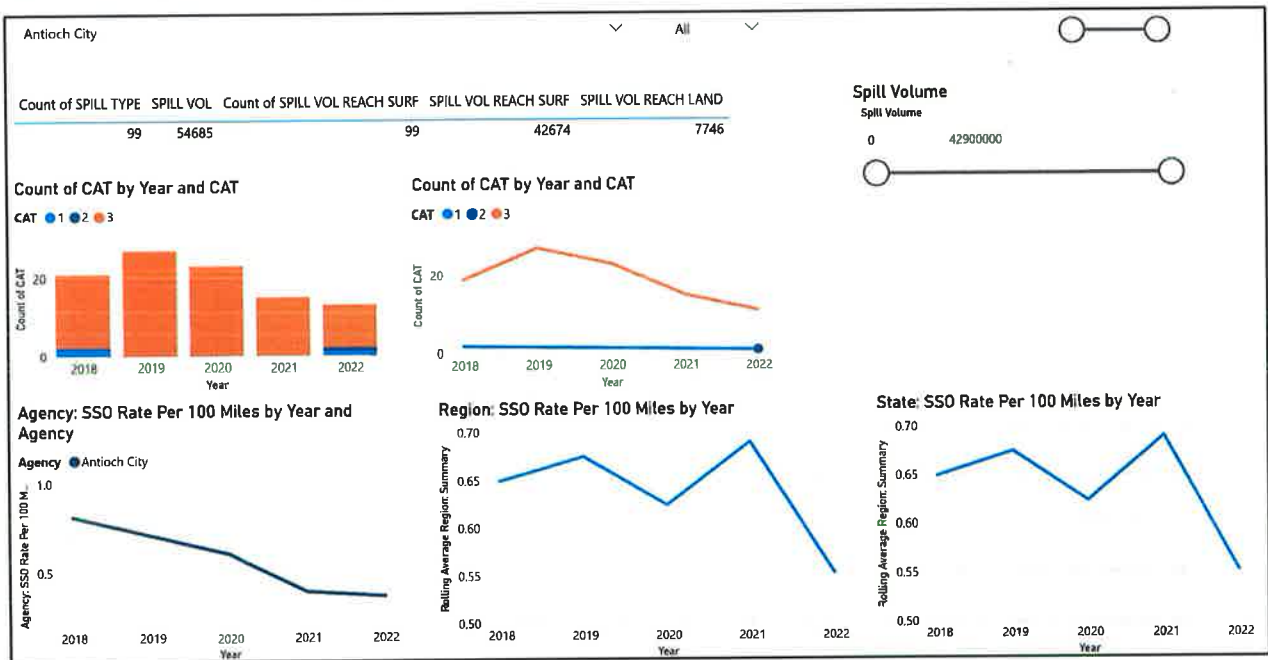


Figure 4-3 below represents a dashboard of City spill during the Audit period (2018-2023)

Figure 4-3: City Spill data “dashboard” spill information during SSMP Audit period (2018-2023)

General Information

Region	Place ID	Place Name	CS Category	Place Address	Place County
5S	631493	City Of Antioch CS	Municipal (Public)	Antioch, CA, 94531	Contra Costa

Collection System Spill Summary

Operational Indices: City Of Antioch CS

Spill Rate Index (spills/100mi/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
City Of Antioch CS	0.12	0.11	0.0	0.12	0.0	0.0	1.02	9.79	0.0
State Municipal (Public) Average	<u>1.96</u>	<u>4.44</u>	<u>1.05</u>	<u>0.86</u>	<u>0.31</u>	<u>1.43</u>	<u>2.93</u>	<u>16.33</u>	<u>0.68</u>
Region Municipal Average	<u>2.26</u>	<u>7.87</u>	<u>2.44</u>	<u>1.25</u>	<u>0.11</u>	<u>2.66</u>	<u>3.49</u>	<u>28.56</u>	<u>0.68</u>

Net Volume Spills Index (gallons/1000 Capita/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
City Of Antioch CS	12.45	0.06	0.0	0.0	0.0	0.0	1.12	0.01	0.0
State Municipal (Public) Average	<u>3214.38</u>	<u>102.07</u>	<u>1578.31</u>	<u>376.66</u>	<u>2.4</u>	<u>1074.19</u>	<u>28.51</u>	<u>2.41</u>	<u>11.34</u>
Region Municipal Average	<u>10139.76</u>	<u>195.87</u>	<u>5471.0</u>	<u>700.25</u>	<u>0.11</u>	<u>2662.09</u>	<u>50.35</u>	<u>3.46</u>	<u>8.95</u>

5.0 AUDIT APPROACH AND PROCEDURES

This section discusses the Audit approach undertaken which incorporates inspection standards utilized and recommended by the U.S. Environmental Protection Agency (U.S. EPA) for field personnel conducting inspections under the Clean Water Act. These standards are also utilized by California Water Board inspectors with evaluating SSS WDRs compliance. This approach benefits the City by undertaking an objective evaluation utilizing a credential inspector for added compliance resilience to help the City improve effectiveness and prepare for inspections by regulators and others.

Figure 5-1 below illustrates a summary of the major SSMP Audit steps utilized for the City SSMP Audit.

Figure 5-1: Summary of Steps of Standard Inspection Procedures



A list of key information and data sources relied on for the SSMP Audit are presented in Table 5-2 below.

Table 5-1: List of key information/data sources relied on for SSMP Audit

Audit Elements		
		Key Information/Data Sources
1.0	Goals	City SSMP, spill data, implementation data
2.0	Organization	City SSMP, spill data, implementation data
3.0	Legal	City SSMP, spill data, implementation data
4.0	O/M	City SSMP, spill data, implementation/work program data
5.0	Design	City SSMP, spill data, standards
6.0	OERP	City SSMP, spill data, OERP implementation/training data
7.0	FOG	City SSMP, spill data, implementation/work program data
8.0	SECAP	City SSMP, spill data, implementation/work program data
9.0	Measurement	City SSMP, spill data, O/M performance data
10.0	Audits	City SSMP/Audits, spill data, implementation of audit findings

Audit Elements		
Key Information/Data Sources		
11.0	Communication	City SSMP, spill data, implementation data
12.0	SSMP Implementation	City SSMP, spill data, implementation data
13.0	Training/SOPs	City SSMP, spill data, OERP implementation/training data
14.0	Spill Violations	City SSMP, spill/compliance data
15.0	Spill Notification	City SSMP, spill/compliance data
16.0	Spill Reporting	City SSMP, spill/compliance data
17.0	Spill Monitoring	City SSMP, spill/compliance data

5.1 2018-2023 AUDIT FINDINGS

This section provides a summary of key compliance findings and best practices observed which are presented in Table 5-2, below. For more detailed findings and best practice recommendations, see **APPENDIX 1**.

Table 5-1: Summary of 2023 Audit Findings (Compliance)

Audit Findings (Compliance)				
Audit Elements		V? ⁵	AOC? ⁶	Example effective practices observed
1.0	Goals	NO	NO	Comprehensive spill reduction efforts in place.
2.0	Organization	NO	NO	Multiple disciplinary involvement in SSMP update and implementation.
3.0	Legal	NO	NO	Extensive ordinances and authority defined.
4.0	O/M	NO	YES	Extensive management/operator understanding of operations, maintenance; quality SSMP implementation.
5.0	Design	NO	NO	Comprehensive design standards and specifications.
6.0	OERP	NO	YES	Substantial emergency response/equipment inventory.
7.0	FOG	NO	NO	Active FOG reduction program.
8.0	SECAP	NO	NO	Significant dedication to capital spending.
9.0	Monitoring	NO	NO	Extensively tracking ongoing spill reduction performance.

⁵ V (Violation)

⁶ AOC (Area of Concern)

Audit Findings (Compliance)				
Audit Elements		V? ⁵	AOC? ⁶	Example effective practices observed
10.0	Audits	YES	NO	Previous formal internal SSMP Audit not conducted; however, inspection revealed the City implements its SSMP with effective key spill reduction work programs in place.
11.0	Communication	NO	NO	Some periodic training events for improving field staff skills and competency.
12.0	SSMP Implementation	NO	NO	Implementation and utilization of SSMP documentation.
13.0	Training/SOPs	NO	NO	Commitments to ongoing training.
14.0	Spill Violations	YES	NO	Quality spill reduction practices in place.
15.0	Spill Notification	NO	NO	Timely compliance.
16.0	Spill Reporting	NO	NO	Timely compliance.
17.0	Spill Monitoring	NO	NO	Operators demonstrate understanding of monitoring requirements for large spills.

Table 5-2: Summary of SSMP Audit Best Practices Recommendations

2023 SSMP Audit Best Practices Recommendations				
Element ⁷		Effectiveness (E)		Resilience (R)
1.0	Goals	<input type="checkbox"/> New Key Performance Indicators (KPIs); annual review of KPIs/work programs.		<input type="checkbox"/> Track ongoing SSMP changes. <input type="checkbox"/> Complete SSMP change logs <input type="checkbox"/> Annual review of Pre-Inspection questionnaire. <input type="checkbox"/> Reorganize SSMP during next update to further highlight key work programs, improvements, and accomplishments for managing goals and objectives).
2.0	Organization	<input type="checkbox"/> New KPIs/annual review.		<input type="checkbox"/> Repeat recommendations (see Goals) <input type="checkbox"/> Other recommendations
3.0	Legal	<input type="checkbox"/> New KPIs/annual review.		<input type="checkbox"/> Repeat recommendations (see element 1) <input type="checkbox"/> Other recommendations
4.0	O/M	<input type="checkbox"/> New KPIs/annual review. <input type="checkbox"/> Improvements to CCTV Program and critical spare parts.		<input type="checkbox"/> Repeat recommendations (see element 1) <input type="checkbox"/> Other recommendations

⁷ For more details about sections 12 to 17, please see the 2022 SSMP Audit Report.

2023 SSMP Audit Best Practices Recommendations			
Element ⁷	Effectiveness (E)	Resilience (R)	
	<input type="checkbox"/> Annual review of work programs.		
5.0 Design	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
6.0 OERP	<input type="checkbox"/> New KPIs/annual review; update OERP, SOPs, training, and field data collection.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
7.0 FOG	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
8.0 SECAP	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
9.0 Monitoring	<input type="checkbox"/> New KPIs/annual review. <input type="checkbox"/> Establish new KPI(s) for training program.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
10.0 Audits	<input type="checkbox"/> New KPIs/annual review. <input type="checkbox"/> Improve tracking of audit timings. <input type="checkbox"/> Add effectiveness evaluations for all future SSMP Audits.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
11.0 Communication	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
12.0 SSMP Implementation	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
13.0 Training/SOPs	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
14.0 Spill Violations	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
15.0 Spill Notification	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations
16.0 Spill Reporting	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1)	<input type="checkbox"/> Other recommendations

2023 SSMP Audit Best Practices Recommendations		
Element ⁷	Effectiveness (E)	Resilience (R)
17.0 Spill Monitoring	<input type="checkbox"/> New KPIs/annual review.	<input type="checkbox"/> Repeat recommendations (see element 1) <input type="checkbox"/> Other recommendations

6.0 AUDIT CONCLUSIONS

The SSMP Audit shed light on many existing successful work programs in place by the City of Antioch management. When comparing the City spill metrics performance with other collection systems in the Central Valley Regional Water Board area, the City performs near the top. Detailed document review incorporating review of the Water Board's Pre-Inspection Questionnaire, meetings, onsite inspection, and field staff interviews were utilized evaluating the City's ongoing spill reduction efforts and SSMP compliance effectiveness.

The Audit further revealed the City's dedication to continuous improvement. Successful staff involvement with the SSMP implementation was observed across most of the elements evaluated in the Audit.

Final Audit findings, best practice recommendations and compliance rankings provide an advantage to help the City further reflect on ways for improving SSMP effectiveness. Additional Key performance indicators (KPIs) for added value in measuring SSMP effectiveness, improvements to critical collection system spare parts, field spill data collection, and training are some examples of the key findings derived from the Audit which should be evaluated City management for consideration in the SSMP update due within the next few years.

The City maintains a robust spill reduction program supported by key evidence presented in the Audit. Audit findings also provide the City with added compliance resilience and preparedness for inspections regulatory inspections by the California Water Boards or U.S. EPA.

APPENDIX 1 – Compliance Evaluation Inspection Report



COMPLIANCE EVALUATION INSPECTION (CEI)

PREPARED BY



COMPLIANCE EVALUATION INSPECTION (CEI) REPORT

1.	Pre-Inspection Desktop Review	4
2.	Pre-Inspection Conference	4
3.	Compliance Evaluation Inspection	5
4.	Inspection Findings.....	13
5.	List of Attachments.....	16

Introduction

Fischer Compliance LLC with assistance from Sam Rose Consulting conducted a Compliance Evaluation inspection (CEI, hereafter inspection)² to evaluate the AGENCY (Agency) Sewer System Management Plan (SSMP) effectiveness and compliance with the SSS WDRs³. The CEI serves as the primary tool for developing the specific compliance outputs for the SSMP Audit including findings and best practice recommendations. The core elements of the CEI including facility information are summarized below.

FACILITY INSPECTED: CITY OF ANTOICH 1201 West 4 th Street Antioch, CA 94509	INSPECTED BY: James Fischer, P.E. NPDES Compliance Inspector ¹ Principal, FISCHER COMPLIANCE, LLC <i>James Fischer</i> Date: 3/9/2023	
SANITARY SEWER COLLECTION SYSTEM (WASTEWATER)	Waste Discharge ID (WDID): #5SSO10890	
Water Quality Order(s)	2006-003-DWQ, 2013-0058-EXEC	
Regional Water Boards	5S	
County	Contra Costa	
Population/Area	111,600	
Miles of Sewers (gravity)	311.5	
Miles of Sewers (service laterals)	177.25	
Miles of Sewers (force mains)	7	
Sewer Connections (#)	31,453	
Lift Stations (#)	1	
Final wastewater disposal	City of Antioch	
FACILITY REPRESENTATIVE	TITLE	CONTACT
Jeff Cook	Collection System Manager	(925) 779-6962
Christine Raposo	Public Works Technician	(925) 779-6822

¹ Credentialed, U.S EPA (2017)

² See <https://www.epa.gov/compliance/compliance-compliance-inspection-manual-national-pollutant-discharge-elimination-system>

³ See https://www.waterboards.ca.gov/water_issues/programs/ssso/docs/2006-003-dwq-sanitary-sewer-systems-waste-discharge-requirements_remediated.pdf

1. Pre-Inspection Desktop Review

To prepare for the compliance inspection, a desktop document review was conducted. The following key information was reviewed, summarized below.

- CIWQS⁴ Sanitary Sewer Overflow (SSO) reports certified by City Sanitary City in the online SSO database.
- Amended MRP Notification and reporting compliance for Category 1, 2 and 3 SSOs.
- Review of Regional Board historic enforcement actions and details.
- Review of compliance items checked by Regional Board compliance inspectors.
- Review answers in completed CIWQS annual Collection System Questionnaire.
- Review answers in completed State Water Board Pre-Inspection Questionnaire”⁵ (**Attachment 1**).
- Previous City SSMP Audit Findings (see **Attachment 2**)

2. Pre-Inspection Conference

On 2/21/2023, an online Pre-Inspection Conference interview was conducted with City management to prepare for the onsite compliance inspection. The conference included evaluation of existing City programs, SSMP effectiveness, compliance, and “self-reporting” program. A report of the questions and answers is included in Attachment 1. A summary of key pre-inspection areas assessed is summarized in Table 1 below.

⁴ California Integrated Water Quality System, CIWQS:

https://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.html

⁵ See: https://www.waterboards.ca.gov/water_issues/programs/ssso/docs/bmp/6piq2.pdf

Table 1 – Pre-Inspection WDR elements assessed.

Elements	Key 2006 WDR ⁶ Requirements	Key 2022 WDR ⁷ Requirements	Assessment Details
1. Document availability	D.11, D.13	5.2, 5.4, 5.7, 6.3, 6.4, Att. D, Att. E1/E2	<ul style="list-style-type: none"> Document/records completeness and availability for Water Board inspectors
2. SSMP implementation	D.11, D.13	5.2, 5.4, 5.7 Att. D	<ul style="list-style-type: none"> Assess level of SSMP implementation
3. Operations and Maintenance	D.11, D.8, D.13	5.2, Att. D	<ul style="list-style-type: none"> City maintenance goals, metrics, and effectiveness Staffing adequacy/effectiveness Cleaning program effectiveness Siphon maintenance effectiveness Closed-circuit television (CCTV) inspection effectiveness Description of ongoing maintenance work programs, improvements, and projects, historic capital projects
4. Mapping	D.13(iv)(a)	5.2, Att. D	<ul style="list-style-type: none"> Procedures for updating maps
5. Ordinances	D.13(iii)	5.2, Att. D	<ul style="list-style-type: none"> Frequency of reviews/updates
6. Critical spare parts	D.8, D.13(iv)	5.2, Att. D	<ul style="list-style-type: none"> Description/adequacy of critical parts
7. Emergency Response Plan for spills	D.7, D.13(vi)	5.2, Att. D.6	<ul style="list-style-type: none"> Training, standard operating procedures (SOPs), and documentation
8. Training	D.11, D.8, D.13	5.2, Att. D	<ul style="list-style-type: none"> Training program/documentation Training procedures, drills, training records/documentation and field operator competency
9. SSO Prevention	D.6, D.8, D.11 Amend. MRP	5.2, Att. D	<ul style="list-style-type: none"> Implementation/documentation

3. Compliance Evaluation Inspection

On 2/24/2023, a Compliance Evaluation Inspection (CEI)⁸ was conducted at the following locations to evaluate City SSMP effectiveness, compliance, and level of implementation summarized in Table 2 below.

