SEWER SYSTEM MANAGEMENT PLAN
for
Orange County Sanitation District

Volume I

Updated March 26, 2025

Prepared by:

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25	03/26/2025	EEC	• Updated to meet the new SSS WDR requirements

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CONTENTS

NOTE: APPENDICES ARE LOCATED IN VOLUME II OF THIS PLAN.

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ABBREVIATIONS / ACRONYMS

BMP	Best Management Practice
BREA	Business Risk Exposure Analysis
CASC	Countywide Area Spill Control
CCTV	Closed-Circuit Television
CIP	Capital Improvement Plan or Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CWEA	California Water Environment Association
ECAP	Environmental Compliance Awareness Program
EDAC	Engineering Department Advisory Council
EDMS	Electronic Document Management System
EMB	Electronic Map Book
EOMM	Electronic Operations and Maintenance Manual
ERP	Emergency Response Plan
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
FTP	File Transfer Protocol
GIS	Geographical Information Systems
GRD	Grease Removal Device
I/I	Inflow / Infiltration
LRO	Legally Responsible Official
MRP	Monitoring and Reporting Program
NASSCO	National Association of Sewer Service Companies
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
OCHCA	Orange County Health Care Agency
OC San	Orange County Sanitation District
OCSD	Orange County Sanitation District
OMaP	Operations Manuals and Procedures
Order	SWRCB Order No. 2006-0003-DWQ adopted May 2, 2006
PMP	Preventive Maintenance Program
R&R	Rehabilitation and Replacement
RWQCB	Regional Water Quality Control Board
SAWPA	Santa Ana Watershed Project Authority
SERP	Spill Emergency Response Plan
SOP	Standard Operating Procedure
SPU	Strategic Plan Update
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
WDR	Waste Discharge Requirements also referred to as the General Waste Discharge Requirements of the State of California

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EXECUTIVE SUMMARY

The Orange County Sanitation District (OC San) is required to comply with the State Water Resources Control Board Reissued Order No. 2022-0103-DWQ (Order) adopted December 6, 2022 and is effective on June 4, 2024, entitled Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Information on the State's Spill Reduction Program can be found at: http://www.waterboards.ca.gov/water_issues/programs/sso/index.shtml.

The purpose of the Order is to prevent sanitary sewer spills (spills) or sewer spills by establishing a statewide Monitoring and Reporting Program (MRP) and requiring each local or regional sewer agency to create and implement their own Sewer System Management Plan (SSMP) based on the mandatory requirements of the Order.

The MRP requires each local or regional sewer agency to appoint a legally responsible official (LRO) and establish a monitoring and reporting organization to monitor and report all spills in accordance with the requirements of the Order and to have the LRO certify the spill report using the California Integrated Water Quality System (CIWQS) website in the timeframe required by the Order. If no spills occur during the course of any given month, the LRO is required to fill out, certify and send via the CIWQS website a "No Spill Certification" documenting that there were no spills for the month reported.

To comply with the essence of this Order:

- OC San has enrolled and applied for coverage and agrees to comply with all conditions and provisions of this Order.
- OC San shall take all feasible steps to eliminate spills. In the event that a spill does occur, OC San shall take all feasible steps to contain and mitigate the impacts of a spill.
- In the event of a spill, OC San 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.
- OC San shall report all spills in accordance with Attachment E1 of the WDR.
- OC San shall properly, manage, operate, and maintain all parts of its sanitary sewer system, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
- OC San shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, and a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures are in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.

- OC San shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events.

This SSMP is organized similarly to Attachment D (SSM Required Elements) of the Order. Each section begins with a summary of the Order requirements, followed by these subsections:

- Compliance Summary – A description of how compliance was achieved;
- Compliance Documents – A listing of source documents that support compliance and the location of these documents; and,
- Roles and Responsibilities – A listing of relevant staff roles and responsibilities.

The SSMP has 11 mandatory elements in chapters 1 through 11. Chapter 1 includes the prohibitions of the WDR.

- **Chapter 1 – Sewer System Management Plan Goal and Introduction**: The goal is to prevent and/or reduce spills and contain and mitigate the effect of any spills that do occur. The goal requires a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer collection system. The introduction of the SSMP provides an update schedule for the SSMP and internal audits, and a sewer system asset overview.
- **Chapter 2 – Organization**: The SSMP must identify the LRO or authorized representative as described in the Order. It must list and identify the organization responsible for operating and maintaining the sanitary sewer collection system including names and telephone numbers for management, administrative and maintenance positions, organizational lines of authorities, and the chain of communication for reporting spills.
- **Chapter 3 – Legal Authority**: Each Enrollee must demonstrate through legally binding procedures such as ordinances, agreements, etc. that it possesses the necessary legal authority to do what is required by the Order.
- **Chapter 4 – Operation and Maintenance Program**: The SSMP must include those elements that are required by the Order that are appropriate and applicable to the sewer agency's system. Minimum requirements for the Operations and Maintenance Program include:
  - Maintaining an updated map of the sanitary sewer system
  - Implementing preventative operations and maintenance activities
  - Conducting training for staff
  - Maintaining an inventory of equipment
- **Chapter 5 – Design and Performance Provisions**: The SSMP must demonstrate that the sewer agency has and appropriately uses design and construction standards and specifications for the installation of new sewer systems, rehabilitation and repair of existing sewer systems and has procedures and standards for inspecting and testing the installation of new sewers, pumps, etc. and for rehabilitation and repair projects.
- **Chapter 6 – Spill Emergency Response Plan**: Each Enrollee shall develop and implement an Spill Emergency Response Plan that identifies measures to protect

public health and the environment and meets the minimum requirements of the Order.