Table 2 – Inspection site names, locations, and descriptions

Location	Name	Address	Description of Items Inspected
A	City Corp Yard	1201 West 4 th St	<ul style="list-style-type: none"> Pre-inspection data review/management interviews.
B	City Corp Yard	1307 West 4 th St	<ul style="list-style-type: none"> Inspection of sewer maintenance/spare parts.
C	Siphon inspection	O St/West 6 th St	<ul style="list-style-type: none"> Inspection of sewer assets; interviews with operators
D	Marina Pump Station	L St/Marina Plaza	<ul style="list-style-type: none"> Inspection of sewer assets; interviews with operators
E	Cleaning location	1301 W 8 th St	<ul style="list-style-type: none"> Inspection of sewer assets; interviews with operators

⁶ Order No. [2006-003-DWQ](#)/Amended Monitoring and Reporting Program/Order No. [2013-0058-EXEC](#) (currently in effect).

⁷ Order No. [2022-0103-DWQ](#) (in effect beginning on 6/5/2023).

⁸ See: <https://www.epa.gov/compliance/compliance-inspection-manual-national-pollutant-discharge-elimination-system>

To prepare for field inspections and further evaluate City spill program readiness and documentation, a pre-conference was conducted with review of the following key areas reviewed summarized in Table 3 below.

Table 3 – Key areas reviewed, WDR citations, and inspection notes (Location A).

Area	Key WDRs Reference(s)	Inspection Notes
1. Spill response coordination and reporting procedures	SSS WDRs, Provisions D.8, D.11, D.13(vi)	<ul style="list-style-type: none"> Reviewed recent spill incident with neighboring agency; reviewed existing procedures and provided recommendations for further enhancing coordination and improving documentation; and recommended improvements with existing spill reporting procedures.
2. Standard Operating Procedures (SOPs)		<ul style="list-style-type: none"> Reviewed existing SOPs; several individual detailed procedures organized and readily available.
3. Maintenance, training, and spill documentation	SSS WDRs, D.13(iv) and D.13(viii).	<ul style="list-style-type: none"> Discussed existing maintenance strategies (47 separate "sewer routes" in place). Reviewed current/planned upgrades to enhance existing computerized maintenance management system (CMMS). Reviewed/discussed outside meetings and documentation with neighboring collection system agency; provided recommendations for further enhancing outside agency coordination/documentation. Reviewed Siphon maintenance procedures, sewer bypassing training/procedures, standard operating procedures, spill records, documentation, and field data collection form in use.
4. Training program	Provisions D.8, D.11, D.13	<ul style="list-style-type: none"> Existing procedures and training program contents; recommend the City consider having managers implement "sign-offs" for training exercises when staff are found to be competent with performing duties to City standards.
5. SSMP Audits (historic)	Provisions D.8, D.11, D.13(x)	<ul style="list-style-type: none"> No extensive previous SSMP Audits were conducted within the past 4 years; recommend the City include comments about why deadlines were missed in its next SSMP update.



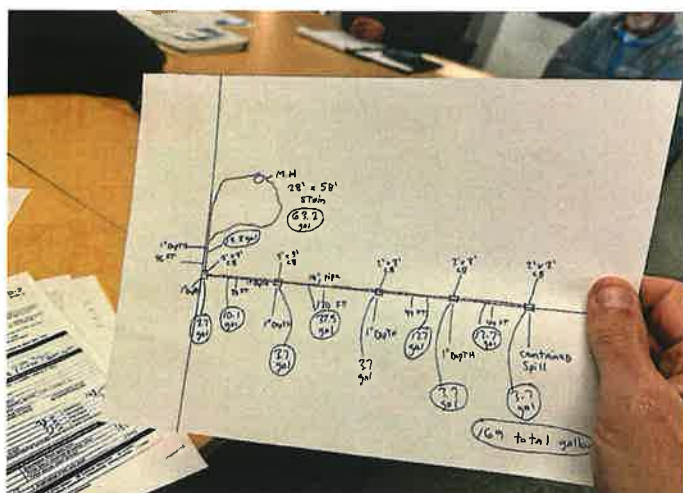
Location A (Photo 1): Pre-inspection conference with City management and staff (view 1); standard operating procedures (binder for Vac-Con Hydro flusher #368), Fats, Oils and Grease (FOG) outreach,



Location A (Photo 2): Pre-inspection conference with City management and staff (view 2); extensive spill response documentation including extensive paper files/historic spill records were reviewed including existing City procedures utilized for documenting spills ("SSO Process" flowcharts), spill photos, site sketches, and operator field notes.



Location A (Photo 3): Inspection of City "self-reporting program" for spills; City maintains paper original files in box from present-2017.



Location A (Photo 4): Inspection of example City spill records containing sketches by field staff for supporting spill volume estimates.

LOCATION B: CORPORATION YARD (1307 West 4th Street): To further evaluate and assess the City SSMP effectiveness, compliance, operations and maintenance programs, and spill response readiness, the following key observations, comments, and photos were documented during the inspection.

Table 4 – Key information and documentation reviewed (Location B).

Key Observations	SSS WDRs Citation(s)	Observations/Comments
1. Inspection of spill containment equipment	Provisions D.8, D.11, D.13	<ul style="list-style-type: none"> Extensive backup supplies and equipment well organized and readily available for emergency response operations including bypass trailer observed in "ready" state.
2. Inspection of maintenance vehicles	Provisions D.8, D.11, D.13	<ul style="list-style-type: none"> Vehicles and equipment observed in excellent working condition.
3. Inspection of tools and critical parts for collection system.	Provisions D.8, D.11, D.13	<ul style="list-style-type: none"> Tools and critical spare parts observed in excellent working condition; extensive cleanliness and organization parts.



Location B (Photo 1): Inspection of City critical spare parts, pipe fittings, tools, and backup supplies/equipment (view 1).



Location B (Photo 2): Inspection of City critical spare parts, pipe fittings, tools, and backup supplies/equipment (view 2).



Location B (Photo 3): Inspection of City sewer vehicles.



Location B (Photo 4): Inspection of City sewer bypass trailer and equipment observed in "ready" state (view 1).



Location B (Photo 5): Inspection of City sewer bypass trailer and dump truck in "ready" state (view 2).



Location B (Photo 6): Inspection of backup/spare parts.

LOCATION C: SEWER SIPHON INSPECTION (O St/West 6th St): To further evaluate and assess the City SSMP effectiveness, compliance, operations and maintenance programs, and spill response readiness, the following key observations, comments, and photos were documented during the inspection.

Table 5 – Key information and documentation reviewed (Location C).

Key Observations	SSS WDRs Citation(s)	Observations/Comments
1. Inspection of siphon downstream manhole	Provisions D.8, D.11, D.13	<ul style="list-style-type: none">• Solids observed located approximately 10 inches below manhole top rim elevation.



Location C (Photo 1): Inspection of siphon (view 1).



Location C (Photo 2): Inspection of siphon (view 2).



Location C (Photo 3): Inspection of siphon (view 3).



Location C (Photo 4): Inspection of siphon (view 4).

LOCATION D: MARINA PUMP STATION (L St/Marina Plaza): To further evaluate and assess the City SSMP effectiveness, compliance, operations and maintenance programs, and spill response readiness, the following key observations, comments, and photos were documented during the inspection.

Table 6 – Key information and documentation reviewed (Location D).

Key Observations	SSS WDRs Citation(s)	Observations/Comments
1. Equipment/operator SOPs	Provisions D.8, D.11, D.13	• Site locked for security with signage/posted phone number.
2. Equipment condition.	Provisions D.8, D.11, D.13	• Pump valve maintenance/problem observed.
3. Alarms.	Provisions D.8, D.11, D.13	• Crews unable to simulate "high-level" alarm check.
4. Field staff interviews.	Provisions D.8, D.11, D.13	• Field staff demonstrate extensive knowledge and understanding of City maintenance programs.



Location D (Photo 1): Inspection of pump station (view 1).



Location D (Photo 2): Pump station motor control panel.



Location D (Photo 3): View inside pump station wet well.



Location D (Photo 4): Operator interviews at pump station.

LOCATION E: CLEANING LOCATION (1301 West 8th St): To further evaluate and assess the City SSMP effectiveness, compliance, operations and maintenance programs, and spill response readiness, the following key observations, comments, and photos were documented during the inspection.

Table 7 – Key information and documentation reviewed (Location E).

Key Observations	SSS WDRs Citation(s)	Observations/Comments
1. Equipment, spill readiness, training	Provisions D.8, D.11, D.13	<ul style="list-style-type: none"> Field staff demonstrate extensive knowledge and understanding of City maintenance programs.



Location E: (Photo 1): Field staff interviews at cleaning location.



Location E: (Photo 2): Inspection of combination truck at cleaning location.



Location E (Photo 3): Inspection of cleaning nozzles and other equipment stored in combination truck.



Location E (Photo 4): Inspection/discussion of City standard operating procedures (SOP) and cleaning practices.



Location E (Photo 5): Inspection of City first responder vehicle.



Location E (Photo 4): Interview with construction crew lead.

4. Inspection Findings

The inspection revealed many of the City's existing spill reduction, maintenance and training practices in place summarized in Table 8 below.

Table 8 (Observed City Best Practices in place)

Element	Findings
1. Maintenance/inspection program	○ Aggressive/comprehensive and well-established system maintenance and inspection programs in place.
2. Spill containment/spill response readiness	○ Extensive equipment/spill readiness measures in place.
3. Sewer lateral inspections	○ Unlike most agencies within regional board (5) area, to be proactive, the City has a comprehensive sewer lateral maintenance program in place.
4. Field records/spill documentation	○ Robust spill documentation, spill start times and volume estimations.
5. Active flow/level monitoring	○ To be proactive and help leverage its existing resources, the City has an active Mutual Aid agreement in place with Delta Diablo Sanitation District.
6. Ongoing spill reduction performance evaluations	○ To be proactive, the City is extensively tracking and monitoring its ongoing spill reduction performance/trends relying on extensive benchmarks established internally .

The inspection revealed the following compliance findings for violations/areas of concern summarized in Tables 9 and 10 below.

Table 9 (Compliance Findings: Violations)

Violations	2006 WDR Reqs.	2022 WDR Reqs.	Notes/Recommendations
1. Spills reaching surface waters since 3/9/2018 (42,674 gallons)	Prohibition 1	4.1, 4.2	<ul style="list-style-type: none"> Additional improvements should be implemented for the City SSMP to further improve ongoing spill reduction effectiveness.
2. SSMP Program Audits	D.13(x)	Spec 5.4 and Att. D.10	<ul style="list-style-type: none"> No SSMP Program Audits were conducted for the collection system within past 4 years.

Table 10 (Compliance Findings: Areas of Concern)

Areas of Concern	2006 WDR Reqs.	2022 WDR Reqs.	Notes/Recommendations
1. Inspection (CCTV) data	<ul style="list-style-type: none"> Provision D.13(iv) 	<ul style="list-style-type: none"> Att. D 	<ul style="list-style-type: none"> The should further evaluate successes and identify improvements for its existing Closed-Circuit Television (CCTV) inspection program.
2. Critical spare parts	<ul style="list-style-type: none"> Provisions D.8, D.13(iv) 	<ul style="list-style-type: none"> Att. D 	<ul style="list-style-type: none"> The City should review its existing spare parts and identify all specific critical parts and equipment deemed critical by City management (including specifications for outside contractors) to maximize availability of parts and emergency spill readiness; update SSMP when improvements are implemented.
3. Sewer Ordinance	<ul style="list-style-type: none"> Provisions D.8, D.13 	<ul style="list-style-type: none"> Att. D 	<ul style="list-style-type: none"> The dates for clarifying the existing City sewer use ordinances were not available during inspection; the City should review its required Ordinance(s) annually to ensure they are up-to-date and update SSMP for any edits/improvements to Ordinances.
4. Training program	<ul style="list-style-type: none"> Provisions D.8, D.13(iv) 	<ul style="list-style-type: none"> Att. D 	<ul style="list-style-type: none"> Based on interviews with field operators, the City should further improve its existing field crew training program to ensure competency is verified after training exercises are completed; the City should also further improve its existing documentation by requiring training "sign-offs" on pertinent standard operating procedures (SOPs) to ensure uniformity and outcomes of operator training program; update SSMP once future improvements are implemented.
5. Maintenance	<ul style="list-style-type: none"> Provisions D.8, D.13(iv) 	<ul style="list-style-type: none"> Att. D 	<ul style="list-style-type: none"> The inspection revealed pumping problems at the Marina Pump station which should be further investigated and addressed to ensure reliable operation.
6. Key Performance Indicators (KPIs)	<ul style="list-style-type: none"> Provision D.13(ix) 	<ul style="list-style-type: none"> Spec 5.11 and Att. D 	<ul style="list-style-type: none"> To further improve tracking and improvement of work programs, the City should develop customized key performance indicators (KPIs) for each SSMP element.
7. Coordination between operations and engineering	<ul style="list-style-type: none"> Provisions D.8, D.13(vi) 	<ul style="list-style-type: none"> Att. D (8.4) 	<ul style="list-style-type: none"> Documentation of joint coordination between City operations and engineering should be further improved; update SSMP when improvements are implemented.
8. Field Data collection	<ul style="list-style-type: none"> Amended MRP 	<ul style="list-style-type: none"> Att. E1/E2 	<ul style="list-style-type: none"> The existing City field data collection forms should be reviewed and further improved to ensure all data in 2006/2022 Orders are being captured to support all spill records/documentation.
9. Notifications compliance	<ul style="list-style-type: none"> Amended MRP 	<ul style="list-style-type: none"> 5.13 and Att. E1/E2 	<ul style="list-style-type: none"> The City experienced one notification violation in 2017 and should develop standard operating procedures (SOPs) to help reduce future notification violations.

Areas of Concern	2006 WDR Reqs.	2022 WDR Reqs.	Notes/Recommendations
10. State Water Board Pre-Inspection Questionnaire	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">6.4.2	<ul style="list-style-type: none">Recommend the City update its Pre-Questionnaire answers in "track changes" mode; update all unanswered/unknown answers; include narratives with any "no" answers.Recommend the City complete all SSMP change logs and attaching them to the existing SSMP.Recommend the City update the following critical fields/information in the questionnaire/update SSMP as necessary once information is obtained:<ul style="list-style-type: none">1) estimated easement area gravity pipeline data and cleaning production metrics;2) above-ground gravity/pressure pipelines,3) service area (square miles);4) # of air-release valves within the collection system;5) information for when last sewer use ordinance(s) were last reviewed and any necessary change(s) necessary for improving required City legal authority;6) updated critical spare parts ID/inventory;7) critical asset inspection data to document ongoing maintenance practices;8) written summary of all key sewer funding sources;9) description/refinement of existing photo policy for documenting spills;10) Additional data for implementation of ongoing commercial/residential Fats, Oils and Grease (FOG) control program to demonstrate implementation;11) Clarification of sewer system design storm utilized for ensuring adequate capacity;12) Updated information for capital improvement projects (CIP) programmed and completed, past 5 years.

5. List of Attachments

Attachment 1 – State Water Board Pre-Inspection Questionnaire completed by the City

1.0 Documents

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
1.1	Sewer System Management Plan (SSMP) completeness and availability for inspection?	Yes	3	Uploaded to Files. Titled SSMP
1.2	SSMP Program Audit completeness and availability for inspection?	No	1	Old. Uploaded with SSMP
1.3	Sewer System Area Map completeness and availability for inspection?	Yes	3	Uploaded. Titled Sewer System Area Map
1.4	Local Sewer Use Ordinance completeness and availability for inspection?	Yes	2	Uploaded to Files. Titled Sewer Ordinance. Also uploaded Proper Cleanout Notice
1.5	Evidence of Agency's SSO Field Response Documentation?	Yes	4	Uploaded to Files. Titled Sewer Overflow Protocol
1.6	Rehabilitation and Replacement Plan completeness and availability for inspection?	Yes	1	N/A
1.7	Capital Improvement Plan (CIP) schedule for System Evaluation and Capacity Assurance Plan (SECAP) completeness and availability for inspection?	No	0	

2.0 Organization

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.1	Collection System Waste Discharge ID number (WDID)	5SSO10890	N/A	
2.1	Collection System Name	City of Antioch CS	N/A	
2.15	Estimated Size Distribution of Assets	Email Jim, ask what he looking for	N/A	
2.16	For which portion of sewer service laterals is your agency responsible?	Lower	N/A	
2.17	Estimated total miles of sewer service laterals (upper and lower) for which your agency is responsible?	177.25	N/A	
2.18	Number of sewer service lateral connections?	31197	N/A	
2.19	Estimated total miles of easements within your sanitary sewer system?	N/A - in our GIS, but not specifically listed out	N/A	
2.2	Collection System Main Point(s) of Contact (name, title, address, email, and telephone number)	See Contact Sheet	N/A	
2.2	What is your total easement sewer system cleaning production in miles/year?	every two years	3	
2.21	What is your total gravity sewer system cleaning production in miles/year?	214.23	4	2021
2.22	Does your agency own any separately enrolled collection systems?	No	N/A	
2.25	For question 2.24, does your agency own this/these WWTP(s)?	There is no 2.23/2.24	N/A	Yes

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.26	Does your collection system discharge into any other collection system(s)?	Yes, Delta Diablo	N/A	
2.28	Do any upstream collection systems >25,000 gallons/day discharge into this collection system?	Yes	N/A	Pittsburg Also
2.3	Type of Sanitary Sewer System	Gravity & Force Main	N/A	
2.31	How many lift/pump stations are there throughout the sewer collection system?	2	N/A	
2.32	How many feet of above ground gravity pipelines are there throughout the sewer collection system?	60'	N/A	
2.33	How many feet of above ground pressurized pipelines are located throughout the sewer collection system?	0	N/A	
2.34	How many air relief valves (ARVs) are located throughout the sewer collection system?	0	N/A	
2.35	How many siphons are there throughout the sewer collection system?	3	N/A	
2.36	Specify the percentage of piping and the number of lift/pump stations constructed in the following table (see TABLE A)	No Table	3	
2.38	If yes to question 2.37 above, please list all specific dates when flow monitoring was conducted.	No 2.37	N/A	? Does Not Apply?
2.39	Does your agency have any permanently installed flow monitor(s) in the collection system?	Yes	N/A	
2.4	If yes to question 2.39 above, please specify total number of monitor(s) installed.	12	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.4	What is the population served by your agency's sanitary sewer system?	111600	N/A	
2.5	What is this fiscal year's budget for operation and maintenance sanitary sewer system facilities?	8578144	3	
2.7	Entry Level (Less than 2 years experience)	3	N/A	
2.8	Journey Level (Greater than or equal to 2 years experience)	13	N/A	
2.9	Supervisory Level	1	N/A	
4.2	What is the approximate size of the service area served by the sewer collection system for your agency, in square miles?	29.95 sq miles	N/A	
4.29	How many have a supervisory, control and data acquisition system (SCADA) installed and operational?	None, but 12 Smart Covers	3	
2.3	Estimated Collection System Flow Characteristics for your collection system: Peak Daily Dry Weather Flow (MGD))	3.5	N/A	
2.3	Estimated Collection System Flow Characteristics for your collection system: Seasonal Daily Dry Weather Flow (MGD)	15.6	N/A	
6.4	Does your agency have legal authority within the Ordinance to limit and enforce illicit discharges from upstream public and/or private satellite collection system(s)?		Y/N	3

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
6.5	if no to question 6.4, does your agency have service agreements or other procedures to limit and enforce illicit discharges from upstream public and/or private satellite collection system(s)?		3	
13	responsibility for sewer service laterals (yes/no)	Lower Laterals Only	N/A	
2.11a	CWEA Maintenance Grade I	6	3	
2.11b	CWEA Maintenance Grade I Plant Maintenance Technologist	0	3	
2.12a	CWEA Grade II Collection System Maintenance	3	3	
2.12b	CWEA Grade II Electrical/Instrumentation Technologist	0	3	
2.12c	CWEA Grade II Mechanical Technologist	0	3	
2.13a	Number of certified (Grade III Collection System Maintenance) agency employees:	3	3	
2.13b	Number of certified (Grade III Electrical/Instrumentation Technologist) agency employees:	0	3	
2.14a	Number of certified (Grade IV Collection System Maintenance) agency employees:	1	3	
2.14b	Number of certified (Grade IV Electrical/Instrumentation Technologist) agency employees:	0	3	
2.14c	Number of certified (Grade IV Mechanical Technologist) agency employees:	0	3	
2.15a-G	Diameter of sewer pipe (gravity) - 6 inches or less, %	48	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.15b-G	Diameter of sewer pipe (gravity) - 8 inches or less, %	35	N/A	
2.15c-G	Diameter of sewer pipe (gravity) - 9-18 inches or less, %	12	N/A	
2.15d-G	Diameter of sewer pipe (gravity) - 19-36 inches or less, %	4	N/A	
2.15e-G	Diameter of sewer pipe (gravity) - >36 inches or less, %	1	N/A	
2.15f-G	Diameter of sewer pipe (gravity) - Unknown diameter	0	N/A	
2.15g-FM	Diameter of sewer pipe (force mains) - 6 inches or less, %	0	N/A	
2.15h-FM	Diameter of sewer pipe (force mains) - 8 inches or less, %	0	N/A	
2.15i-FM	Diameter of sewer pipe (force mains) - 9-18 inches or less, %	0	N/A	
2.15j-FM	Diameter of sewer pipe (force mains) - 19-36 inches or less, %	0	N/A	
2.15k-FM	Diameter of sewer pipe (force mains) - >36 inches or less, %	0	N/A	
2.15l-FM	Diameter of sewer pipe (force mains) - Unknown diameter	0	N/A	
2.23a	If yes to question 2.22, which collection system(s) does your agency own (list collection system Name(s))	No 2.22. We own our Collection System. Only one other in Antioch and that is Delta Diablo.	N/A	
2.23b	If yes to question 2.22, which collection system(s) does your agency own (list collection system WDID(s))	Number listed above	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.24a	Which wastewater treatment plant(s) (WWTPs) ultimately receive wastewater from this collection system?	Antioch Waste Water Treatment Plant and Delta Diablo	N/A	
2.24b	Receiving Treatment Plan name(s)	See 2.24a	N/A	
2.24c	Receiving Treatment Plan CIWQS permit ID(s)	N/A	N/A	
2.27a	If yes to question 2.26, which collection system(s) receive wastewater from this collection system?	No 2.26	N/A	
2.27b	Receiving Collection System name(s)	N/A	N/A	
2.27c	Receiving Collection System WDID(s)	N/A	N/A	
2.29a	If yes to question 2.28, which collection system(s) discharge into this collection system?	N/A	N/A	
2.29b	Upstream Collection System name(s)	N/A	N/A	
2.29c	Upstream Collection System WDID(s)	N/A	N/A	

3.0 Legal

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
3.1	Is/are your agency's Legally Responsible Official(s) and Data Submitter(s) registration information up-to-date?	Yes	3	CLICK HERE TO LIST YOUR LROs
3.2	If your local governing board has an internet website, please specify the internet address	None	N/A	
3.3	Please list the names and titles of each of your agency's current governing board members.	None	N/A	CLICK HERE TO LIST YOUR REGIONAL BOARD MEMBERS
3.4	Is your agency's SSMP available on your agency's website?	Yes	4	
3.5	If yes to question 3.4, please provide the internet address here	Sewer Collections – NPDES – City of Antioch, California (www.antiochca.gov)	N/A	Sewer Collections – NPDES – City of Antioch, California (www.antiochca.gov)
6.1	Does your agency have an adopted sewer use ordinance (Ordinance)? If no to question 6.1, skip to question 7.1	Yes	N/A	1.4 Sewer Ordinance
6.1	Does the Ordinance prohibit illicit discharges from service connections into the sewer?	Yes	N/A	1.4 Sewer Ordinance
6.11	Does the Ordinance require sewers and connections to be properly designed and constructed?	Yes	N/A	1.4 Sewer Ordinance
6.12	Does the Ordinance require proper maintenance, inspection and repairs of laterals?	No	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
6.13	Does the Ordinance limit the discharge of fats, oils and grease (FOG) and other debris that may cause blockages?	Yes	3	1.4 Sewer Ordinance
6.14	Does the Ordinance give your agency the authority to inspect grease producing facilities?	Yes	3	
6.15	Does the Ordinance reference the Uniform Building Code?	No	N/A	
6.16	Does the Ordinance reference the California Plumbing Code?	No	N/A	
6.17	Does the Ordinance give your agency the authority to inspect, maintain and repair assets located within sewer easements?	Yes	3	1.4 Sewer Ordinance
6.18	Does the Ordinance provide your agency with the proper authority to issue notices of violation (NOVs)?	Yes	3	
6.19	If yes to question 6.18, how many NOVs has your agency issued in the past 3 years?	One	3	
6.2	Does the Ordinance provide your agency with the proper authority to issue enforcement penalties for violators?	Yes	N/A	
6.2	Specify the date of last update/change of your agency's local Ordinance approved by your agency's local governing board. [DATE]	Unknown	N/A	
6.21	If yes to question 6.20, how many enforcement penalties has your agency issued in the past 3 years?	One	N/A	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
6.22	Does Ordinance provide your agency with the proper authority to ban connections and/or disconnect services for violators?	Yes	N/A	
6.23	If yes to question 6.22, how many actions has your agency undertaken in the past 3 years?	None	N/A	
6.24	Does the Ordinance provide your agency with the authority to limit future development and/or building?	Yes	N/A	
6.25	If yes to question 6.24, how many actions has your agency undertaken in the past 3 years?	None	3	
6.3	Specify the time frequency in which the Ordinance is reviewed. [FREQ]	Has not been reviewed in a long time	N/A	
6.6	Does the Ordinance ban inflow from stormwater sources?	Yes	4	
6.7	Does the Ordinance specify who owns and/or maintains the sewer service lateral from the building foundation to the property line (upper lateral portion)?	Yes	N/A	
6.8	Does the Ordinance specify who owns and/or maintains the sewer service lateral from the property line to the sewer main line (lower lateral portion)?	Yes	N/A	
6.9	Does the Ordinance require testing and/or inspection of the sewer service lateral upon remodeling, renovations and/or transfer of property/residence?	Yes	N/A	

Prepared by

4.0 Operations and Maintenance

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
4.1	Please specify the basis for the population estimate in question 2.4 (e.g., official census data, estimated by agency, etc.)?	Population Based off Census Data and City Data	N/A	
4.3	Please describe the terrain within your agency's sewer service area (Mountainous, Hilly, Flat, Valley, etc.)?	Various Terrain from Mountainous to Flatt, to moderately hilly to below sea level.	N/A	
4.4	Please specify what percentage of the collection system's flow comes from residential, commercial, industrial, and institutional sources.	1	N/A	
4.5	Has your agency identified and mapped all the gravity sewer line segments, public access points (manholes, lamp holes, rod holes, etc.), lift/pumping facilities, pressure pipes and valves, and stormwater-related facilities?	Yes	3	
4.6	Does your agency currently have sewer system assets mapped in a Geographic Information System (GIS)?	Yes	3	
4.7	Does your agency currently have stormwater-related facilities mapped in GIS?	Yes	3	
4.8	What is the estimated number of gravity sewer line pipe segments located throughout the collection system?	6615	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
4.9	Does your agency have a formal review process in place to ensure that any mapping issues noted by field staff or others are addressed?	Yes	3	
4.10	Please indicate the total number of public access points (manholes, lamp holes, rod holes, etc.) located within your sewer collection system.	4652	N/A	GIS Provided Data
4.11	Has your agency ever historically owned or maintained any portion of sewer service laterals? [Y/N or Unknown]	Yes	N/A	
4.12	Does your agency have a voluntary sewer service lateral incentive program in place?	No	N/A	
4.13	How many incoming complaints did your agency receive for privately-owned sewer service lateral problems in the previous fiscal year?	506	N/A	
4.14	How many service calls did your agency respond to in the field for privately-owned service lateral problems in the previous fiscal year?	561	N/A	
4.15	Does your agency track all installation locations of sewer backflow prevention devices installed on sewer assets owned and/or maintained by your agency?	yes	N/A	
4.16	If yes to 4.15, list number of known sewer backflow prevention devices installed on sewer assets owned and/or maintained by your agency.	unknown	N/A	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
4.17	Has your agency mapped each lift/pump station's actual GPS coordinates?	Yes	3	
4.18	Has your agency conducted a risk assessment for each asset?	Yes	3	
4.19	How many of these assets have redundant pipelines installed?	?	3	
4.20	How many have dedicated emergency stand-by power generators located onsite?	1	3	
4.21	Has your agency developed written standard and emergency operating procedures for major sewer assets covering power and/or lift/pumping failure(s) to minimize SSOs?	yes, in ssmp	3	
4.22	Has your agency determined the lowest hydraulic overflow point(s) and calculated the longest possible holding time(s) for each asset?	No	3	
4.23	Has your agency identified critical spare parts for each asset?	Yes	3	
4.24	For question 4.23, does your agency maintain the spare parts identified for each asset?	No	3	
4.25	How many facilities are located within 100 feet of a surface water, creek or drainage channel?	293	N/A	GIS Provided Data
4.26	How many are located within 20 feet of a storm drain inlet?	2610	N/A	GIS Provided Data