- **Chapter 7 – Sewer Pipe Blockage Control Program**: Each Enrollee shall evaluate its sewer system and determine if a Sewer Pipe Blockage Control Program is needed. The Sewer Pipe Blockage Control Program, if needed, must meet all the requirements of the Order.
- **Chapter 8 – System Evaluation, Capacity Assurance and Capital Improvements**: The Enrollee shall prepare and implement a Plan that will provide adequate hydraulic capacity for the sewer collection system required by the Order. The Plan should include:
    - System Evaluation and Capacity Assessment
    - Capacity Assessment and Design Criteria
    - Prioritization of Corrective actions
    - Capital Improvement Plan (CIP)
- **Chapter 9 – Monitoring, Measurement, and Program Modifications**: The Enrollee shall maintain relevant information to establish and prioritize SSMP activities, monitor the implementation and measure the effectiveness of the SSMP activities, and provide assessment of the performance and/or modification of the SSMP activities as required by the Order. The SSMP must include an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement.
- **Chapter 10 – Internal Audits**: The Enrollee shall conduct periodic internal audits appropriate to the size of the sewer system and the number of spills. At a minimum, these audits must occur every three years as required by the Order. The audit at a minimum must include:
    - Evaluation of the implementation and effectiveness of the SSMP in preventing spills
    - Evaluation of the compliance with the Order
    - Identification of SSMP deficiencies in addressing ongoing spills and discharges to waters of the State
    - Identification of necessary modifications to the SSMP to correct deficiencies
- **Chapter 11 – Communication Program**: OC San 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 sewer agency and shall also create a plan of communication with other local sewer agencies that may be tributary or satellite to the sewer agency's sewer collection system. In addition, the communication system should notify the public for any spills that result in closures of public areas or impacts to drinking water.

This revision, which follows an SSMP audit (April 16, 2024), addresses many of the audit findings and recommended changes, as well as modifications to reflect OC San's current organizational practices and structure. Some of the more significant changes include:

- Updated revision log sheets for Volume I and Volume II Appendices,
- Updated program organization (**Appendix C**),
- Revised Asset Management Improvement Program is in progress (**Appendix H**)
- Updated the monitoring and reporting requirements (**Appendices P2 & P3**)
- The addition of 870-GEN-08 (Rev 01)_Spill Response (**Appendix Q2**),
- The addition of the Sewer Spill Estimation Guide to calculate spills (**Appendix R**),
- Clarification of the requirements of the auditor (**Appendix X2**),
- Inclusion of audit closeout memo (**Appendix Y**),
- Procurement of new CCTV software

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CHAPTER 1 – SEWER SYSTEM MANAGEMENT PLAN GOAL AND INTRODUCTION

This chapter describes the goal of the SSMP.

1.1 Introduction

Volume I (this document) provides a general description of how OC San complies with the various provisions of the Order and provides references to supporting documents. Volume II (Appendices to Vol I) contains specific information and supporting documents. Some supporting materials, such as the OC San Electronic Map Book, the electronic OC San Sewer Atlas, the OC San electronic Hydraulic Model, the OC San Design Guidelines, OC San Master Specifications and Standard Drawings, large format drawings, relational databases, and voluminous documents may not be physically included in the SSMP. In these cases, a reference is provided that indicates the type, owner, and location of these supporting materials.

This chapter describes the sewage discharge prohibitions and provisions as stated in the "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems."

1.2 Purpose

The purpose of the Order is to prevent sewer spills. OC San has prepared and will maintain the SSMP to support this purpose.

1.3 Goal

The goal of the SSMP is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

A copy of the Order and the certified SSMP is available to personnel operating and maintaining the OC San sanitary sewer system. A copy of the Order is also included as **Appendix A** in Volume II of this SSMP. Pursuant to California Water Code Section 13267(b), OC San will also comply with the spill "Notification, Monitoring, Reporting and Recordkeeping Requirements" established in Attachment E1 and E2 of the Order and all future revisions, included by reference in the Order. A copy of Attachment E1 and E2 is included in **Appendix B** of Volume II.

1.4 Sewer System Management Plan Update Schedule

OC San has met all the mandatory elements of the SSMP as specified in the SSMP Time Schedule below.

SSMP Task	Milestone Due/Completion Date
Application for Permit Coverage	Nov. 2, 2006
Reporting Program	Jan. 3, 2007
SSMP Development Plan and Schedule	August 2, 2007

Goal and Organization Structure	November 2, 2007
Overflow Emergency Response Program	November 2, 2008
Legal Authority	November 2, 2008
Operation and Maintenance Program	November 2, 2008
Grease Control Program	November 2, 2008
Design and Performance	May 2, 2009
System Evaluation and Capacity Assurance Plan	May 2, 2009
Final SSMP, incorporating all of the SSMP requirements	May 2, 2009
Audit of OC San's SSMP	October 17, 2010 April 25, 2013 July 31, 2015 May 2, 2017 May 2, 2019 April 13, 2021 April 16, 2024 April, 2027
OC San SSMP Update	May 2, 2017
OC San SSMP Update	March 26, 2025
Next OC San SSMP Update	May 2, 2031

1.5 Sewer System Asset Overview

OC San owns and operates wastewater collection system infrastructure, as well as two resource recovery and wastewater treatment facilities located in Fountain Valley and Huntington Beach. The OC San collection system infrastructure includes over 380 miles of regional trunk sewer pipelines and 15 pump stations throughout the OC San service area. Wastewater is conveyed to Reclamation Plant Number (No.) 1 in Fountain Valley and Reclamation Plant No. 2 in Huntington Beach. These facilities treat an average daily wastewater flow of 185 million gallons per day, serving over 2.6 million people in central and northern Orange County, California. An up-to-date map of the sanitary sewer system is maintained in GIS by OC San. Further descriptions of the mapping system is described in Section 4.1.

The 2023 Asset Management Program further describes the sewer system assets managed by OC San and is provided as **Appendix H** of Volume II.

1.6 Prohibitions

Per Section 4 of the Order, OC San is required to comply with the following prohibitions:

1.6.1 Discharge of Sewage from a Sanitary Sewer System

Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.

1.6.2 Discharge of Sewage to Waters of the State

Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.

1.6.3 Discharge of Sewage Creating a Nuisance

Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code section 13050(m) is prohibited.

1.7 Compliance Documents

The SSMP programs and policies pertaining to this section are included in the following documents:

- SWRCB Order No 2022-0103-DWQ (**Appendix A**)
- SWRCB Order No 2022-0103-DWQ Attachment E1 and E2 (**Appendix B**)
- 2023 Asset Management Program (**Appendix H**)

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CHAPTER 2 –ORGANIZATION

This chapter describes the OC San organizational staffing responsible for implementing the SSMP.

The Order requires that the SSMP include:

(a) The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this Order;

(b) The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific SSMP elements;

(c) Organizational lines of authority; and

(d) Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable.

2.1 Administrative and Maintenance Positions

The manager of the OC San Collection Facilities O&M Divisions is the OC San authorized representative or legally responsible official listed on the Notice of Intent and is responsible for the certification of spill reports involving the OC San sewer collection system.

2.1.1 Compliance Summary

OC San has provided sufficient staffing to operate the sewer system on a sustainable basis, and to comply with all requirements of this Order.