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
4.27	How many lift/pump stations are equipped with audible and/or visual alarms located in public view to expedite notification to your agency in the event of an SSO?	2	N/A	
4.28	How many lift/pump stations are equipped with an Auto Dialer Alarm System(s) for detecting lift/pump failure and/or high wet well levels?	2	N/A	
4.30	For question 4.29, how many can be remotely operated?	alarms both can be ran remote	N/A	
4.31	How many lift/pump stations display emergency notification signage, including agency contact information, in public view to expedite notification to your agency in the event of an SSO?	1	N/A	
4.32	Does your agency implement vandalism control efforts to discourage unauthorized access and/or vandalism to these assets?	Yes	N/A	
4.33	How many lift/pump stations have built-in lift/pumping bypass capability for emergency use?	none	N/A	
4.34	How many have electrical power connections installed to allow for the use of portable emergency generators?	1	N/A	
4.35	How many sewer force mains are owned by your agency?	300'	N/A	
4.36	For the assets in question 4.35, has your agency conducted a risk assessment for each asset?	Regularly Conducting	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
4.37	For the assets in question 4.35, how many have a dedicated corrosion protection system(s) installed?	none	3	
4.38	For the assets in question 4.35, what is the total number of air relief valves installed?	0	N/A	
8.1	Does your agency use a computerized maintenance management system (CMMS) to generate work orders and track sewer maintenance, operations and management information?	Yes	3	
8.2	If yes to question 8.1, is CMMS data used for ongoing strategies to eliminate/reduce SSOs?	Yes, follow up WO's	N/A	
8.3	If yes to question 8.1, is the CMMS data used to evaluate cleaning production rates?	yes, areas with continued high volume of debris, grease or roots are added to quarterly	N/A	
8.4	If yes to question 8.1, does your agency use the CMMS information to provide data for tracking system trends, problems and/or performance?	Yes	3	
8.5	If no to question 8.1, does your agency have a different method in place to provide data for tracking system trends, problems and/or performance?	CCTV data	N/A	
8.6	What is the total number of focused problem areas ("hot spots") located throughout the collection system?	297	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
8.7	What percentage of all gravity sewers under you agency's responsibility have been visually inspected with Closed-Circuit Television (CCTV) to date?	It is our goal to visually inspect all lines within 7-10 years	3	
8.9	What percentage of CCTV video listed in answer 8.7 above has been reviewed and ranked?	1	3	
8.10	What was your agency's total CCTV inspection production for past 12 months (miles)?	24.93	3	
8.11	What is your agency's planned CCTV inspection production scheduled for the next 12 months (miles)?	Our goals vary per year. But at least 10% of our system	N/A	
8.12	What was your agency's total gravity sewer collection system cleaning production (hydro flushing, mechanical and hand rodding) over the past 12 months (miles per year)?	156.43 miles/year 2022	3	
8.13	What is your agency's total gravity sewer collection system cleaning production scheduled (hydro flushing, mechanical and hand rodding) for the next 12 months (miles per year)?	varies per year but a minimum of 33% of our system.	3	
8.14	Does your agency have a method in use for reviewing and analyzing force main sewers and their components?	yes CCTV	3	
8.15	Does your agency have a program to inspect and maintain air relief valves (ARVs)? [Y/N/ n/a]	N/A	3	
8.16	How many ARVs are not accessible for inspection/maintenance? [#/ n/a]	N/A	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
8.17	What was the total number of ARVs exercised and cleaned in past 12 months?	0	3	
8.18	What is the total number of ARVs planned to be exercised and cleaned in the next 12 months?	0	3	
8.19	What is the total number of public access points (manholes, lamp holes, rod holes, etc.) inspected in the past 12 months?	2727	N/A	
8.20	What is the total number of public access points (manholes, lamp holes, rod holes, etc.) scheduled to be inspected in the next 12 months?	At a minimum 33% of our system	N/A	
8.21	Does your agency visually inspect pipeline routes at least annually, and after major storms, earthquakes or other events that could damage these assets, to check for sink holes or leaks along force main(s)?	Yes, the entire system is inspected over the course of 3 yrs, and rural areas monthly and areas after heavy rain events.	3	
8.22	How many above ground crossings (if applicable) were inspected in the past 12 months? [#, N/A or Unknown]	1	N/A	
8.23	How many siphons (if applicable) were inspected in the past 12 months? [#, N/A or Unknown]	all Areas are evaluated	3	
8.24	Does your agency have a process to identify areas subject to excess hydrogen sulfide corrosion?	yes during routine maintenance	N/A	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
8.25	Does your agency have a formal pipe grading process in place to identify pipe discontinuities?	Yes PAPC CCTV inspections	3	
8.26	Does your agency require video (CCTV) inspections before and after cleaning to measure the effectiveness of these activities?	yes on our quarterlys	3	
8.27	Does your agency video (CCTV) inspect pipes after all SSO(s)?	Yes	3	
8.28	Does your agency conduct smoke, dye or other tests to check for illicit connections?	yes as needed.	3	
8.29	If yes to question 8.28, how many miles of sewer system were tested in the past 12 months?	unknown	3	
8.30	Does your agency use video (CCTV) to monitor discharger compliance for illicit connections?	Yes	3	
8.31	If yes to question 8.30, list the total number of miles of video (CCTV) inspection conducted for this purpose in the past 12 months.	55.24 Miles	N/A	
8.32	Does your agency have formal agreements in place to increase resources through established mutual assistance agreements with other agencies/contractors for wet weather episodes or for SSO response activities?	nothing in writing but we do have mutual aid teams set up with City of Pittsburg, Delta Diablo, City of Brentwood and Iron house sD.	3	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
8.33	Does your agency have a program in place to identify areas with inflow and infiltration (I/I) ?	Yes, CCTV program identifies and then placed on repair list	3	
8.34	If yes to question 8.33, estimate the total number of miles identified by this program.	Difficult to obtain exact mileage, but all tracked on work orders that can be pulled.	N/A	look up repairs on mainlines and add footages
8.35	Does your agency have an active root control program in place?	Yes	5	
8.36	If yes to question 8.35, please list the type(s) of control efforts in place (e.g., chemical, mechanical, etc.).	Chemical and mechanical	N/A	
8.37	If your agency uses chemical(s) for root control, please list chemical(s) used. [N/A if no chem. root program]	Razerooter	N/A	
8.51	Does your agency retain contract service(s) for sewer collection system maintenance, operations, and/or management in excess of \$10,000/year?	Yes	N/A	
12.2	For question 12.1, how many have a dedicated logbook(s) to document fieldwork activities?	No 12.1	N/A	
12.3	How many hydro flusher(s) are owned and/or leased by your agency?	3	3	
12.4	How many mechanical rodder(s) are owned and/or leased by your agency?	2	3	
12.5	How many video (CCTV) inspection vehicle(s) are owned and/or leased by your agency?	1	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
12.6	How many utility truck(s) are owned and/or leased by your agency?	4	3	
12.7	How many portable sewage lift/pump(s) are owned and/or leased by your agency?	3	3	
12.8	How many portable generator(s) are owned and/or leased by your agency?	2	3	
12.9	Does your agency own equipment designed to block the storm drain system, in an emergency, to prevent untreated or partially treated wastewater from reaching surface waters?	Yes	3	
13.1	Does your agency have a program in place for communicating on a regular basis with the public regarding the development, implementation, and performance of its SSMP?	our city website and our bi-weekly reports	3	
13.2	Does your agency have a program in place for communicating with upstream or downstream satellite sewer system(s) connected to its collection system? [Y/N or N/A]	quarterly meetings with tri-cities	3	
13.3	Does your agency participate in responding to Underground Service Alert(s) (USA) or other similar organizations to identify and mark sewer lines?	Yes	3	
13.4	Does your agency's communication program give the public the opportunity to provide input as your SSMP is being implemented?	no	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
15.1	Does your agency generate SSO reduction performance metric(s) for its collection system for use in future planning?	yes	3	
15.2	Does your agency have a program in place to conduct periodic video (CCTV) inspections of areas throughout the collection system that have never been evaluated by video (CCTV) to date? [Y/N or N/A]	All Areas are evaluated at one point during the last 10 years and are scheduled to be completed on a 7 to 10 year cycle	3	
15.3	Does your agency document meetings between O&M and source control staff, if applicable? [Y/N or N/A]	emails kept only	3	
15.4	Does your agency document meetings between O&M and engineering staff to discuss system problem areas and projects, if applicable? [Y/N or N/A]	email kept only	N/A	
15.5	Does your agency hold post-SSO briefings with collections staff, management and others involved, to evaluate root cause of SSOs and document service changes necessary to be prepared in responding to SSOs in the future?	Yes	3	
15.6	Does your agency pursue investigation of upstream satellite(s) or potential illicit dischargers as part of the SSO cause determination process?	if applicable	N/A	
15.7	Does your agency adjust sewer collection system cleaning interval(s) for problem areas based on review and analysis of each past SSO?	Yes	3	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
15.8	How many of the SSOs over the past 12 months were preventable through more proactive maintenance?	probably all 15	3	
A.14	Have hold times been calculated for all lift/pump stations?	no	3	
B.4	Annual budget for past three years (CIP)?	Total spent was \$3,563,547.00. Actual budget varies pending jobs needed to be done	3	
C.3	Force mains inspected annually (miles/feet)	300'	3	
C.3	Pipes cleaned at least one per year (% of system)	33%+	3	
C.3	System cleaning frequency to clean entire system (years)	3 yrs	3	
C.4	What is the annual maintenance schedule for focused problem areas ("hot spots")?	3 months, 6months, annually	N/A	
C.4	CCTV condition assessment rating system description (PACP, internal method, etc.)	PAPC ratings	3	
C.4	Have condition assessment ratings been completed for all outstanding grade 4/5 PACP (or equivalent) pipe segments identified in system via CCTV?	Yes	3	
D	Does your agency have reports and I/I studies available for inspection?	Yes, through our cctv software	3	

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
D	Has the system undergone a capacity and inflow and infiltration (I/I) assessment?	no	3	
D	If yes, provide date and summary of findings.		3	
D	Is agency implementing an inflow/infiltration (I/I) reduction program)?	we will be soon	3	
Element 01	Overall quality of work program in place to reduce/eliminate future spills (pipes, gravity)	SOP's/SSMP	3	
Element 02	Overall quality of work program in place to reduce/eliminate future spills (force mains)	great	3	
Element 03	Overall quality of work program in place to reduce/eliminate future spills (lift/pump stations)	Yes, good	3	
Element 04	Overall quality of work program in place to reduce/eliminate future spills (roots)	good	3	
Element 05	Overall quality of work program in place to reduce/eliminate future spills (grease)	good	3	
Element 06	Overall quality of work program in place to reduce/eliminate future spills (structural)	good	3	
Element 09	Overall quality of CCTV program basis and explain its effectiveness	good	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
Element 10	Overall quality of hot spot program and explain its effectiveness	Every 3-6 Mo cleaning. Very effective in reduction of hot spot SSO's	3	
Element 11	Overall quality of cleaning program and explain its effectiveness	we have reduced the amount of sso's from mainline over the past 10 years	3	
Element 12	Overall quality/currency of operational SOPs for use by field staff	needs work	2	
Element 13	Overall quality of training documentation for field staff	needs work	4	
Element 14	Adequacy of system O/M funding past 3 years	ok	2	
Element 15	Adequacy of system O/M program past 3 years	ok	3	
Element 16	Adequacy of system CIP funding past 3 years	ok	2	
Element 17	Adequacy of system CIP program past 3 years	ok	2	
Element 18	Adequacy of training program past 3 years	ok	4	
Element 19	Adequacy of system SSMP implementation past 3 years	good	3	
Element 20	Adequacy of LRO(s) training and competency	good	4	
Element 21	Adequacy of field staff with SSMP familiarity	needs work	2	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
Element 22	Adequacy of field staff with emergency pump station bypass setup	good	3	
Element 23	Adequacy of field staff with responding to spill emergencies	ok	3	
Element 24	Adequacy of spill root cause analysis program	great	3	
Element 25	Adequacy of efforts to track performance metrics for preventative maintenance program	ok	3	
Element 26	Adequacy of field data collection forms	ok	3	
Element 27	Adequacy of field data including spill start times	good	3	
Element 28	Adequacy of field staff with spill volume estimates	good	3	
Element 29	Adequacy of defending existing all spill reports and field data collected	good	3	
Element 30	Adequacy of site-specific emergency plans for each list/pump station?	needs written down, but good	3	
Element 31	Adequacy of pump station readiness for responding to spills	yes, good	3	
Element 32	Adequacy of existing spare parts ID and inventory controls	ok	3	
Element 33	Adequacy of OERP and field staff competency with responding to spills	good with most that we send to repond to SSO's	3	
Element 34	Adequacy of photo documentation archived for spills	great	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
Element 35	# of open work orders > 1 year	good	3	
Element 36	# of open work orders > 2 years	good	3	
Element 37	Has agency complied with periodic SSMP Audit requirements?	no	3	
Element 38	Are all spill reports in compliance with all required field spill documentation/records/accuracy (see MRP)	yes	3	
Element 39	Ratio of certified staff to total staff	1	3	
FCL	O/M funds spent past three years?	26126544	3	
FCL	Does your agency have a focused problem areas ("hot spot") reduction program in place?	yes	3	
FCL	If yes, what is the approximate reduction percentage of annual "hot spot" cleanings conducted over past 3 years?	20% or more	N/A	
FCL	What is the approximate percent of focused problem areas ("hot spots") to total system cleaning production?	0.35	3	291,648 miles out of 825,957 for 2022
FCL	Does your agency have a separate OERP not included in your publicly-available SSMP?	no	N/A	
FCL	Does your agency track and respond to all complaints and collection necessary information to comply with Amended MRP, section E?	yes	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
FCL	Does your agency train and document exercises utilizing your agency-specific OERP?	yes, we train I hope we are tracking it affectively	3	
FCL	Has agency identified all critical spare parts/maintains their inventories covering all assets deemed critical (pipes, pump stations, force mains, backup equipment, etc)?	mostly	3	
FCL	If yes to separate OERP, specify date of last update.	n/a	3	
FCL	Number of annual training exercises conducted on agency-speciic OERP past 3 years	9 (approximately 2-3 times a year so that each employee attends once a year)	3	
FCL	Ongoing predictive force main monitoring?	cctv data used	3	
FCL	Shortest hold time for all lift/pump station in system (minutes) without power?	unknown but monitored any time we get a notification of power down.	3	

5.0 Design

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
5.1	Does your agency utilize an Enterprise Fund for services provided to the public?	yes	N/A	
5.2	If yes to question 5.1, what is the estimated annual revenue generated from this fund?	6,900,000 (sewer service fees)	3	Get from one solution
5.3	If yes to 5.1, what is the current Enterprise Fund balance?	N/A	N/A	
5.4	If no to 5.1, what is the current balance of funds available for your sewer system?	N/A	N/A	
5.5	Please provide a brief description of all sewer collection system funding source(s) (e.g., sewer user fees, annual budget allocation, property taxes, etc.).	sewer and connection fees only	N/A	
5.6	What is your agency's total number of billed sewer connections?	31453	N/A	
5.7	What is your agency's total number of billed customers for sewer service?	31453	N/A	
5.8	What is your agency's current average monthly household user fee for sewage collection only?	15	N/A	
5.9	For answer in 5.8, what is your agency's sewer fee rate basis (e.g., measured flow, calculated flow, flat fee, etc.)	Uniform Charge/Flat Fee	3	
5.1	For question 5.8 above, specify the last date that sewer fees were increased by your local governing board. [date]	44355	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
5.11	Has your local governing board approved any future sewer use fee increase(s)?	Yes	N/A	
5.12	How much did your agency spend in the last year for operations and maintenance activities (O&M) for sewer assets?	Approximately 7 Million	3	
5.13	How much did your agency spend in the last fiscal year on capital expenditures for sewer assets (e.g., new pipelines, lift/pump station upgrades/rehabilitation, new equipment, etc.)?	Amount difficult to calculate without breaking out invoices, but within budget line items.	3	

6.0 SERP

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
14.1	Does your agency maintain water quality monitoring records as required by the Amended MRP, section B(6)?	Yes	3	
14.7	Does your agency have a procedure(s) in place for collecting field information to assist in determining the actual SSO start time?	Yes	4	
14.9	Does your agency regularly update initial reports given to the California Emergency Management Agency, local health department, and Regional Board as information develops regarding SSOs requiring notification?	Yes	3	
14.5	Does your agency require crews to take photos of all SSOs?	Yes	N/A	
14.8	Does your agency use SOPs to estimate SSO volume spilled, recovered and not recovered, including estimation of cleanup water used?	Yes but not clean up water used	4	
14.6	If no to question 14.5, does your agency at least require crews to take photos of SSOs that result in backups into structures?	N/A	N/A	

7.0 SPBCP

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
7.1	What is the approval date of your Sewer Capital Improvement Plan (Sewer CIP) by your agency's local governing board?	CIP follows SSMP. 2018 is the last update	N/A	13mil currently projected for CIP projects per the CIP 2022-2027 Plan
7.2	For question 7.1, is your Sewer CIP available on the internet for public review?	Yes	N/A	
7.3	If yes to question 7.2, please specify the internet address	Sewer Collections – NPDES – City of Antioch, California (antiochca.gov)	N/A	
7.4	What is the projected date of your next Sewer CIP update?	N/A	3	
8.38	Does your agency have a commercial FOG program in place?	Yes	3	
8.39	If no to question 8.38, has your agency justified in its SSMP why a FOG program is not needed?	In Ordinance	N/A	
8.4	If yes to question 8.38, does your agency have a FOG Ordinance separate from the sewer use ordinance?	No, both included in Ordinance	N/A	
8.41	If yes to question 8.40, please list the FOG Ordinance citation number:		N/A	
8.42	If yes to question 8.38, approximately how many food service establishments (FSEs) such as restaurants, schools, hospitals, jails, and convalescent homes are subject to FOG control.	All	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
8.43	If yes to question 8.38, what is the total number of FSE permits issued for FOG control?	N/A	3	
8.44	If yes to question 8.38, what is the total number of dedicated FSE FOG inspectors?	0	3	
8.45	If yes to question 8.38, how many FSE FOG inspections were conducted in past 12 months?	1	3	
8.46	If yes to question 8.38, how many FSE FOG enforcement action(s) were initiated in the past 12 months?	1	3	
8.47	If yes to question 8.38, how many FSE FOG inspections are planned for the next 12 months?	N/A	3	
8.49	If yes to question 8.48, briefly describe the program	Ordinance controls FOG program and DDSD Assists with enforcement.	N/A	
C.3	Average frequency of FSE inspections over past 5 calendar years?	N/A	N/A	

8.0 SECAP

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
2.37	Has your agency ever conducted any historic flow monitoring for the sewer system to evaluate hydraulic characteristics during weather conditions?	Yes	3	
7	Basis of peak flow (storm frequency), 1 occurrence in # of years.	unknown	N/A	
8.48	Does your agency have a residential FOG program in place?	Ordinance, and periodic notification through bi-monthly report	3	
8.8	Specify most recent date of completion for answer listed in 8.7 (ref: What percentage of CCTV video listed in answer 8.7 above has been reviewed and ranked?)	on going , 100%	3	
2.30a	Estimated Collection System Flow Characteristics for your collection system: Average Daily Dry Weather Flow (MGD))	3.5MGD	N/A	
B.5	Date of most recent Sewer Master Plan	2014	N/A	
FCL	CIP funds spent past three years?	3563547	3	

Prepared by

9.0 MMPM

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
9.1	Does your agency's SSO Emergency Response Plan incorporate procedures for lift/pump stations/force main sewers?	Yes	3	
9.2	Does your agency have a dispatcher(s) within your agency to handle, dispatch and document incoming complaints from your sewer system customers?	Yes	N/A	
9.3	If yes to 9.2, does your agency utilize a dispatch radio system for notifying collection crews who respond to SSOs?	No. Email/Phone	N/A	
9.4	If yes to 9.3, please list the frequency(s) in use for the dispatch radio system	N/A	N/A	
9.5	Does your agency have standard operating procedures (SOPs) in place to test and document, at least once per year, the performance of its after-hours emergency notification system(s)?	No	3	
9.6	Does your agency provide and document any scenario-based SSO emergency response simulation training for collections staff at least on an annual basis to ensure staff are properly trained and prepared in the event of an SSO?	Yes	3	
9.7	If yes to 9.6, does this training include practical exercises including researching SSO start times and calculating the SSO volume spilled and recovered?	Yes	3	

Prepared by

SSMP Pre-Inspection Questionnaire City of Antioch

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
9.8	Do your emergency operating procedures (EOPs) include requirements to determine the impact of an SSO, including accelerated or additional environmental monitoring?	no	3	Ask Jeff
15.9	How many of the SSOs over the past 4 years occurred at repeat locations?	0	3	