2.1.2 Compliance Documents

OC San has developed a Program Organizational Chart (**Appendix C**). Names with titles, SSMP responsibility, and phone numbers are included in the chart. The Organizational Chart also details the organizational lines of authority for OC San. On a routine basis, the chart is reviewed by OC San stakeholders and updated.

2.1.3 Roles and Responsibilities

Job descriptions for the positions listed in the organizational charts are available from the Human Resources Division. Primary responsibility for the day-to-day management and O&M of the collection facility assets resides within the Operations and Maintenance Department, and the daily field activities are managed by the Collection Facilities O&M Division. In addition, specific SSMP roles and document responsibilities are described in **Appendix C**.

2.2 Chain of Communication.

The Order requires the SSMP to contain a chain of communication for spill reporting, from receipt of a complaint or other information through reporting to the regulatory agencies.

2.2.1 Compliance Summary

OC San has a flow chart, Appendix P1, that shows the chain of communication for reporting spills. It starts with the receipt of a complaint or other information and includes the name and title of the person responsible for reporting spills from receipt at the OC San Control Center to the State of California CIWQS website, the Santa Ana RWQCB, OCHCA, and if required, Office of Emergency Services (OES).

The response flowchart is part of the Spill Reporting Guidelines developed to manage the reporting process and exists as a supplemental guide to be used with the current OC San Spill Emergency Response Plan. This flow chart is also known as the OC San Spill Response Flow Chart.

2.2.2 Compliance Documents

The organizational/procedural flow charts can be found in the following appendices for contacts and information provided in the chain of communication flow chart for reporting spills.

Appendix P1 of the SSMP Volume II includes the OC San Spill Response Flow Chart. This flow chart contains the chain of communication for reporting spills in compliance with the Order.

Appendix Q1 of the SSMP Volume II includes the OC San SERP. This plan is also required in compliance with Section D, paragraph 13 (vi) the Order.

2.2.3 Roles and Responsibilities

The roles and responsibilities of each position are described in detail in the documents listed above as well as in the appendices.

CHAPTER 3 – LEGAL AUTHORITY

This chapter describes the legal authority to implement the SSMP.

OC San must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

(a) Prevent illicit discharges into its sanitary sewer system (examples may include infiltration and inflow), unauthorized stormwater, chemical dumping, unauthorized debris and cut roots, etc.).

The inflow sources may include items such as sump pumps, roof leaders, yard and stairwell drains, satellite systems, or any other materials that adversely affect the performance of the collection system and/or the wastewater reclamation plants.

(b) Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure.

(c) Require that sewers and connections be properly designed and constructed.

(d) Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or operated by OC San.

(e) Enforce any violation of its sewer ordinance, service agreements, or other legally binding procedures; and

(f) Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

3.1 Compliance Summary

This SSMP complies with the Order requirements for legal authority under the following enacted ordinances/resolutions or agency policies.

(a) **Ordinance No. OCSD-53** "Wastewater Discharge Regulations" effective July 1, 2019, replacing "Waste Discharge Regulations" effective July 1, 2016. Article 2 of Ordinance No. OCSD-53 has general prohibitions, limits and requirements for discharge which apply to all users of the OC San sewer collection facilities. This Ordinance complies with and meets the minimum legal authority for OC San required by the General WDR.

(b) **The WDR requires that OC San sewers and connections** be properly designed and constructed. The design and construction requirements for OC San sewers are kept and managed by the OC San Engineering Department. These include the Engineering Design Guidelines, the CAD manual, the Master Specifications, Process Control Software Standards, Standard Drawings, and Instrumentation & Equipment

Tagging Information. The construction, inspection and testing of new lateral connections and bypass piping facilities is governed by the permit and related construction standards, and legally enforced through OC San's connection permit program through the Engineering Department, as authorized by OC San's Charter. Documentation for these requirements is located at the permit counter in the Engineering Department at OC San's Headquarters

OC San's Engineering Department develops and maintains construction standards for OC San pumping stations and collection system. These legally binding documents will also ensure that testing is conducted and baseline condition assessment completed for sewer system construction projects (air test, CCTV, pump station performance, etc.), and that procedures are in place to transfer the resulting test data to the end user. These should also require development and implementation of technical requirements and training standards for construction inspectors.

(c) To ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency OC San adopted Resolution No. OCSD 07-14: "Adopting a Policy Regarding Maintenance of Unobstructed Access to District Easements" on June 27, 2007.

(d) **In accordance with the enforcement provisions of its discharge ordinances, including OCSD-25 and OCSD-53,** OC San established and actively manages the source control function within the Resource Protection Division. This division of the OC San Environmental Services Department also enforces applicable sections of the State of California and United States of America state and federal laws relating to source control and violation of its sewer ordinances, resolutions, service agreements, or other legally binding documents.

3.2 Compliance Documents

The legal authority for enacting the SSMP programs and policies are included in the following documents:

- FOG Ordinance No. OCSD-25 (**Appendix E1**)
- Wastewater Discharge Regulations Ordinance No. OCSD-53 (**Appendix E2**)
- FOG Fee Resolution No. OCSD 05-04 (**Appendix E3**)
- Legal authority, as outlined in OC San's Charter, is on file in the OC San Clerk of the Board's office
- Construction contracts, standard testing and inspection requirements, Master Specifications section 02627 Manhole and Precast Vault Construction, other sections

3.3 Roles and Responsibilities

The roles and responsibilities for enforcement of the legal authority to enact the SSMP programs and policies is derived from acts of OC San's governing Board. Legal interpretation of the enabling state legislation giving authority to OC San is provided by OC San General Counsel.

During the course of implementing the FOG Source Control Program, programmatic changes are anticipated which may necessitate revision of FOG Ordinance No. OCSD-25 and FOG Fee Resolution No. OCSD 05-04. The OC San Resource Protection Division is responsible for periodically reviewing and updating these documents, as the need arises, to ensure that the legal authority is comprehensive and covers all aspects of the FOG Source Control Program.

Wastewater Discharge Regulations Ordinance No. OCSD-53 is OC San's main ordinance for regulating sewer use and wastewater discharges in the satellite cities and sewering agencies that drain to OC San's system. Additionally, there are discharges under contractual agreements, such as from the Santa Ana Watershed Protection Authority (SAWPA) and Los Angeles County Sanitation District (LACSD). Ordinance No. OCSD-53 includes agreements with SAWPA and LACSD and controlling inflow and infiltration and illegal connections to the system. The OC San Resource Protection Division is responsible for maintaining and updating or amending this ordinance.