10.0 Audits

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
10.1	Does your agency have a process in place to collect data to monitor performance of its SSMP and efforts in reducing SSOs?	Yes	3	
10.2	If yes to question 10.1, does your agency use the data collected to update SSMP program elements?	Yes	3	

11.0 COMM

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
11.1	What is the total number of dedicated sewer maintenance crews in place at your agency?		3	
11.2	For question 11.1, how many staff are typically in each maintenance crew?		N/A	
11.3	Has your agency determined core competencies/capabilities (and any relevant gaps) for its collections staff covering at a minimum sewer line cleaning, point repairs, video (CCTV) inspections, lift/pump station maintenance, sewer line excavation, and utility line locating?	Yes	3	
11.4	If yes to question 11.3, is written documentation available?	Yes	N/A	
11.5	Does your agency require collections staff to review the SSS WDRs and the agency's SSMP at least annually?	Yes	3	
11.6	Does your agency use a workforce planning/retention program to ensure adequate future collections staff?	not written	3	
11.7	Does your agency provide initial and recurrent training to appropriate staff [including outside contractor(s)] regarding your agency's SSO Emergency Response Plan and O&M programs?	Yes	3	
11.8	If yes to 11.7, what is the total number of individuals trained in the past 12 months.	18	3	

Prepared by

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
11.9	For contracted sewer services, do your contracting specifications contain specific language requiring initial and recurrent training of contractor staff regarding your agency's SSO Emergency Response Plan and O&M programs?	N/A	3	

13.0 MRP

QUESTION No.	QUESTION DESCRIPTION	AGENCY ANSWER	AGENCY RATING (0 - 5)	DOCUMENT LOCATION
14.1	Are all the records required in the Amended MRP, B(5) ("Record Keeping") readily available for review by the Water Boards?	yes ?	3	
14.2	Does your agency maintain a list and description of all sewer-related complaints from customers for the past 5 years, including calls received after normal working hours?	Yes	3	
14.3	If yes to question 14.2, does this include information for privately owned sewer laterals?	Yes	N/A	
14.4	Does your agency have a quality assurance/quality control (QA/QC) procedure in place for review of technical information collected by field staff prior to certification of the SSO report(s) in the Water Board's online reporting system (CIWQS) by the Legal	Yes	3	

APPENDIX 2 – Detailed Audit Findings and Best Practice Recommendations

PURPOSE.....	2
DATA SOURCES REVIEWED	2
SUMMARY OF AUDIT FINDINGS	3
1. GOALS.....	4
2. ORGANIZATION	7
3. LEGAL	9
4. OPERATIONS AND MAINTENANCE.....	11
5. DESIGN.....	14
6. OVERFLOW EMERGENCY RESPONSE PLAN (OERP)	16
7. FATS, OILS AND GREASE (FOG)	19
8. SYSTEM EVALUATION AND CAPACITY ASSURANCE (SECAP).....	21
9. MONITORING.....	24
10. AUDITS	26
11. COMMUNICATION.....	28
12. SSMP IMPLEMENTATION	30
13. TRAINING/SOPs	32
14. SPILL VIOLATIONS	34
15. SPILL NOTIFICATION	37
16. SPILL REPORTING	40
17. SPILL MONITORING	42

PURPOSE

The purpose of this Appendix includes provides transparency for the systematic audit procedures utilized by Fischer Compliance for evaluating the City SSMP compliance with all elements of the SSS WDRs and recommendations for improving effectiveness.

DATA SOURCES REVIEWED

- City 2018 SSMP
- 2022 Pre-Inspection Questionnaire completed by City (see Appendix 1)
- 2022 Compliance Evaluation Inspection Report (see Appendix 1)
- CIWQS data and SSO data "flat files" posted on SSO Reduction Website¹.
- Other pertinent collection system operational data and files obtained from City.
- Sanitary Sewer Systems Waste Discharge Requirements (SSS WDR), Order No. 2022-0103-DWQ, effective 6/5/2023².

¹ See https://www.waterboards.ca.gov/water_issues/programs/ssr/

² Certified Order adopted available for download at:
https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2022/wqo_2022-0103-dwg.pdf

SUMMARY OF AUDIT FINDINGS

Elements Assessed	Compliance Points Assessed (weighted)	Total Points Possible	WDR Compliance Ranking (%)
1. Goals	4	5	80
2. Organization	4	5	80
3. Legal	4	5	80
4. O/M	8	10	80
5. Design	4	5	80
6. OERP	3	5	60
7. FOG	4	5	80
8. SECAP	4	5	80
9. Monitoring	5	5	100
10. Audits	6	10	60
11. Communication	4	5	80
12. Implementation	4	5	80
13. Training/SOPs	3	5	60
14. Spill violations	6	10	60
15. Spill notification	5	5	100
16. Spill reporting	5	5	100
17. Spill monitoring	4	5	80
Totals	77	100	77

1. GOALS

1.1 Key Requirements

Provision D.13(ii): "Organization: The SSMP must identify: The name of the responsible or authorized representative as described in Section J of this Order. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES))."

Provision D.9: "The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and Auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices."

Provision D.11: "The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting."

1.2 Agency Best Practices

BEST PRACTICE FINDINGS	
	BEST PRACTICES
1. Goals	<input checked="" type="checkbox"/> 1a. Extensive overall effective maintenance practices and SSMP implementation.
	<input checked="" type="checkbox"/> 1b. Proactive cleaning program with extensive enhanced maintenance areas.
	<input checked="" type="checkbox"/> 1c. Effective internal support between Departments with SSMP implementation.
	<input checked="" type="checkbox"/> 1d. Substantial emergency response equipment and readiness
	<input checked="" type="checkbox"/> 1e. Substantial capital spending addressing ongoing deficiencies/improvements.
	<input checked="" type="checkbox"/> 1f. Proactive/effective SSO reduction efforts/measures in place.

1.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
1. Goals	<input checked="" type="checkbox"/> None Click or tap here to enter text.	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
1. Goals	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

1.4 Best Practice Recommendations

BEST PRACTICE RECOMMENADTIONS	
	IMPROVING EFFECTIVENESS
1. Goals	<input type="checkbox"/> BPR-E 1.1 (Establish new Key Performance Indicators (KPIs) to more closely measure/track effectiveness of this element and all other SSMP elements).
	<input type="checkbox"/> BPR-E 1.2 (Schedule annual review of new KPIs).
	<input type="checkbox"/> BPR-E 1.3 (Schedule annual review of existing work programs for accuracy, completeness, and effectiveness; document all updates (major and minor) in "SSMP Change Log").

BEST PRACTICE RECOMMENDATIONS	
	IMPROVING COMPLIANCE RESILIENCE
1. Goals	<input type="checkbox"/> 1a. (Track ongoing SSMP changes in "track changes" format and cite key documents for Audit).
	<input type="checkbox"/> BRP-E 1b. (5. (Complete "SSMP Change Log" entries for demonstrating implementation).
	<input type="checkbox"/> BRP-E 1c. (Annual review of completed Pre-Inspection Questionnaire with answers matching CIWQS online questionnaire and attach to most recent SSMP).
	<input type="checkbox"/> BRP-E 1d. (Reorganize SSMP during next update to further highlight key work programs, improvements, and accomplishments for managing goals and objectives).

1.5 Compliance Points (weighted): 4/5 (80%)

2. ORGANIZATION

2.1 Key Requirements

Provision D.13(ii): "Organization: The SSMP must identify: The name of the responsible or authorized representative as described in Section J of this Order. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES))."

Provision D.9: "The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and Auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices."

Provision D.11: "The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting."

2.2 Agency Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
2. Organization	<input checked="" type="checkbox"/> 2a. Multiple disciplinary team member involvement in SSMP from engineering and operations.
	<input checked="" type="checkbox"/> 2b. Extensive descriptions of staff/responsibilities in SSMP
	<input checked="" type="checkbox"/> 2c. Agency requires CWEA certifications for all field staff.
	<input checked="" type="checkbox"/> 2d. Dedication to implementing previous SSMP Audit findings.
	<input checked="" type="checkbox"/> 2e. Comprehensive/compliance SSMP Audits.

2.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
2. Organization	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
2. Organization	<input checked="" type="checkbox"/> AOC 4.3 (Documentation of joint coordination between City operations and engineering should be further improved; update SSMP when improvements are implemented).	<input checked="" type="checkbox"/> YES

2.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENDATIONS	
	IMPROVING EFFECTIVENESS
	<input type="checkbox"/> BPR-E 1.1 (Establish new Key Performance Indicators (KPIs) to more closely measure/track effectiveness of this element and all other SSMP elements).
	<input type="checkbox"/> BPR-E 1.2 (Schedule annual review of new KPIs).

BEST PRACTICE RECOMMENDATIONS	
	IMPROVING COMPLIANCE RESILIENCE
2. Organization	<input type="checkbox"/> 1 a. (Schedule annual review/update of org. chart and agency roles/responsibilities).
	<input type="checkbox"/> BPR-R 1 b. (Ensure input is solicited, documented, and incorporated from all responsible team members and key field staff for future Audits and SSMP updates).
	<input type="checkbox"/> BPR-R 1 c. (Track ongoing SSMP changes in "track changes" format and cite key documents utilized).
	<input type="checkbox"/> BPR-R 1 d. (Complete "SSMP Change Log" entries for demonstrating implementation).

2.5 Compliance Points/Ranking: 4/5 (80%)

3. LEGAL

3.1 Key Requirements

Provision D.13(iii): "Legal Authority: Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to: Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.); Require that sewers and connections be properly designed and constructed; Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency; Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and Enforce any Inspection Violations of its sewer ordinances."

3.2 Agency Best Practices

COMPLIANCE FINDINGS		
	BEST PRACTICES	ACTION?
3. Legal	<input checked="" type="checkbox"/> 3a. Extensive ordinances and authority with substantial enforcement mechanisms defined.	<input checked="" type="checkbox"/> None

3.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
3. Legal	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
3. Legal	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

3.4 Best Practice Recommendations

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
3. Legal	<input type="checkbox"/> BPR-E 3.1-3.3 (see Element 1 BPR description/develop for this element).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
3. Legal	<input type="checkbox"/> 3a. BPR-R: (Track ongoing SSMP changes in "track changes" format and cite key documents utilized).

3.5 Compliance Points/Ranking: 4/5 (80%)

4. OPERATIONS AND MAINTENANCE

4.1 Key Requirements

Provision D.13(iv): ““(iv)Operation and Maintenance Program. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system: Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities; Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders; Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan; Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and Provide equipment and replacement part inventories, including identification of critical replacement parts.”

Provision D.3: “The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.”

Provision D.4: “In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.”

Provisions D.7/D.8/D.9: Mitigation of SSOs, properly operate, maintain, manage, allocation of adequate resources.

4.2 Agency Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
4. O/M	<input checked="" type="checkbox"/> 4a. Active and effective cleaning coordination and synchronizing to improve efficiency.
	<input checked="" type="checkbox"/> 4b. Extensive equipment/spill readiness measures.
	<input checked="" type="checkbox"/> 4c. Active/established/successful ongoing sewer lateral maintenance program.

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
4. O/M	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
4. O/M	<input checked="" type="checkbox"/> AOC 4.1 (The City should further evaluate successes and identify improvements for its existing Closed-Circuit Television (CCTV) inspection program.	<input checked="" type="checkbox"/> YES
	<input checked="" type="checkbox"/> AOC 4.2 (The City should review its existing spare parts and identify all specific critical parts and equipment deemed critical by City management (including specifications for outside contractors) to maximize availability of parts and emergency spill readiness; update SSMP when improvements are implemented).	<input checked="" type="checkbox"/> YES
		<input checked="" type="checkbox"/> YES

4.3 Compliance Findings

4.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
4. O/M	<input type="checkbox"/> BPR-E 4.1-4.2 (see Element 1).
	<input type="checkbox"/> BPR-E 4.3 (Annual review of critical/spare parts inventory).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
4. O/M	<input type="checkbox"/> BPR-R 4.1-4.3 (see Element 1).

4.5 Compliance Points/Ranking: 8/10 (80%)

5. DESIGN

5.1 Key Requirements:

Provision D.13(v): "Design and Performance Provisions: Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects."

5.2 Agency Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
5. Design	<input checked="" type="checkbox"/> 5a. Comprehensive design standards and specifications.

5.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
5. Design	<input type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
5. Design	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

5.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
5. Design	<input type="checkbox"/> BPR-E 5.1-5.2 (see Element 1).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
5. Design	<input type="checkbox"/> BPR-R 5.1-5.2 (see Element 1).

5.5 Compliance Points/Ranking: 4/5 (80%)

6. OVERFLOW EMERGENCY RESPONSE PLAN (OERP)

6.1 Key Requirements:

Provision D.13(vi): "Overflow Emergency Response Plan - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following: Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner; A program to ensure an appropriate response to all overflows; Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification; Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained; Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to Determine the nature and impact of the discharge."

D.3, D.4, D.7, D.8: Reduce/prevent SSOs/impacts to storm drains, proper O/M.

6.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
6. OERP	<input checked="" type="checkbox"/> 6a. (Substantial spill response readiness).
	<input checked="" type="checkbox"/> 6c. (Spill emergency response trailer(s)).
	<input checked="" type="checkbox"/> 6e. (Photo documentation program required for all spills).

6.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
6. OERP	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
6. OERP	<input checked="" type="checkbox"/> AOC 6.1 (Improvements needed for more fully implementing OERP).	<input checked="" type="checkbox"/> YES
	<input checked="" type="checkbox"/> AOC 6.2 (Additional hands-on training/exercises for improving field staff OERP familiarity and spill response effectiveness).	<input checked="" type="checkbox"/> YES

6.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
6. OERP	<input type="checkbox"/> BPR-E 6.1-6.3 (see Element 1).
	<input type="checkbox"/> BPR-E 6.4 (Annual review/training on OERP/SOPs and update references).
	<input type="checkbox"/> BPR-E 6.5 (Ongoing review/improvement to field data collection procedures and forms).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
6. OERP	<input type="checkbox"/> BPR-R 6.1-6.3 (see Element 1).

6.5 Compliance Points/Ranking: 3/5 (60%)

7. FATS, OILS AND GREASE (FOG)

7.1 Key Requirements:

Provision D.13(vii): "FOG Control Program: Each Enrollee shall evaluate its service area to Determine whether a FOG control program is needed. If an Enrollee Determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate: An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG; A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area; The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG; Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements; Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance; An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above."

D.3, D.4, D.8: Reduce/prevent SSOs/impacts to storm drains, proper O/M.

7.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
6. FOG	<input checked="" type="checkbox"/> 7a. (Aggressive Food Service Establishment (FSE) source control inspection program).

7.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
7. FOG	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
7. FOG	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

7.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADTIONS	
	IMPROVING EFFECTIVENESS
7. FOG	<input type="checkbox"/> BPR-E 8.1-8.3 (see Element 1).

BEST PRACTICE RECOMMENADTIONS	
	IMPROVING COMPLIANCE RESILIENCE
7. FOG	<input type="checkbox"/> None

7.5 Compliance Points/Ranking: 4/5 (80%)

8. SYSTEM EVALUATION AND CAPACITY ASSURANCE (SECAP)

8.1 Key Requirements:

Provision D.13(viii): "System Evaluation and Capacity Assurance Plan: The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include: Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events; Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding. Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14."

Provision D.8: Proper O/M, adequate capacity for conveying base/peak flows.

8.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
	<input checked="" type="checkbox"/> 9b. (Significant dedication to improve ongoing system capacity).

8.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
8. SECAP	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
8. SECAP	<input checked="" type="checkbox"/> None .	<input checked="" type="checkbox"/> None

8.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
8. SECAP	<input type="checkbox"/> BPR-E 8.1-8.3 (see Element 1).
	<input type="checkbox"/> BPR-E 8.4 (Annual review of short/long-term CIPs to ensure ongoing capacity effectiveness).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
8. SECAP	<input type="checkbox"/> BPR-E 8.1-8.3 (see Element 1).

8.5 Compliance Points/Ranking: 4/5 (80%)

9. MONITORING

9.1 Key Requirements:

Provision D.13(ix): "The Enrollee shall: (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities; (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP; (c) Assess the success of the preventative maintenance program; (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and (e) Identify and illustrate SSO trends, including: frequency, location, and volume."

Provision D.13(x): "As part of the SSMP, the Enrollee shall conduct periodic internal SSMP Audits, appropriate to the size of the system and the number of SSOs. At a minimum, these SSMP audits must occur every two years and a report must be prepared and kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them."

9.2 Observed Best Practices

COMPLIANCE FINDINGS

BEST PRACTICES

☒ 9a. Extensive tracking and monitoring of ongoing spill reduction performance/trends including useful benchmarks and metrics for evaluating effectiveness of overall SSMP implementation and maintenance program.

9.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
9. Monitoring	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
9. Monitoring	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

9.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS		
	IMPROVING EFFECTIVENESS	
9. Monitoring	<input checked="" type="checkbox"/> BPR-E 9.1-9.3 (see Element 1).	
	<input checked="" type="checkbox"/> BPR-E 9.4 (Period update of capacity inflow and infiltration (/1/1) reduction performance).	

BEST PRACTICE RECOMMENADCTIONS		
	IMPROVING COMPLIANCE RESILIENCE	
9. Monitoring	<input checked="" type="checkbox"/> To further improve tracking and improvement of work programs, the City should develop a customized key performance indicators (KPIs) to track/monitor its training program implementation).	

9.5 Compliance Points/Ranking: 5/5 (100%)

10. AUDITS

10.1 Key Requirements:

Provision D.13(x): "As part of the SSMP, the Enrollee shall conduct periodic internal SSMP Audits, appropriate to the size of the system and the number of SSOs. At a minimum, these SSMP audits must occur every two years and a report must be prepared and kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them."

Provision D.13(ix): "The Enrollee shall: (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities; (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP; (c) Assess the success of the preventative maintenance program; (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and (e) Identify and illustrate SSO trends, including: frequency, location, and volume."

10.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
10. Audits	<input checked="" type="checkbox"/> 10a. (Audits provide comprehensive review of SSMP and work programs).
	<input checked="" type="checkbox"/> 10b. (Tracking/timely implementation of previous Audit findings).
	<input checked="" type="checkbox"/> 10c. (Comprehensive and compliant historic SSMP Audits).

10.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
10. Audits	<input checked="" type="checkbox"/> V 10.1 (The City failed to conduct an SSMP audit(s)).	<input checked="" type="checkbox"/> Yes

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
10. Audits	<input checked="" type="checkbox"/> AOC 10.1 (Recommended improvements for measuring SSMP element effectiveness with narratives for each SSMP element).	<input checked="" type="checkbox"/> Yes

10.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
10. Audits	<input type="checkbox"/> BPR-E 10.1-10.3 (see Element 1).
	<input type="checkbox"/> BPR-E 10.2 (Include historic SSMP Audits findings in SSMP).
	<input type="checkbox"/> BPR-E 10.3 (Include commitments table in next SSMP update for Audit findings)

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
10. Audits	<input checked="" type="checkbox"/> None

10.5 Compliance Points/Ranking: 6/10 (60%)

11. COMMUNICATION

11.1 Key Requirements:

Provision D.13(xi): "Communication Program – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented. The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system."

11.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
11. Comm.	<input type="checkbox"/> 11a. (Effective communications with public/website).
	<input type="checkbox"/> 11b. (Effective communications/coordination with outside agency).

11.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
11. Comm.	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
11. Comm.	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

11.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
11. Comm.	<input type="checkbox"/> BPR-E 11.1-11.3 (see Element 1).
	<input type="checkbox"/> BPR-E 11.4 (Document ongoing communications/meetings/trainings for improving relations with outside/satellite collection agencies).
	<input type="checkbox"/> BPR-E (Other): Click or tap here to enter text.

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
11. Comm.	<input checked="" type="checkbox"/> None

11.5 Compliance Points/Ranking: 4/5 (80%)

12. SSMP IMPLEMENTATION

12.1 Key Requirements:

Provision D.11: "The Enrollee shall develop and implement a written Sewer System Management Plan (2021 SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This 2021 SSMP must be approved by the Enrollee's governing board at a public meeting."

Provisions D.3,D.4 D.7, D.8, Amended MRP: Reduce/prevent SSOs/impacts to storm drains, properly operate, maintain, manage, compliance with Monitoring and Reporting requirements.

12.2 Observed Best Practices

COMPLIANCE FINDINGS

	BEST PRACTICES
12. Implem.	<input type="checkbox"/> 12a. (Demonstrated implementation of O/M program).
	<input type="checkbox"/> 12b. (Successful staff involvement with SSMP implementation/updates).
	<input type="checkbox"/> 12c. (Successful staff involvement with SSMP implementation/updates).
	<input type="checkbox"/> 12d. (Completion of State Water Board Pre-Inspection Questionnaire).

12.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
12. Implem.	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
12. Implem.	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

12.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
12. Implem.	<input type="checkbox"/> BPR-E 12.1-12.3 (see Element 1).
	<input type="checkbox"/> BPR-E 12.4 (Conduct SSMP field staff drills on SSMP to improve familiarity and response effectiveness).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
12. Implem.	<input type="checkbox"/> None

12.5 Compliance Points/Ranking: 4/5 (80%)

13. TRAINING/SOPs

13.1 Key Requirements:

Provisions D.8, D.3, D.4, D.13(iv), D.13(vi): Properly operate, maintain, manage, reduce/prevent SSOs/impacts to storm drains, proper O/M, OERP.

Provision D.13(vi): "Overflow Emergency Response Plan - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following: Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner; A program to ensure an appropriate response to all overflows; Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification; Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained; Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge."

13.2 Observed Best Practices

COMPLIANCE FINDINGS

BEST PRACTICES

13. Training/SOPs ☐ 13a. (Commitments to ongoing training for field crews).

13.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
13. Training/SOPs	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
13. Training/SOPs	<input checked="" type="checkbox"/> AOC 13.1 (Based on interviews with field operators, the City should further improve its existing field crew training program to ensure competency is verified after training exercises are completed; the City should also further improves its existing documentation efforts including consideration of requiring "sign-offs" on standard operating procedures (SOPs) to ensure uniformity and quality of training efforts deployed; update SSMP once future training program/documentation improvements are implemented).	<input checked="" type="checkbox"/> None
	<input checked="" type="checkbox"/> AOC 13.3 (Improvements needed to existing SOPs).	<input checked="" type="checkbox"/> None
	<input checked="" type="checkbox"/> AOC 13.4 (Improvements needed with field staff OERP/SOP familiarity to further maximize spill response effectiveness/readiness).	<input checked="" type="checkbox"/> None

13.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
13. Training/SOPs	<input type="checkbox"/> BPR-E 13.1-13.3 (see Element 1).
	<input type="checkbox"/> BPR-E 13.4 (Periodic trainings on field forms).
	<input type="checkbox"/> BPR-E 13.5 (Periodic trainings with neighboring collection system agencies).

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
13. Training/SOPs	<input checked="" type="checkbox"/> None

13.5 Compliance Points/Ranking: 3/5 (60%)

14. SPILL VIOLATIONS

14.1 Key Requirements:

Amended MRP, section B: "For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number. 2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

- i. Name of person notifying Cal OES and direct return phone number.
- ii. Estimated SSO volume discharged (gallons).
- iii. If ongoing, estimated SSO discharge rate (gallons per minute).
- iv. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO.
- Indication of whether the SSO has been contained.
- vi. Indication of whether surface water is impacted.
- vii. Name of surface water impacted by the SSO, if applicable.
- viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
- ix. Any other known SSO impacts.
- x. SSO incident location (address, District, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s)."

14.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
14. Spill Violations	<input checked="" type="checkbox"/> 14a. (Low volume for Cat 1 spills during audit period).
	<input checked="" type="checkbox"/> 14b. (Effective field data collection forms).
	<input checked="" type="checkbox"/> 14c. (Effective spill debriefings/root cause analysis).

14.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
14. Spill Violations	<input checked="" type="checkbox"/> V 14.1 (Spill discharge violations, ~3,500 gallons reportedly reached surface waters during Audit period (2017-2022)).	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
14. Spill Violations	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

14.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADTIONS	
	IMPROVING EFFECTIVENESS
14. Spill Violations	<input type="checkbox"/> BPR-E 2.1-2.3 (see Element 1).

BEST PRACTICE RECOMMENADTIONS	
	IMPROVING COMPLIANCE RESILIENCE
14. Spill Violations	<input type="checkbox"/> Continue with annual evaluations and adjustments to work programs to further reduce spills.

14.5 Compliance Points/Ranking: 6/10 (60%)

15. SPILL NOTIFICATION

15.1 Key Requirements:

Amended MRP, section B: "For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number. 2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

- i. Name of person notifying Cal OES and direct return phone number.
- ii. Estimated SSO volume discharged (gallons).
- iii. If ongoing, estimated SSO discharge rate (gallons per minute).
- iv. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO.
- Indication of whether the SSO has been contained.
- vi. Indication of whether surface water is impacted.
- vii. Name of surface water impacted by the SSO, if applicable.
- viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
- ix. Any other known SSO impacts.
- x. SSO incident location (address, District, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s)."

15.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
15. Spill Notification	<input checked="" type="checkbox"/> 15a. (Demonstrated ongoing compliance success).
	<input checked="" type="checkbox"/> 15b. (Existing effective spill notification procedures in place).

15.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
15. Spill Notification	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
15. Spill Notification	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

15.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING EFFECTIVENESS
15. Spill Notification	<input type="checkbox"/> BPR-E 2.1-2.3 (see Element 1).
	<input type="checkbox"/> BPR-E 2.4 (New SOP for notifications to help reduce future violations)

BEST PRACTICE RECOMMENADCTIONS	
	IMPROVING COMPLIANCE RESILIENCE
15. Spill Notification	<input type="checkbox"/> The City should review its current standard operating procedures (SOPs) for spill notification and reporting efforts and edit as necessary to help reduce potential future violations.

15.5 Compliance Points/Ranking: 5/5 (100%)

16. SPILL REPORTING

16.1 Key Requirements:

Amended MRP, section B: "For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number. 2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

- i. Name of person notifying Cal OES and direct return phone number.
- ii. Estimated SSO volume discharged (gallons).
- iii. If ongoing, estimated SSO discharge rate (gallons per minute).
- iv. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO.
- Indication of whether the SSO has been contained.
- vi. Indication of whether surface water is impacted.
- vii. Name of surface water impacted by the SSO, if applicable.
- viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
- ix. Any other known SSO impacts.
- x. SSO incident location (address, District, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s)."

16.2 Observed Best Practices

COMPLIANCE FINDINGS	
	BEST PRACTICES
16. Spill Reporting	<input checked="" type="checkbox"/> 16a. (Demonstrated ongoing compliance success).
	<input checked="" type="checkbox"/> 16b. (SOP reporting SOP in place).
	<input checked="" type="checkbox"/> 16c. No spill reporting violations for Cat 1 (draft reports) during Audit period.

16.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
16. Spill Reporting	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> YES

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
16. Spill Reporting	<input checked="" type="checkbox"/> 16.1 (The inspection revealed the existing City field data collection forms should be reviewed and further improved to ensure all data in 2006/2022 Orders are being captured to support all spill records/documentation).	<input checked="" type="checkbox"/> None

16.4 Best Practice Recommendations:

BEST PRACTICE RECOMMENDATIONS	
	IMPROVING EFFECTIVENESS
16. Spill Reporting	<input type="checkbox"/> BPR-E 2.1-2.3 (see Element 1).

BEST PRACTICE RECOMMENDATIONS	
	IMPROVING COMPLIANCE RESILIENCE
16. Spill Reporting	<input checked="" type="checkbox"/> None

16.5 Compliance Points/Ranking: 5/5 (100%)

17. SPILL MONITORING

17.1 Key Requirements:

Amended MRP, section B: "For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number. 2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

- i. Name of person notifying Cal OES and direct return phone number.
- ii. Estimated SSO volume discharged (gallons).
- iii. If ongoing, estimated SSO discharge rate (gallons per minute).
- iv. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO.
- v. Indication of whether the SSO has been contained.
- vi. Indication of whether surface water is impacted.
- vii. Name of surface water impacted by the SSO, if applicable.
- viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
- ix. Any other known SSO impacts.
- x. SSO incident location (address, District, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s)."

17.2 Observed Best Practices

COMPLIANCE FINDINGS

	BEST PRACTICES	ACTION?
17. Large Spills	<input checked="" type="checkbox"/> 15a. (Demonstrated sampling program readiness for large spills).	<input checked="" type="checkbox"/> None
	<input checked="" type="checkbox"/> 15b. (SOP for sampling/monitoring in place).	<input checked="" type="checkbox"/> None

17.3 Compliance Findings

COMPLIANCE FINDINGS		
	VIOLATIONS	ACTION?
17. Large Spills	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

COMPLIANCE FINDINGS		
	AREAS OF CONCERN	ACTION?
17. Large Spills	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None

1.4 Best Practice Recommendations

BEST PRACTICE RECOMMENADCTIONS		
	IMPROVING EFFECTIVENESS	
17. Large Spills	<input type="checkbox"/> BPR-E 2.1-2.3 (see Element 1).	
	<input type="checkbox"/> BPR-E 2.4 (Annual drills to ensure readiness).	

BEST PRACTICE RECOMMENADCTIONS		
	IMPROVING COMPLIANCE RESILIENCE	
17. Large Spills	<input checked="" type="checkbox"/> None.	

17.5 Compliance Points/Ranking: 4/5 (80%)

APPENDIX 3 – List of all Spills Certified by City (2018 to present)

City of Antioch List of Spills 2018 - Present

EVENT ID	Region	Responsible Agency	SSO Category	Start Date	SSO Vol	Vol of SSO Recovered	Vol of SSO Reached Surface Water	SSO Failure Point	WDID
846404	5S	Antioch City	Category 3	4/11/2018 9:00	8	8	0	Lower Lateral (Public)	5SSO10890
846445	5S	Antioch City	Category 3	4/10/2018 8:30	228	228	0	Lower Lateral (Public)	5SSO10890
846890	5S	Antioch City	Category 1	4/30/2018 16:30	10,417	3,130	7,445	Gravity Mainline	5SSO10890
846925	5S	Antioch City	Category 3	5/2/2018 9:30	13	13	0	Lower Lateral (Public)	5SSO10890
846926	5S	Antioch City	Category 3	4/24/2018 11:40	608	0	0	Manhole	5SSO10890
847194	5S	Antioch City	Category 3	5/11/2018 8:30	13	12	0	Lower Lateral (Public)	5SSO10890
847195	5S	Antioch City	Category 3	5/6/2018 8:13	8	8	0	Lower Lateral (Public)	5SSO10890
847197	5S	Antioch City	Category 3	5/5/2018 18:07	10	10	0	Lower Lateral (Public)	5SSO10890
847605	5S	Antioch City	Category 3	5/29/2018 8:30	3	2	0	Lower Lateral (Public)	5SSO10890
848265	5S	Antioch City	Category 3	6/13/2018 9:00	5	5	0	Lower Lateral (Public)	5SSO10890
850347	5S	Antioch City	Category 3	8/20/2018 8:57	18	18	0	Lower Lateral (Public)	5SSO10890
851065	5S	Antioch City	Category 3	9/15/2018 12:30	5	5	0	Lower Lateral (Public)	5SSO10890
851889	5S	Antioch City	Category 3	10/19/2018 9:36	17	17	0	Lower Lateral (Public)	5SSO10890
851960	5S	Antioch City	Category 3	10/22/2018 13:08	19	19	0	Gravity Mainline	5SSO10890
852705	5S	Antioch City	Category 1	11/8/2018 13:00	67	29	38	Lower Lateral (Public)	5SSO10890
852719	5S	Antioch City	Category 3	11/11/2018 9:30	8	8	0	Lower Lateral (Public)	5SSO10890
852906	5S	Antioch City	Category 3	11/15/2018 14:20	160	160	0	Gravity Mainline	5SSO10890
853867	5S	Antioch City	Category 3	12/1/2018 14:30	8	8	0	Lower Lateral (Public)	5SSO10890
854508	5S	Antioch City	Category 3	12/18/2018 13:55	2	2	0	Lower Lateral (Public)	5SSO10890
855014	5S	Antioch City	Category 3	12/28/2018 12:00	6	6	0	Lower Lateral (Public)	5SSO10890
855015	5S	Antioch City	Category 3	12/27/2018 4:30	30	30	0	Lower Lateral (Public)	5SSO10890
855140	5S	Antioch City	Category 3	1/7/2019 15:19	6	6	0	Lower Lateral (Public)	5SSO10890
855564	5S	Antioch City	Category 3	1/24/2019 8:50	36	36	0	Lower Lateral (Public)	5SSO10890
855917	5S	Antioch City	Category 3	2/1/2019 15:19	8	8	0	Lower Lateral (Public)	5SSO10890
856270	5S	Antioch City	Category 3	2/15/2019 9:00	2	2	0	Lower Lateral (Public)	5SSO10890
856818	5S	Antioch City	Category 3	3/1/2019 14:30	19	19	0	Lower Lateral (Public)	5SSO10890
857105	5S	Antioch City	Category 3	3/17/2019 12:00	50	50	0	Lower Lateral (Public)	5SSO10890
857745	5S	Antioch City	Category 3	4/18/2019 8:00	7	7	0	Lower Lateral (Public)	5SSO10890
857749	5S	Antioch City	Category 3	4/16/2019 14:00	86	86	0	Lower Lateral (Public)	5SSO10890
857932	5S	Antioch City	Category 3	4/25/2019 14:00	80	80	0	Lower Lateral (Public)	5SSO10890
857934	5S	Antioch City	Category 3	4/25/2019 17:45	5	5	0	Lower Lateral (Public)	5SSO10890
858668	5S	Antioch City	Category 3	5/30/2019 10:55	3	3	0	Lower Lateral (Public)	5SSO10890
858789	5S	Antioch City	Category 3	6/4/2019 9:00	9	9	0	Lower Lateral (Public)	5SSO10890
858877	5S	Antioch City	Category 3	6/9/2019 15:00	147	147	0	Gravity Mainline	5SSO10890
859943	5S	Antioch City	Category 3	7/18/2019 11:30	5	5	0	Lower Lateral (Public)	5SSO10890
860177	5S	Antioch City	Category 3	7/30/2019 11:00	93	93	0	Lower Lateral (Public)	5SSO10890
860329	5S	Antioch City	Category 3	8/6/2019 14:00	24	24	0	Lower Lateral (Public)	5SSO10890
860386	5S	Antioch City	Category 3	8/11/2019 15:05	1	1	0	Lower Lateral (Public)	5SSO10890
861116	5S	Antioch City	Category 3	9/10/2019 11:45	12	12	0	Lower Lateral (Public)	5SSO10890
861237	5S	Antioch City	Category 3	9/16/2019 11:10	12	12	0	Lower Lateral (Public)	5SSO10890
861269	5S	Antioch City	Category 3	9/17/2019 1:00	14	14	0	Gravity Mainline	5SSO10890
862177	5S	Antioch City	Category 3	10/16/2019 7:50	1	1	0	Lower Lateral (Public)	5SSO10890
862362	5S	Antioch City	Category 3	10/17/2019 9:30	26	26	0	Lower Lateral (Public)	5SSO10890
862577	5S	Antioch City	Category 3	10/31/2019 6:56	6	6	0	Lower Lateral (Public)	5SSO10890
862921	5S	Antioch City	Category 3	11/15/2019 16:00	467	467	0	Lower Lateral (Public)	5SSO10890
863419	5S	Antioch City	Category 3	12/5/2019 16:00	39	39	0	Lower Lateral (Public)	5SSO10890
863540	5S	Antioch City	Category 3	12/14/2019 9:00	31	31	0	Lower Lateral (Public)	5SSO10890
863543	5S	Antioch City	Category 3	12/15/2019 11:30	4	4	0	Gravity Mainline	5SSO10890
864335	5S	Antioch City	Category 3	1/21/2020 9:03	3	3	0	Lower Lateral (Public)	5SSO10890
864791	5S	Antioch City	Category 3	2/10/2020 18:00	25	25	0	Lower Lateral (Public)	5SSO10890
864893	5S	Antioch City	Category 3	2/12/2020 15:30	17	17	0	Lower Lateral (Public)	5SSO10890