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CHAPTER 4 – OPERATION AND MAINTENANCE PROGRAM

This chapter describes OC San activities regarding management of engineering data, maps of the sanitary sewer system, operations and preventive maintenance, training programs, and equipment and replacement part inventories. The Operation and Maintenance Program must include the items listed below.

(a) An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

(b) A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors. The scheduling system must include:

- Inspection and maintenance activities;
- Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
- Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

(c) In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of this General Order;
- The Enrollee's Spill Emergency Response Plan procedures and practice drills;
- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

(d) An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

4.1 Mapping

OC San maintains electronic models of facilities and assets. The concept with roles and responsibilities is described in Facility Model Maintenance Management Plan (**Appendix K1**).

- OC San Sewer Atlas – This is an electronic facility model that includes all of the sewer lines, manholes, diversion structures, force mains, siphons, force main valves, and pump stations of the OC San collection system. The Sewer Atlas can be viewed through a variety of methods. The sewers and manholes can be viewed with either a plain background or a photographic background with the streets and sewer lines superimposed over the background. Maintenance procedures for the Sewer Atlas are described in **Appendix K2**.

- Engineering Drawings Library and Laserfische – allows access to scanned image file of drawings generated from capital projects from the collection system.
- Enterprise-wide Geographical Information System (GIS) – an on-going program linking various heretofore independent database functions and related information graphically, to more easily find and correlate such things as easement documents with the electronic mapping information and cataloging of useful and connected information.

When discrepancies are identified between the field conditions and electronic records, staff complete the online Map Request Form (**Appendix K3**), and updates are made by the responsible party.

4.1.1 Compliance Summary

The asset inventory of all collection system assets is contained in OC San's GIS, which is maintained as part of OC San's Enterprise Information Management program. A subset of the asset register is contained in IBM Maximo which is a Computerized Maintenance Management System (CMMS). The CMMS-resident assets are those assets that have or may have scheduled maintenance activities associated with them to ensure their performance level is maintained, and that they reach their expected useful lives. The assets contained in the GIS, CMMS, and other asset-based data repositories (such as the Supervisory Control and Data Acquisition) are all connected by the use of unique identifiers known as structure ID's, which are associated with fixed process locations and equipment numbers. The collection system assets contained in the CMMS have various types of scheduled maintenance activities assigned to them; these activities may include any combination of investigation of problem, condition assessment, and preventive maintenance activities necessary to properly maintain the assets.

If necessary, OC San can provide the GIS shape files or access to the public maps to the State and Regional Water Board staff.

Every year OC San issues an updated Asset Management Plan that details asset management activities and identifies asset management improvement strategies and projects being considered by OC San. The current Asset Management Plan is contained in **Appendix H**.

Treatment Plant-related Operation and Maintenance manuals and Equipment Service Manuals have been put into an electronic format. Standard Operating Procedures have been developed and are routinely reviewed and updated. These renewed resources are made available to all OC San employees online through SharePoint and the OMaP system. Under the O&M Director's responsibility, OMaP is updated and expanded to match any changes made to plant processes and equipment.

4.1.2 Compliance Documents

The documents supporting compliance with the requirements for mapping are as follows:

- Integrated Emergency Response Plan (IERP) with copies located in the OC San Headquarters, the Control Centers and Emergency Operations Centers at Reclamation Plant No. 1 and Treatment Plant No. 2

- New Facility Atlas Discrepancy Form
- New Sewer Atlas Discrepancy Form
- Electronic Map Book and OC San Sewer Atlas
- Flow monitoring reports and records

Pump station and ancillary equipment drawings are on file in the Engineering Department. Copies of drawings are available for staff through the Engineering Department library. The Information Technology Department is responsible for maintaining the electronic version of all record drawings, and the Sewer Atlas.

4.1.3 Roles and Responsibilities

The annual budget document contains a chart that identifies the positions in general, and also those positions specifically responsible for OC San's collection system assets. The Enterprise GIS Business Unit is responsible for maintaining the OC San mapping systems. The Engineering Department is responsible for acquiring drawings during capital projects. The Operations and Maintenance Department identifies the management, supervision, and field positions that are responsible for identifying the various tasks required to support the proactive maintenance program for OC San assets. This information is posted on the OC San website and can be accessed at https://www.ocsan.gov/. Program responsibilities are also presented in **Appendix C**.

4.2 Preventive Operation and Maintenance Program

OC San has an on-going preventive and corrective maintenance program and is in the process of developing a comprehensive life-cycle asset management program. OC San has an IERP that includes procurement procedures and inventories for critical equipment under various scenarios. OC San's current reliability shows that the availability and stock levels of spare parts has been sufficient, and no changes are recommended.

OC San has prepared the PMP document, which covers the assets managed in the sanitary sewer system, and is based on an approach that combines predictive, preventive, and corrective maintenance strategies and established BMPs. Copies of the PMP and Collection Facilities O&M Vehicle Inventory are included in Volume II **Appendices I1** and **I2**, respectively.

One component of the PMP development process is the resource gap analysis. OC San continually reviews resource needs through the annual budget process, the asset management program, rehabilitation and replacement program, and capacity evaluations. The PMP also contains a review of existing business and work practices; this review is on-going. The work is focused on validating existing or making improvements to the current data management, data analysis, and supporting decision-making processes. This will ensure that the maintenance divisions provide consistent, effective, and efficient maintenance support for OC San assets. In light of the expanded maintenance program requirements, the current performance management processes will be reviewed to determine continued alignment; maintenance reports will be modified as needed.

4.2.1 Compliance Summary

The Collection Facilities O&M Division conducts various maintenance activities to maintain collection system assets. As part of the work order closeout process, all operational and structural condition information is recorded. This work history documentation is analyzed to identify potential

operational failures which could result in spills. Maintenance tasks might be added, deleted, or altered based on the analysis findings. Tasks might be altered by modifying the task work content, adjusting task intervals and/or adjusting task times to compensate for the adverse conditions found. Work order closeout procedures are in place to ensure that all work history is memorialized. As part of the preventive maintenance program analysis process, observations related to grease build-up within the sewer collection facilities pipelines are reported to the Resource Protection Division. The Resource Protection Division is then responsible for further investigations to determine the cause of the identified grease build-ups, as further addressed in Chapter 8 (Sewer Blockage Control Program).

4.2.2 Compliance Documents

Documents that support compliance of this section include the following:

- Preventive Maintenance Program (**Appendix I1**)
- Collection Facilities O&M Vehicle Inventory (**Appendix I2**)
- CCTV and condition assessment records

4.2.3 Roles and Responsibilities

The annual budget contains the chart that identifies the positions responsible for the Collection Facilities O&M Division program in place to support OC San's collection system assets. The charts for the Collection Facilities O&M Division are updated and published each year as a part of the budget process. The charts for the Collection Facilities O&M Division and the Plant 1 Maintenance Division identify the management, supervision, and field positions that are responsible for identifying the various tasks required to support the proactive maintenance program for OC San assets. The budget information is posted on the OC San website and can be accessed at https://www.ocsan.gov/.

4.3 Training Program

OC San regularly provides training for staff in collection system operations, maintenance, and monitoring, and requires that contractors' staffs are appropriately trained. This training is divided into two general parts: (1) Safety Training and (2) Technical Training. OC San training is documented using the online Cornerstone program.

4.3.1 Compliance Summary

OC San's staff currently participates in the California Water Environment Federation (CWEA) certification program for collection workers, Grades I through IV. OC San also participates in NASSCO certification program for pipeline and manhole assessment. OC San provides on-going in-house technical, job skills, and safety training for its staff.

OC San has an Spill Emergency Response Plan (SERP) Training procedure for all collection system maintenance technologists. This training and the OC San spill response training facility at Reclamation Plant No. 1 are also available for use by our satellite agencies. OC San also has developed training programs and SOPs for line cleaning, vactor truck operation, sewer grit removal and dumping, valve repair and replacement, pump station operation and maintenance, and other related tasks. SOP development and training are ongoing.

4.3.2 Compliance Documents

Technical training and supporting resources are centralized and managed by the Human Resources Employee Development Division for OC San. All records and documentation are available for review in the Human Resources Department.

The Human Resources Department maintains and updates all internal procedures for tracking training needs for CWEA Technical Certification certificate holders for Collection Facilities employees. The Collection Facilities Maintenance Business Unit maintains its SOPs.

4.3.3 Roles and Responsibilities

The OC San Human Resources Employee Development Division is responsible for maintaining and updating all OC San employee training records.

4.4 Equipment Inventory

OC San maintains an inventory of sewer system equipment and necessary replacement and spare parts.

4.4.1 Compliance Summary

The OC San CMMS maintains a list of rotating assets and the necessary replacement and spare parts for the ongoing operations and maintenance of the sewer collection system and assets. Additionally, each vehicle has a tools and parts inventory that is assigned to that specific vehicle. Available inventory is reviewed on a regular basis. In addition to the CCMS inventory, copies of the Collection Facilities O&M Vehicle Inventory are included in Volume II **Appendix I2**, respectively.

4.4.2 Compliance Documents

- Collection Facilities O&M Vehicle Inventory (**Appendix I2**)

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CHAPTER 5 – DESIGN AND PERFORMANCE PROVISIONS

This chapter references the OC San Engineering Design Standards (Guidelines, Master Specifications, Standard Drawings, etc.) for new sanitary sewer systems, pump stations, and other appurtenances, and for the rehabilitation and repair of existing sewer systems.

The OC San Design and Performance Provisions must include the following items as appropriate and applicable to the sewage collection system.

(a) Updated design criteria and construction standards and specifications for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria.

(b) Procedures and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

5.1 Compliance Summary

Requirements for design, construction, inspection, quality assurance, and commissioning of new and rehabilitated facilities are available for viewing in SharePoint on the OC San intranet. The sanitary sewer requirements are also available as a standalone document titled OC San Design and Construction Requirement for Sanitary Sewers (an excerpt from the OC San Engineering Design Guidelines). The Standards are updated per the dedicated management of change process that requires each standard to be updated on an on-going basis in regard to best industry practices and/or technology changes applied to a broad spectrum of projects and lessons learned.

5.2 Compliance Documents

Documents used for design and performance evaluations include the following:

- OC San Master Specifications, Design Guidelines, and other OC San Design Standards;
- Standard Specifications for Public Works Construction (Greenbook);
- Codes and Standards of trade organizations (NFPA, ASTM, IEEE, etc.);
- Applicable federal, state and local laws and regulations, e.g.: CA Code of Regulations, Title 8 (Cal/OSHA), Title 24 (California Building Codes);
- Inspection reports, test reports, and contractor certifications

5.3 Roles and Responsibilities

The designated design group supervisor manages the standards update and implementation processes under the general oversight by the Engineering Manager and Construction Manager. Proposed updates to the Standards can be based on recommendations made by OC San Project Managers who submit "lessons learned" during each project and/or are developed by designated editors to reflect the latest technology improvements, industry practices, and federal, state and local laws and regulations. In addition, any OC San employee may propose a change at any time.

Significant proposed changes to the Standards (e.g., new standards, significant philosophy changes, global updates, etc.) are submitted to the Engineering Department Advisory Council (EDAC) for review/comment/approval. The EDAC meets periodically and includes the managers and supervisors of those Engineering Department divisions involved daily in planning, design, and construction, as well as stakeholders from other OC San divisions. Less significant changes do not require EDAC's approval and are published by the Engineering and Construction Division as they are finalized.

CHAPTER 6 – SPILL EMERGENCY RESPONSE PLAN

OC San has developed an Spill Emergency Response Plan (SERP) that identifies measures to protect public health and the environment.

6.1 Compliance Summary

OC San maintains a SERP which is updated as needed by the Collection Facilities O&M Supervisor and reviewed and approved by the division Manager. SOPs are also updated by the Collection Facilities O&M Supervisor for Emergency Response for Spills and Spill Containment. SOPs for notification are updated as needed by the Environmental Compliance staff and approved by their division Manager. The SERP includes, but is not limited to the following items:

(a) Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;

(b) Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;

(c) Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;

(d) Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;

(e) Address emergency system operations, traffic control and other necessary response activities;

(e) Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;

(f) Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;

(g) Remove sewage from the drainage conveyance system;

(h) Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;

(i) Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;

(j) Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;

(k) Conduct post-spill assessments of spill response activities;

(l) Document and report spill events as required in this General Order; and

(n) Annually, review and assess effectiveness of the SERP, and update the Plan as needed.