City of Antioch
List of Spills 2018 - Present

<u>EVENT ID</u>	<u>Region</u>	<u>Responsible Agency</u>	<u>SSO Category</u>	<u>Start Date</u>	<u>SSO Vol</u>	<u>Vol of SSO Recovered</u>	<u>Vol of SSO Reached Surface Water</u>	<u>SSO Failure Point</u>	<u>WDID</u>
864894	5S	Antioch City	Category 3	2/16/2020 11:30	159	159	0	Gravity Mainline	5SSO10890
865352	5S	Antioch City	Category 3	3/3/2020 21:15	384	384	0	Gravity Mainline	5SSO10890
865761	5S	Antioch City	Category 3	3/23/2020 15:56	7	7	0	Lower Lateral (Public)	5SSO10890
866130	5S	Antioch City	Category 3	4/13/2020 18:45	653	653	0	Lower Lateral (Public)	5SSO10890
866421	5S	Antioch City	Category 3	4/24/2020 18:00	178	178	0	Lower Lateral (Public)	5SSO10890
866461	5S	Antioch City	Category 3	4/27/2020 17:40	28	28	0	Lower Lateral (Public)	5SSO10890
866839	5S	Antioch City	Category 3	5/18/2020 9:10	30	30	0	Lower Lateral (Public)	5SSO10890
867307	5S	Antioch City	Category 3	6/9/2020 12:17	11	11	0	Lower Lateral (Public)	5SSO10890
867595	5S	Antioch City	Category 3	6/21/2020 10:00	25	25	0	Lower Lateral (Public)	5SSO10890
867952	5S	Antioch City	Category 3	7/13/2020 16:30	19	19	0	Lower Lateral (Public)	5SSO10890
868107	5S	Antioch City	Category 3	7/21/2020 19:00	19	19	0	Lower Lateral (Public)	5SSO10890
868196	5S	Antioch City	Category 3	7/29/2020 14:30	1	1	0	Lower Lateral (Public)	5SSO10890
868603	5S	Antioch City	Category 3	8/19/2020 11:25	5	5	0	Lower Lateral (Public)	5SSO10890
868604	5S	Antioch City	Category 3	8/20/2020 8:00	7	7	0	Lower Lateral (Public)	5SSO10890
869032	5S	Antioch City	Category 3	9/16/2020 9:30	15	15	0	Lower Lateral (Public)	5SSO10890
869428	5S	Antioch City	Category 3	10/2/2020 5:00	8	8	0	Lower Lateral (Public)	5SSO10890
869621	5S	Antioch City	Category 3	10/7/2020 9:00	2	2	0	Lower Lateral (Public)	5SSO10890
869622	5S	Antioch City	Category 3	10/7/2020 11:15	10	10	0	Lower Lateral (Public)	5SSO10890
869623	5S	Antioch City	Category 3	10/8/2020 9:30	18	18	0	Lower Lateral (Public)	5SSO10890
870284	5S	Antioch City	Category 3	10/31/2020 18:45	12	12	0	Lower Lateral (Public)	5SSO10890
871813	5S	Antioch City	Category 3	1/25/2021 11:47	5	5	0	Lower Lateral (Public)	5SSO10890
872334	5S	Antioch City	Category 3	2/10/2021 14:55	5	5	0	Lower Lateral (Public)	5SSO10890
872634	5S	Antioch City	Category 3	2/25/2021 11:40	79	79	0	Gravity Mainline	5SSO10890
873506	5S	Antioch City	Category 3	4/12/2021 10:15	156	156	0	Lower Lateral (Public)	5SSO10890
873722	5S	Antioch City	Category 3	4/26/2021 10:00	3	3	0	Lower Lateral (Public)	5SSO10890
874087	5S	Antioch City	Category 3	5/14/2021 8:15	55	55	0	Lower Lateral (Public)	5SSO10890
874486	5S	Antioch City	Category 3	6/4/2021 8:30	2	2	0	Lower Lateral (Public)	5SSO10890
874531	5S	Antioch City	Category 3	6/9/2021 10:58	2	2	0	Lower Lateral (Public)	5SSO10890
874691	5S	Antioch City	Category 3	6/11/2021 9:48	13	13	0	Lower Lateral (Public)	5SSO10890
876337	5S	Antioch City	Category 3	9/9/2021 12:08	23	23	0	Lower Lateral (Public)	5SSO10890
876474	5S	Antioch City	Category 3	9/20/2021 16:37	3	3	0	Lower Lateral (Public)	5SSO10890
876709	5S	Antioch City	Category 3	9/26/2021 16:37	47	1	0	Gravity Mainline	5SSO10890
877114	5S	Antioch City	Category 3	10/19/2021 8:30	54	54	0	Gravity Mainline	5SSO10890
877406	5S	Antioch City	Category 3	11/2/2021 17:10	31	31	0	Lower Lateral (Public)	5SSO10890
878291	5S	Antioch City	Category 3	12/19/2021 11:10	7	7	0	Lower Lateral (Public)	5SSO10890
878698	5S	Antioch City	Category 3	1/3/2022 9:00	20	20	0	Lower Lateral (Public)	5SSO10890
878701	5S	Antioch City	Category 3	1/3/2022 16:57	24	24	0	Gravity Mainline	5SSO10890
879530	5S	Antioch City	Category 3	2/15/2022 11:18	32	32	0	Lower Lateral (Public)	5SSO10890
879835	5S	Antioch City	Category 3	3/2/2022 13:38	98	98	0	Gravity Mainline	5SSO10890
879863	5S	Antioch City	Category 3	3/6/2022 14:30	15	15	0	Lower Lateral (Public)	5SSO10890
879869	5S	Antioch City	Category 2	3/5/2022 10:30	2,780	2,780	0	Gravity Mainline	5SSO10890
879917	5S	Antioch City	Category 3	3/7/2022 7:32	21	21	0	Lower Lateral (Public)	5SSO10890
881202	5S	Antioch City	Category 3	5/6/2022 13:59	12	12	0	Gravity Mainline	5SSO10890
882224	5S	Antioch City	Category 3	7/7/2022 8:23	5	5	0	Lower Lateral (Public)	5SSO10890
882491	5S	Antioch City	Category 1	7/26/2022 11:10	36,691	36,691	35,191	Manhole	5SSO10890
882561	5S	Antioch City	Category 3	7/21/2022 11:47	3	3	0	Lower Lateral (Public)	5SSO10890
883175	5S	Antioch City	Category 3	8/31/2022 19:15	8	8	0	Gravity Mainline	5SSO10890
883861	5S	Antioch City	Category 3	10/11/2022 12:25	9	9	0	Lower Lateral (Public)	5SSO10890
884571	5S	Antioch City	Category 3	11/22/2022 13:55	4	4	0	Lower Lateral (Public)	5SSO10890
884765	5S	Antioch City	Category 3	12/8/2022 13:43	169	169	0	Gravity Mainline	5SSO10890
886340	5S	Antioch City	Category 3	2/2/2023 11:20	4	4	0	Lower Lateral (Public)	5SSO10890

City of Antioch
List of Spills 2018 - Present

<u>EVENT ID</u>	<u>Region</u>	<u>Responsible Agency</u>	<u>SSO Category</u>	<u>Start Date</u>	<u>SSO Vol</u>	<u>Vol of SSO Recovered</u>	<u>Vol of SSO Reached Surface Water</u>	<u>SSO Failure Point</u>	<u>WDID</u>
887263	5S	Antioch City	Category 3	3/21/2023 13:00	2	2	0	Lower Lateral (Public)	5SSO10890

APPENDIX 4 – Spill Performance Data and Other Metrics

Table of Contents

Figure 4-1: City spill rate (rolling avg # of spills/100 miles/year, 2018-2023)	2
Figure 4-2: Regional Water Board (Sacramento) rolling spill averages, 2018-2023	3
Figure 4-3: City spill volume by year and per capita (2018-2023).....	4
Figure 4-4: City spill recovery metrics by spill type (2018-2023)	5
Figure 4-4: Spill volume discharge rates, volume of spills/capita/year (2018-2023)	5
Figure 4-6: City counts of spill causes by number of spills (2018-2023).....	6
Figure 4-7: City counts of spill causes by number of spills (2018-2023).....	7
Figure 4-8: City counts of spill causes by number of spills (2018-2023).....	8
Figure 4-9: City sewer system budget data (2018-2023).....	9

Figure 4.1 below displays the City rolling average SSO rates (spills/100 miles/year) including a comparison with the Central Valley (Sacramento) Regional Water Board metrics during the SSMP Audit period (2018-2023).

Figure 4-1: City spill rate (rolling avg # of spills/100 miles/year, 2018-2023)

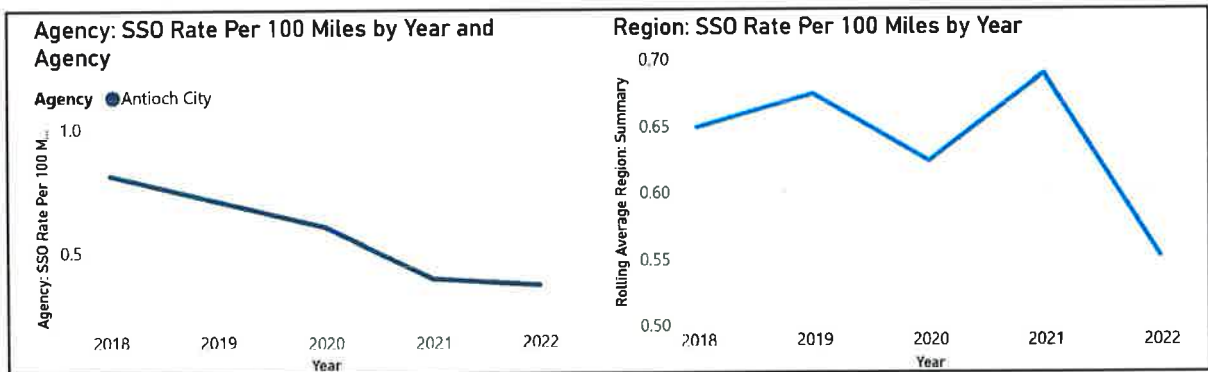


Figure 4.2 below displays the Central Valley Regional Water Board (Sacramento) rolling average SSO rates (spills/100 miles/year) during the SSMP Audit period (2018-2023).

Figure 4-2: Regional Water Board (Sacramento) rolling spill averages, 2018-2023

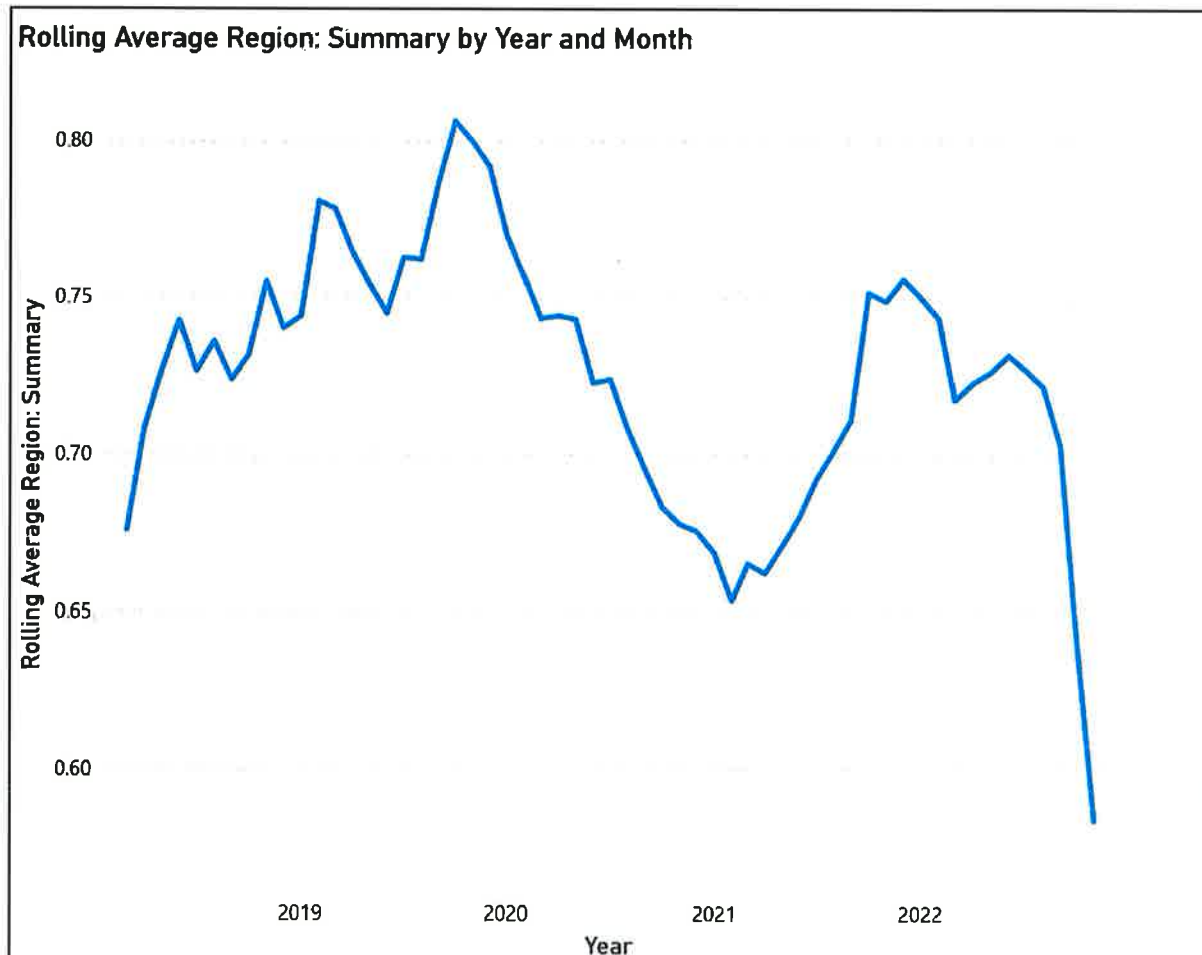


Figure 4.3 below displays the City spill volume by year and volume per capita during the SSMP Audit period (2018-2023).