Note: Spill sampling, if conducted, is performed by the OCHCA. In some instances, OCHCA may request that OC San conduct sampling. The first responders from the Collections Division carry equipment to collect samples if necessary. The Environmental Laboratory also provides sample

collection kits, sampling SOPs, and provided training to the Collections Divisions so staff can collect samples when needed.

OC San maintains a spill response training facility that safely simulates (by using potable water) a spill on a typical city street and allows staff to prepare for the real event, from initial notification to spill report documentation. **Appendix R** of Volume II contains guidance for calculating spill volumes and training for the spill simulation. Ongoing training (first responders and shop tailgate meetings) occur monthly, and staff is trained in traffic control every two years. OC San allows its satellite cities and sewer agencies to utilize this training facility.

6.2 Compliance Documents

The compliance documents are as follows:

- Spill Emergency Response Flow Chart (**Appendix P1**);
- Environmental Compliance Spill Response Procedure (**Appendix P2**);
- Spill Notification Procedures (**Appendix P3**);
- Spill Emergency Response Plan (**Appendix Q1**);
- SOPs for Spill Emergency Response and Spill Containment (**Appendix Q2**);
- Risk Management Program (**Appendix S**)

6.3 Roles and Responsibilities

Information on the positions, roles, and responsibilities is included in the documents listed above and **Appendix C**.

CHAPTER 7 – SEWER PIPE BLOCKAGE CONTROL PROGRAM

Prior to implementation of the Sewer Pipe Blockage Control Program, OC San contracted the services of a consultant to conduct a study to establish the building blocks for an effective Fats Oils and Grease (FOG) source control program. The study, known as the Phase I Report (available from OC San's Resource Protection Division) was completed in July 2003 per the Regional Board 8 WDR Order. The report presented twelve potential building blocks along with a draft ordinance which eventually served as the blueprint for OC San's FOG Control Program as well as the countywide FOG control effort executed through OC San's satellite cities and sewer agencies.

To limit the discharge of FOG and other debris that may cause sewer collection system blockages or spills, and in compliance with the SWRCB Order No. 2006-0003-DWQ Order, adopted May 2, 2006, OC San has prepared and implemented the following elements into their Sewer Pipe Blockage Control Program effort:

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of pipe-blocking substances;

(b) A plan and schedule for the disposal of pipe-blocking substances 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 substances generated within a sanitary sewer system service area;

(c) The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;

(d) Requirements to install grease removal devices (GRD, such as traps or interceptors), design standards for the GRDs, maintenance requirements, BMP requirements, and record keeping and reporting requirements;

(e) Authority to inspect grease-producing facilities, enforcement authorities, and whether OC San has sufficient staff to inspect and enforce the FOG ordinance;

(f) An identification of sanitary sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section (OC San's Collection Facilities Division of the Operations & Maintenance Department is responsible for maintenance scheduling); and

(g) 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.

7.1 Compliance Summary

To address the WDR Order, OC San passed a FOG Ordinance (**Appendix E1**) to establish the legal authority to prohibit Food Service Establishments from discharging FOG to the sewer system. The Ordinance for Wastewater Discharge Regulations (**Appendix E2**) provides the uniform requirements for users of OC San's facilities. The resolution to establish fees for the FOG Program is included in **Appendix E3**. In addition, OC San assembled a model FOG source control program using the building block components identified in the Phase I Report and developed an enforcement

management system to resolve noncompliance issues in a fair and consistent manner. For a detailed discussion of the program and its development see "Fats, Oils, and Grease Source Control Program and Enforcement Management System," **Appendix F** and "Basis for Program Development, Program Components, and Policies," **Appendix G1** in SSMP Volume II.

To limit the discharge of FOG and other debris that may cause blockages; OC San established two comprehensive policies regarding limitation of the discharge of FOG into the OC San sewer collection facilities. These are: (1) Ordinance No. OCSD-25 "Fats, Oils, and Grease (FOG) Ordinance For Food Service Establishments", effective January 1, 2005; and (2) Resolution No. OCSD 05-04 "Establishing Fats, Oils, and Grease Control Program Fees Applicable To Food Service Establishments", effective May 1, 2005. Together these ordinances and policies provide OC San with the legal authorities necessary to limit FOG and debris entering the OC San sewer collection system.

The majority of the OC San service area is comprised of larger diameter trunk sewer lines that are not typically prone to pipe-blocking substances. Smaller diameter sewer lines are monitored and cleaned on a regular frequency per the Operations and Maintenance Program established schedules. As needed root treatment is used in areas of heavy root growth, and OC San has established an effective What 2 Flush campaign to reduce the accumulation rags and wipes that could block sewer lines or affect sewer lift stations.

As a regional agency with trunklines throughout Orange County, OC San shares overlapping operational authority throughout the cities and sewer agency districts within the county. In general, OC San owns and maintains the larger trunklines while the cities and agencies that form OC San, own and maintain the smaller laterals. OC San relies on the cooperation and resources of the 27 satellite cities and agencies to maintain the smaller laterals and to implement FOG control programs for the FSEs that discharge directly to the local collection systems. Beginning May 2006, each city or sewer agency was required to comply with the statewide WDR Order, and consequently, each agency needed to develop and implement a FOG control program which suited its individual conditions and needs. Though the specifics vary, the programs generally follow the basic approach of prohibiting FOG discharges and mandating the use of kitchen Best Management Practices (BMPs) at the FSEs in their jurisdictions. **Appendix G3** summarizes the program elements implemented by the various satellite cities and sewer agencies and provides a contact list for each agency and city.

In 2005, as the primary owner of both regional and local sewer lines in northwest Tustin, OC San assumed responsibility for initiating the FOG control commercial program and residential outreach in that area. OC San remained the administrating authority until April 13, 2016 when the Orange County Local Agency Formation Commission approved East Orange County Water District's (EOCWD) application to accept the transfer of the sewers within OC San's Service Area 7 and several adjacent unincorporated areas of Orange County. The transfer of all assets was completed in August 2016. This change in ownership affected the responsibility for implementing the FOG control program in the service area. As of the transfer, EOCWD became the administering authority for the FOG control program in the northwest Tustin area. OC San continues to manage a limited FOG control program for approximately 40 food service establishments that discharge directly into OC San-owned trunklines in the City of Orange.

In January of 2006, OC San and 12 other satellite cities and agencies entered an agreement with OCHCA (see SSMP Volume II, **Appendix G2** for a copy of the agreement) to expand the normal FSE health inspection protocols to include FOG control elements. These inspections consist of providing FOG control literature to the FSEs as well as generating a list of noncompliance observations on several program elements including the presence of a garbage disposal, missing drain screens, grease disposal records, missing signage, improper FOG disposal, missing grease recycling container, and lack of BMP training records. OCHCA efforts on behalf of the participants do not include enforcement or follow-up for noncompliance, or grease trap monitoring. In July of 2011, all sewer assets in the City of Yorba Linda were transferred to the Yorba Linda Water District, which assumed the FOG control responsibilities for that city. In July 2013, the Yorba Linda Water District ended their involvement in the OCHCA FSE program. The Sunset Beach Sanitary District and the Midway City Sanitary District ended their involvement in the OCHCA FSE program in February 2019 and February 2020 respectively. As the current administering authority for the northwest Tustin area, EOCWD joined OC San and the 9 other cities and agencies still using OCHCA inspections.

The following table details the eleven cities and agencies that participate in the OCHCA program as part of their FOG control strategy.

Anaheim	Fountain Valley	Placentia
Buena Park	La Habra	Santa Ana
Costa Mesa Sanitary District	Orange	Villa Park
East Orange County Water District	Orange County Sanitation District	

Satellite cities and agencies not shown on this list manage their own FOG programs and are also subject to OC San's Legal Authority provisions.

7.2 Compliance Documents

- FOG Ordinance No OCSD-25 (**Appendix E1**)
- The Ordinance for Wastewater Discharge Regulations (**Appendix E2**)
- The resolution to establish fees for the FOG Program (**Appendix E3**)
- FOG Source Control Program and Enforcement Management System (**Appendix F**)
- FOG Source Control Program, Basis for Program Development, Program Components, and Policies (**Appendix G1**)
- FOG Control Study, Phase I and Phase II Report (located in the Environmental Compliance Division)
- Agreement for Provision of Environmental Health Services Between County of Orange and Orange County Sanitation District (**Appendix G2**)

7.3 Roles and Responsibilities

OC San's Collection Facilities Division of the Operations & Maintenance Department has a program to identify sections of the collection system subject to blockages, and a schedule for trouble-spot cleaning as part of the preventive maintenance program. The review of existing trouble-spot conditions is a continuous process conducted as part of the cleaning program. Trouble-spots that can be attributed to FOG are reported to the Resource Protection Division for investigation and mitigation. The Collection Facilities and Resource Protection staff collaboratively developed procedures to ensure the timely reporting of trouble-spot modifications such as the discovery of a new trouble-spot or a change in the maintenance frequency of an existing site. In turn, the Resource Protection Division forwards information related to the investigation and mitigation of trouble-spots back to the Collections Facilities O&M Division so the appropriate adjustments can be made to the cleaning activities at that location.

OC San's Resource Protection Division is responsible for reviewing and updating the FOG Source Control Program and Enforcement Management System as the program evolves.

The Public Affairs Office creates communication pieces to share the Fats, Oil, and Grease (FOG) program messaging across various communication platforms. Regular updates are included in the OC San Connection newsletter which is distributed electronically to approximately 3,000 subscribers on a quarterly basis. Outreach toolkits that are FOG specific are also created at least once a year and distributed to our member agencies to use in their communication channels such as social media, website, and newsletters. FOG is also routinely featured in our social media posts and discussed during community outreach events throughout our service area.

CHAPTER 8 – SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

OC San has prepared and implemented a Plan that provides hydraulic capacity of key sewer system elements under peak flow conditions, as well as the appropriate design for storm or wet weather events. At a minimum, the Plan includes the following:

(a) **System Evaluation and Condition Assessment:** The Plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;
- Identify and justify the amount (percentage) of its system for its condition to be assessed each year;
- Prioritize the condition assessment of system areas that:
  - Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
  - Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
  - Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;
- Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods;
- Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;
- Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
- Identify system assets vulnerable to direct and indirect impacts of climate change, including, but not limited to, the following: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

(b) **Capacity Assessment and Design Criteria:** The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;
- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

(c) **Prioritization of Corrective Action:** The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

(d) **Capital Improvement Plan:** The capital improvement plan must include the following items:

- Project schedules including completion dates for all portions of the capital improvement program;
- Internal and external project funding sources for each project; and
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies.

8.1 Compliance Summary

OC San has an established Plan that includes the following:

- **System Evaluation and Condition Assessment:** The portions of the collection system that could experience or contribute to an spill caused by hydraulic deficiency have been identified in the Collections Capacity Evaluation Study's Master Plan Update Report (MPU), completed December 2019. The MPU utilized InfoWorks ICM modelling program to quantify the peak flows associated with conditions that are known to cause overflow events such as inflow and infiltration from storms. The capacity of pump stations and force mains during peak wet weather events were estimated and hydraulic deficiencies of pipelines were identified for further study. Collections Operations and Maintenance implement a CCTV program of pipelines and manholes that is consistent with PACP and MACP standards allowing the condition of the sewer pipes and manholes to be consistently ranked and the necessity of subsequent rehabilitation or replacement efforts to be prioritized.
- **Capacity Assessment and Design Criteria:** OC San has established design documents to ensure adequate capacity. Each of the projects included in OC San's CIP program reference OC San's design documents as a starting point for detailed

design effort. Collectively the design documents are design guidelines, master specifications, and standard drawings. These documents are periodically reviewed and revised as the agency's knowledge base grows. Additionally, the 2019 MPU established the design criteria for capacity deficiencies under dry and wet weather conditions. The MPU also establishes standards for the capacity of pump stations, evaluated low ground elevations and related wet well operating points.

- **Prioritization of Corrective Action:** OC San has established a CIP to prioritize identified hydraulic deficiencies. The CIP includes project cost estimates, project prioritization, alternatives analysis, and construction schedules. The prioritization of corrective actions most importantly considers the severity and consequences of potential spills in areas where projects have been identified.
- **Capital Improvement Plan:** This CIP is updated annually by the Engineering Planning Division. The updates describe any significant changes in proposed actions and/or implementation schedules and will include information on the performance of measures that have been implemented.

OC San's CIP assures that older facilities are upgraded as needed to ensure adequate capacity through the system. These programs are formally addressed and described more extensively in the Capacity Evaluation Plan, which was submitted in December 2019 (amended thereafter; please see date on approved document), and is included as **Appendix M**.

OC San works under annual and long-range plans that have proven effective, and OC San is not currently experiencing capacity-related problems. Indications of possible capacity problems seen by the Collections Facilities O&M Division are brought to the attention of the Engineering Department for further evaluation.