Figure 4-3: City spill volume by year and per capita (2018-2023)

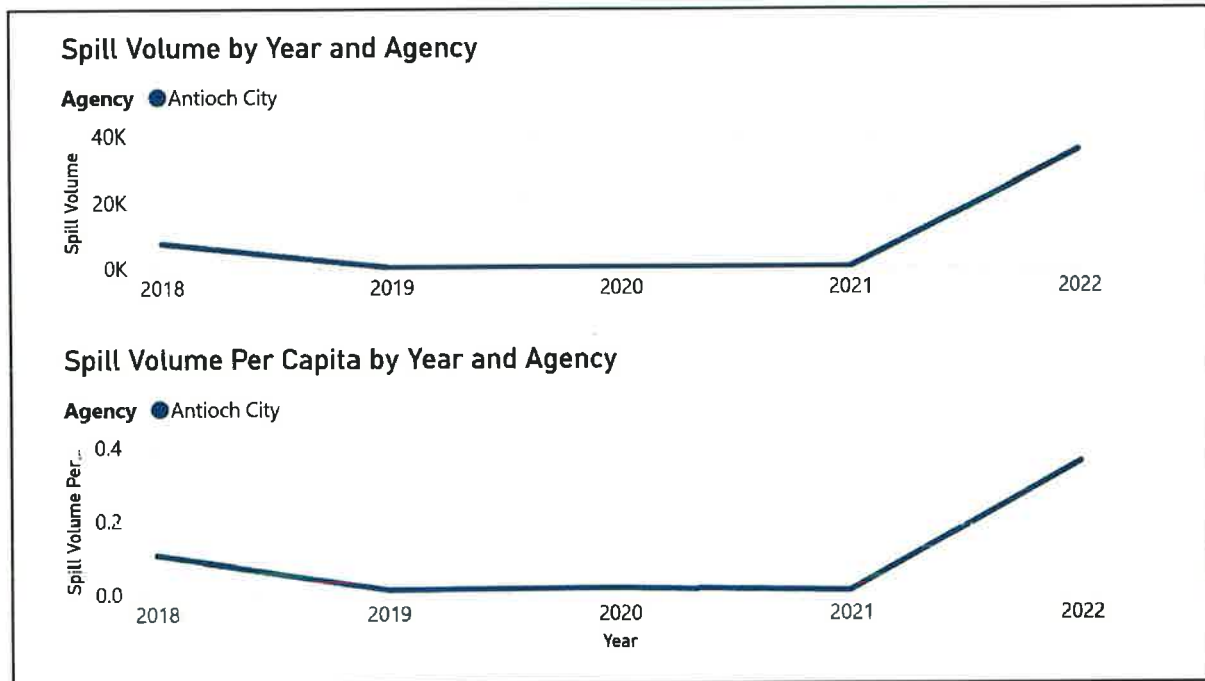


Figure 4.5 below displays the City spill volume recovered by spill types during the SSMP Audit period (2018-2023).

Figure 4-4: City spill recovery metrics by spill type (2018-2023)

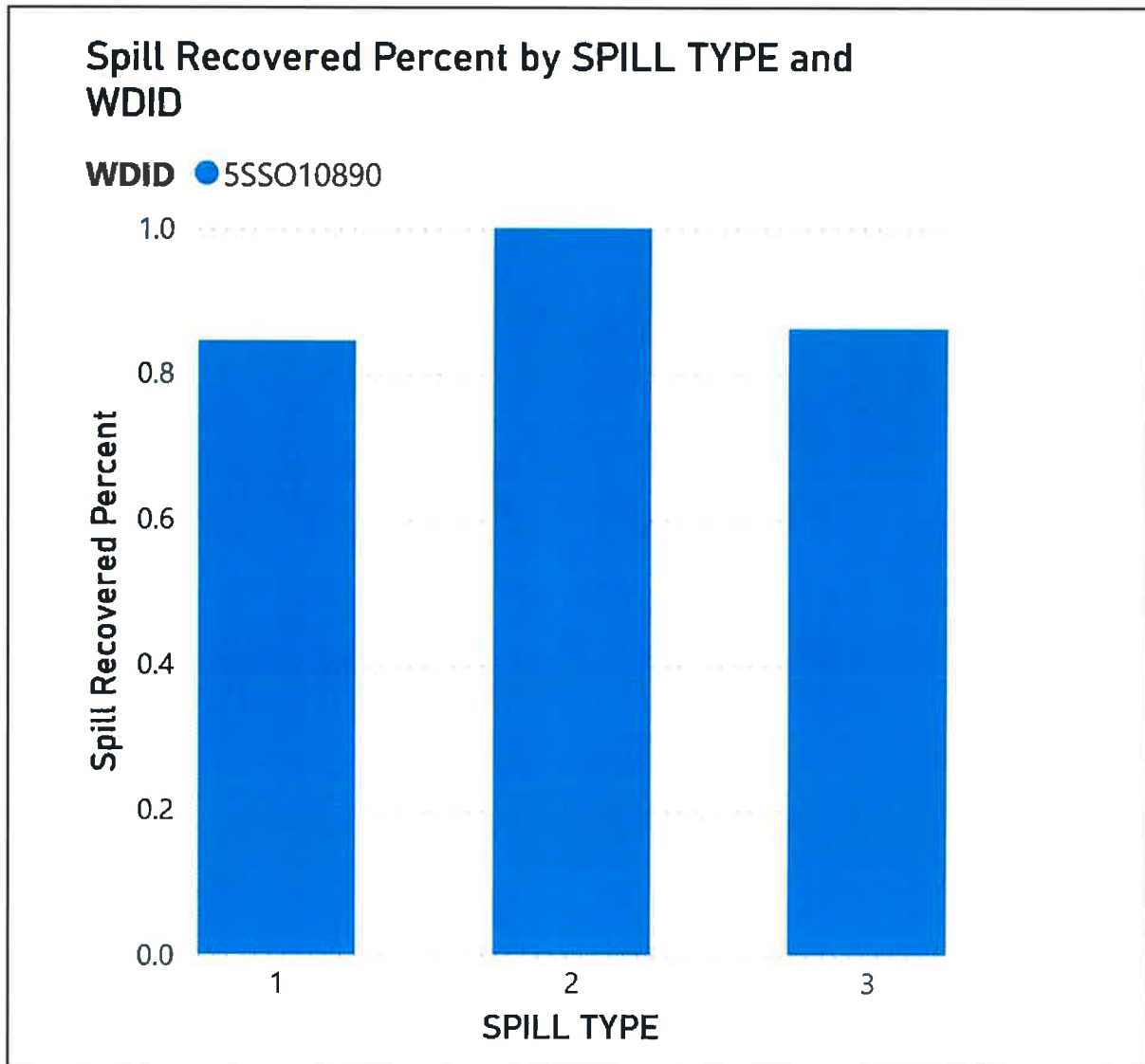


Figure 4.6 below displays the City counts of spill causes by number of spills during the SSMP Audit period (2018-2023).

Figure 4-6: City counts of spill causes by number of spills (2018-2023)

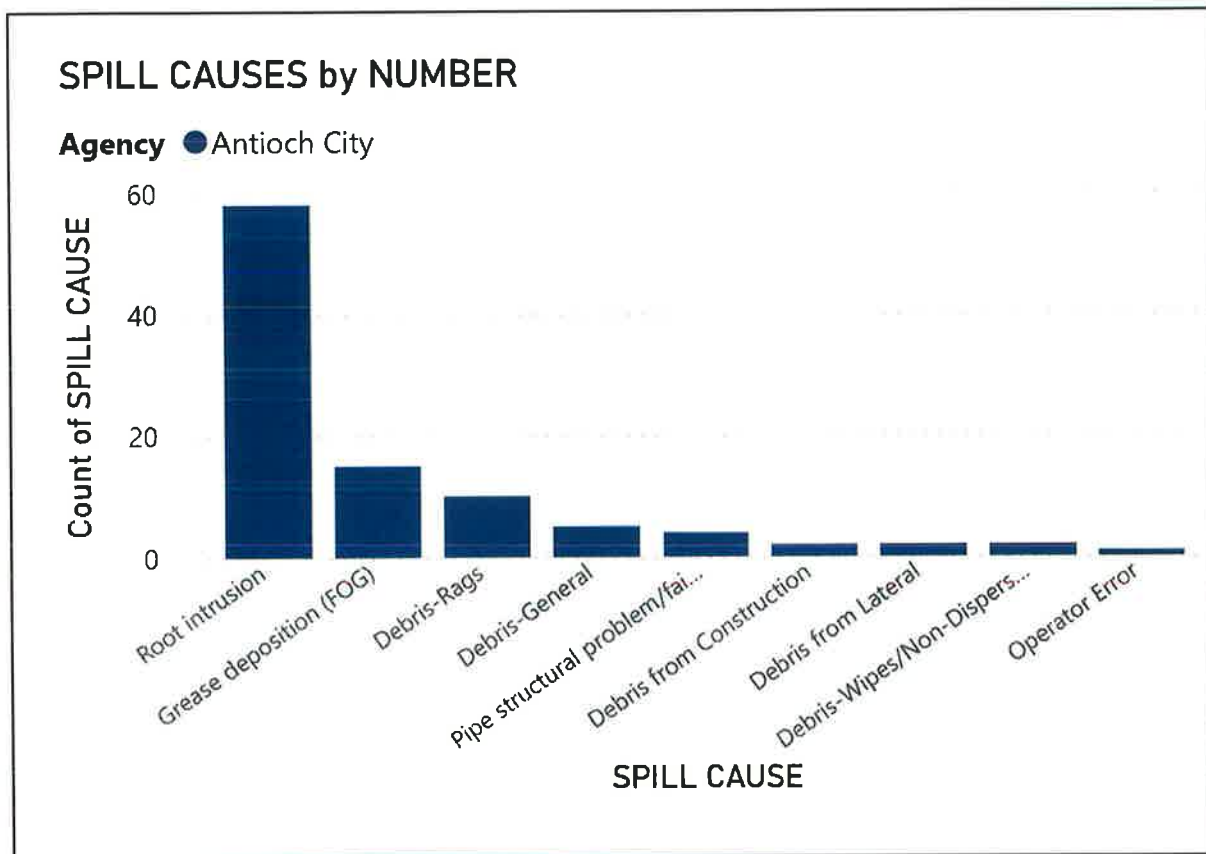


Figure 4.7 below displays the City counts of spill causes by volume of spills during the SSMP Audit period (2018-2023).

Figure 4-7: City counts of spill causes by number of spills (2018-2023)

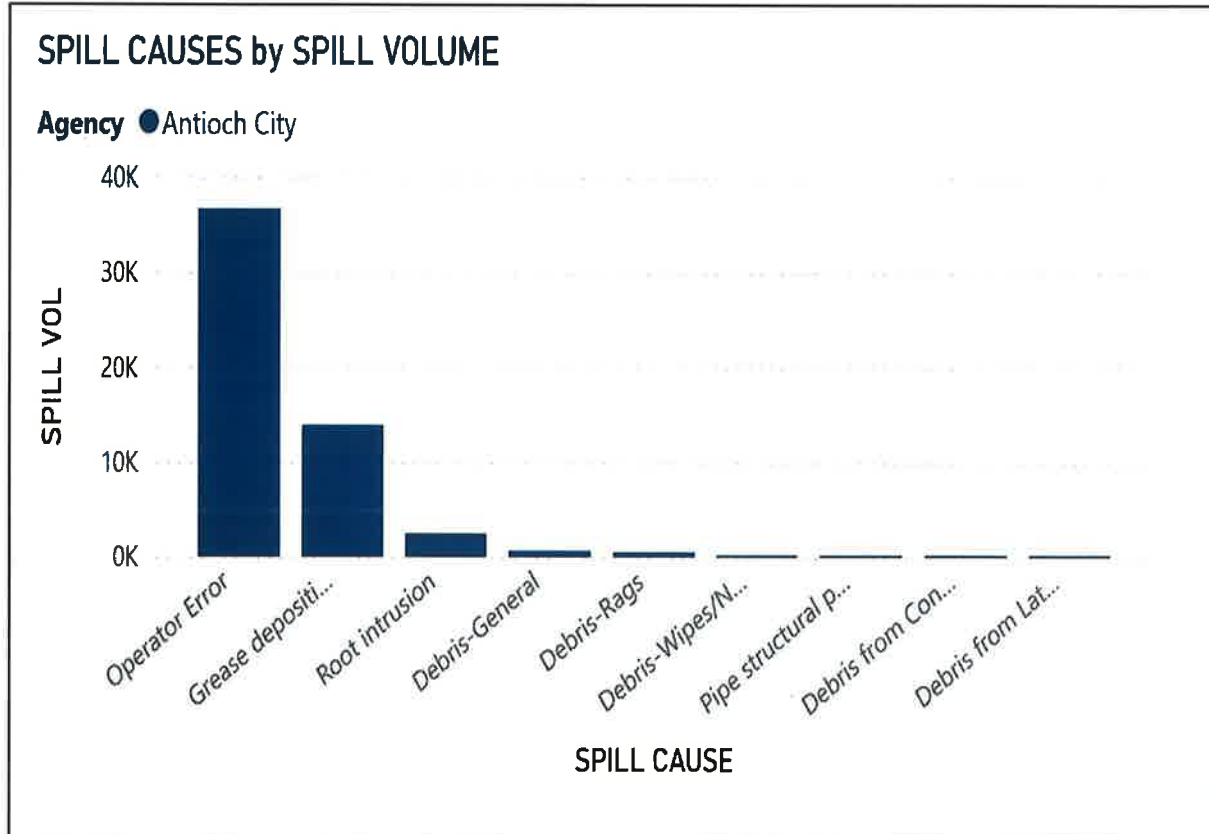


Figure 4.8 below displays the City counts of spill causes by where failures occurred during the SSMP Audit period (2018-2023).

Figure 4-8: City counts of spill causes by number of spills (2018-2023)

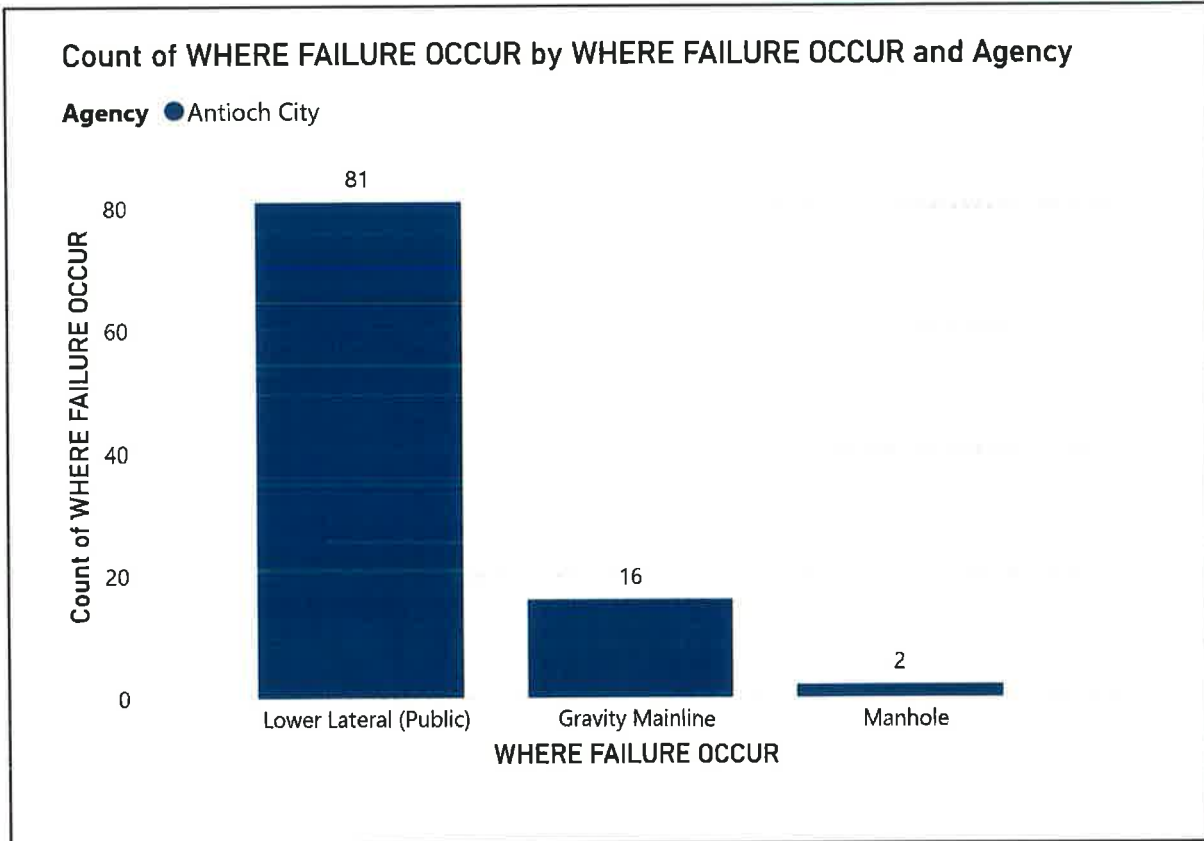


Figure 4.9 below displays City budget data for operations and maintenance (O/M) and capital improvements for the collection system during the SSMP Audit period (2018-2023).

Figure 4-9: City sewer system budget data (2018-2023)