8.2 Compliance Documents

The documents used for system evaluation and capacity assurance are as follows:

- Monthly Spill Reports
- Source Control Annual Report
- Flow Data
- Asset Management Plan
- System Evaluation and Capacity Assurance Plan (**Appendix M**)
- FY2024-25 and 2025-26 Budget, adopted June 26, 2024 (This document contains the sewer system's Capital Improvement Program)
- OC San Collections Capacity Evaluation Study's Master Plan Update, completed December 2019 (This document contains the latest capacity evaluation for the sewer system)
- Computerized Maintenance Management System Database

8.3 Roles and Responsibilities

The CIP development, including capacity assurance, implementation, and update, are the responsibility of various OC San divisions and departments but are headed up by the Engineering Planning Division. Information on the CIP budget process and the roles and responsibilities of each department are included in **Appendix U**.

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CHAPTER 9 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This chapter describes OC San measures and activities.

(a) Maintain relevant information, including audit findings, to establish and prioritize appropriate SSMP activities;

(b) Monitor the implementation and, where appropriate, measure the effectiveness of each SSMP element;

(c) Assess the success of the preventive operation and maintenance activities;

(d) Update program procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and

(e) Identifying and illustrating spill trends, including frequency, location, and estimated volumes.

9.1 Compliance Summary

OC San has been reporting and keeping statistics on all spills for over a decade and has been monitoring some nationwide statistics. Although some elements of the measurement portion of the program have not yet been developed, they will likely include a spill-trending metric in the future.

OC San utilizes the State of California's CIWQS database and mapping to track and illustrate trends of spills. OC San identifies the root cause of a spill, such as structural problems, capacity, type of debris, pumping facility component failure as these and other indicators are of value in monitoring the effectiveness of the program and making improvements. If necessary, projects will be developed to rehabilitate or replace system components based on sound asset management decisions.

OC San has identified desired levels of service in our Board-adopted Strategic Plan related to sewer spills, when they do occur:

- < 2.1 Sanitary sewer spills per 100 miles
- Respond to collection system spills within 1 hour

In addition, Safety goals are established for each division through the use of a Safety Scorecard. The score is determined through staff completion of required training, documentation of safety incidences in a timely manner, inspections of work areas on a quarterly basis, and regular reporting of near-miss incidents. All OC San staff are part of this program, including the Collection Facilities O&M Division. In the event the safety metrics or OC San levels of service are altered, the Collection Facilities O&M Division will utilize the most current goals.

9.2 Adaptive Management

OC San monitors the implementation effectiveness of the SSMP elements through review at OC San stakeholder meetings. OC San will also work to ensure that OC San remains in compliance with the WDR and make changes and updates to its SSMP, as necessary, based on audit evaluations.

9.3 Compliance Documents

The documents used for monitoring, measurement, and program modification requirements are as follows:

- Sewer System Management Plan
- Flow Data
- OC San Asset Management Plan
- Monthly Spill Reports and Maps of Spills
- Current CMMS database showing work planned, completed and findings
- OC San GIS

9.3 Roles and Responsibilities

The Environmental Compliance Division has responsibility for the spill reporting process, record keeping, internal audits, and updating the reporting procedures. Other roles are as follows:

- Sewer Level of Service – Collection Facilities O&M Division
- WDR Stakeholder Team – throughout OC San
- WDR and SSMP Internal Audit Oversight
- OC San Agency-wide Asset Management Team

CHAPTER 10 – INTERNAL AUDITS

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. **Within six months after the end of the required 3-year audit period**, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of the General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At a minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators' input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

10.1 Compliance Summary

OC San has an internal audit program that covers the WDR and its elements. OC San's Environmental Auditing Program Manager hires a third-party auditor to conduct repeating agency-wide audits. Strategies to correct deficiencies, if identified, will be developed by the responsible OC San division with assistance from OC San's WDR stakeholders.

OC San meets with their satellite cities and agencies and discusses collaborative auditing approaches, training, and lessons-learned, pending the availability of resources.

10.2 Compliance Documents

The documents used for audit evaluations include the following:

- OC San Environmental Auditing Program Procedures Manual (**Appendix X1**)
- OC San Internal Audit Finding Forms(**Appendix X2**)

10.3 Roles and Responsibilities

The positions, roles, and responsibilities of the audit staff are as follows:

OC San internal environmental audits are conducted following guidelines established in the "Environmental Audit Program Guidance Manual." Audits are conducted by 1) a certified environmental auditor or 2) an individual who can demonstrate sufficient expertise in the field being audited. The Environmental Auditing Program Manager has the responsibility of hiring a third party to conduct the audits. Deficiencies identified as a result of the audit are brought to the attention of each responsible OC San stakeholder. Deficiencies and suggested corrective actions are identified, verified, and documented by the third-party auditor using the Audit Finding Form and posted on the OC San internal website under Environmental Compliance, ECAP, and Environmental Auditing. The WDR Subject Matter Expert is responsible for following up with WDR stakeholders to close the findings and notifying the Environmental Auditing Program Manager to upload document in the OC San internal website.

CHAPTER 11 – COMMUNICATION PROGRAM

OC San 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 OC San as the program is developed and implemented. The Plan must include procedures for OC San to communicate with:

- The public for:
  - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
  - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

11.1 Compliance Summary

OC San will communicate on a regular basis with interested parties on the implementation and performance of this SSMP. The communication program allows interested parties to provide input as the program is developed and implemented.

OC San has complied with this requirement through hosting numerous meetings, presentations, workshops, utilizing OC San's website and social media tools as a resource for disseminating information. OC San staff and local city/agency staff meet routinely as part of the CA WDR Steering Committee and the SoCal WDR Group.

11.2 Compliance Documents

Information regarding the WDR/SSMP can be found on OC San's website at the following address https://www.ocsan.gov/. The website offers documents available as viewable and/or downloadable files: the entire site is searchable and reports can be accessed by utilizing key words such as "Spill, WDR, SSMP, Sewer System Management Plan." Information can also be accessed via the drop-down menu, section entitled "Public Information" under "Documents and Reports." Sample screens from the website are included as **Appendix V.**

11.3 Roles and Responsibilities

OC San will continue with its commitment to communicate regularly with and allow input from interested parties on the development, implementation, and performance of its SSMP. OC San communicates with its constituents by continually updating and improving the information on the OC San website.

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