
SEWER SYSTEM MANAGEMENT PLAN
for
Orange County Sanitation District

Volume I

Updated [July 18, 2022](#)

Prepared by:



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REVISION HISTORY– UPDATED 09/26/22

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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
IERP	Integrated Emergency Response Plan
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
SOP	Standard Operating Procedure
SPU	Strategic Plan Update
SSO	Sanitary Sewer Overflow and any sewer spill or overflow of sewage
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 Order No. 2006-0003-DWQ adopted May 2, 2006, entitled Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.” Information on the State’s SSO 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 Overflows (SSO) 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 and establish a monitoring and reporting organization to monitor and report all SSOs in accordance with the requirements of the Order and to have the LRO certify the SSO report using the California Integrated Water Quality System (CIWQS) website in the timeframe required by the Order. If no SSOs 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 SSOs 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 SSOs. In the event that an SSO does occur, OC San shall take all feasible steps to contain and mitigate the impacts of an SSO.
- In the event of an SSO, 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 SSOs in accordance with Section G 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 paragraph D (Provisions) 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 2 through 12. Chapter 1 discusses the prohibitions and provisions of the WDR.

- **Chapter 1 – Prohibitions and Provisions:** This chapter describes the sewage discharge prohibitions and provisions as stated in the “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.”
- **Chapter 2 – Goal:** The goal is to prevent and/or reduce SSOs and mitigate the effect of any SSOs that do occur. The goal requires a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer collection system.
- **Chapter 3 – 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 and the chain of communication for reporting SSOs.
- **Chapter 4 – 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 5 – 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.
- **Chapter 6 – 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 7 – 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 and meets the minimum requirements of the Order.
- **Chapter 8 – FOG Control Program:** Each Enrollee shall evaluate its sewer system and determine if a Fats, Oils and Grease control program is needed. The FOG control plan, if needed, must meet all the requirements of the Order.

- **Chapter 9 – System Evaluation and Capacity Assurance Plan:** The Enrollee shall prepare and implement a Capital Improvement Plan that will provide adequate hydraulic capacity for the sewer collection system required by the Order.
- **Chapter 10 – 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.
- **Chapter 11 – SSMP Program Audits:** The Enrollee shall conduct periodic internal audits appropriate to the size of the sewer system and the number of SSOs. At a minimum, these audits must occur every two years as required by the Order.
- **Chapter 12 – 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 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.

This revision, which follows an SSMP audit (July 31, 2015), 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:

- Created 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 changes to the monitoring and reporting requirements (**Appendices P2 & P3**)
- The addition of 870-GEN-08 (Rev 01)_SSO Response (**Appendix Q2**),
- The addition of the Sewer Spill Estimation Guide to calculate SSOs (**Appendix R**),
- Clarification of the requirements of the auditor (**Appendix X2**),
- Inclusion of audit closeout memo (**Appendix Y**),
- Procurement of new CCTV software is in progress.

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CHAPTER 1 – PROHIBITIONS AND PROVISIONS

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

1.1 Prohibitions

To meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, OC San is required to comply with the following prohibitions:

- Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited, and
- Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

1.2 Provisions

As stated in the Order, OC San agrees to meet the following provisions:

1. OC San must comply with all conditions in the Order. Any noncompliance with the Order constitutes a violation of the California Water Code and is grounds for enforcement action.
2. Nothing in the general WDR shall be:
 - (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
 - (ii) Interpreted or applied to authorize a SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
 - (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
 - (iv) Interpreted or applied to supersede any more specific or more stringent WDR or enforcement order issued by a Regional Water Board.

3. OC San shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, OC San shall take all feasible steps to contain and mitigate the impacts of an SSO.
4. In the event of an SSO, 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.
5. OC San shall report SSOs in accordance with Section G of the general WDR.
6. When an SSO occurs, OC San shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.
OC San shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:
 - (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure.
 - (ii) Vacuum truck recovery of sanitary sewer overflows and washdown water.
 - (iii) Cleanup of SSO-related debris at the overflow site.
 - (iv) System modifications to prevent another SSO at the same location.
 - (v) Adequate sampling to determine the nature and impact of the release.
 - (vi) Adequate public notification to protect the public from exposure to the SSO.
7. OC San shall properly manage, operate, and maintain all parts of the sanitary sewer it owns and operates, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
8. OC San 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 accepted accounting practices.
9. OC San shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in OC San's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the OC San.

10. The Enrollee shall develop and implement a written SSMP and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publically 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.
11. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals and shall bear the professional(s)' signature and stamp.

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

<u>SSMP Task</u>	<u>Milestone Due/Completion Date</u>
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

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CHAPTER 2 – GOAL

This chapter describes the goal of the SSMP.

2.1 Purpose

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

2.2 Goal

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the OC San sanitary sewer system to prevent SSOs and mitigate any SSOs 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 SSO “Monitoring and Reporting Program No. 2006-0003 DWQ” and all future revisions, included by reference in the Order. A copy of the MRP is included in **Appendix B** of Volume II.

2.3 About This Document

Volume I provides a general description of how OC San complies with the various provisions of the Order and provides references to supporting documents. Volume II 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.

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CHAPTER 3 – DESCRIPTION OF ORGANIZATION

This chapter describes the OC San organization and chain of communication.

3.1 Administrative and Maintenance Positions

The Order requires that the SSMP include the administrative and maintenance positions responsible for implementing measures in the SSMP program, including lines of authority by organization charge or similar document.

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

3.1.1 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.

3.1.2 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. On a routine basis, the chart is reviewed by OC San stakeholders and updated.

3.1.3 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**.

3.2 Chain of Communication.

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

3.2.1 Compliance Summary

OC San has a flow chart that shows the chain of communication for reporting SSOs. It starts with the receipt of a complaint or other information, and includes the name and title of the person responsible for reporting SSOs from receipt at the OC San Control Center to the State of California CIWQS website, the Santa Ana Regional Water Quality Control Board, Orange County Health Care Agency, and if required, Office of Emergency Services (OES).

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

3.2.2 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 SSOs.

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

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

3.2.3 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 4 – 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), 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 Waste Water Treatment Plant.
- (b) Require that sewers and connections be properly designed and constructed. 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) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency.
- (d) Limit the discharge of FOG and other debris that may cause blockages.
The FOG control program will be for commercial, industrial, and institutional users and will combine source and field control to reduce SSOs caused by the discharge of FOG to the collection system.
- (e) Enforce its sewer ordinances.

4.1 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 Reclamation Plant No. 1.

- (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. While OC San does not permit direct lateral connection to its regional sewers, it has been OC San practice to accept responsibility for maintaining the first four feet of local satellite agency pipelines connecting to OC San sewers. OC San issues permits to property owners and contract for work according to OC San standards. Approved design and construction standards are situated in electronic files, and are also available on compact disc. A special standard derived from the master specifications is issued for property owner contractors and is available at the permit counter in the Engineering Department at OC San Reclamation Plant No. 1.
- (d) **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 provide OC San with the legal authorities necessary to limit FOG and debris entering into the OC San sewer collection system.
- (e) **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 and resolutions.

4.2 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

4.3 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 sewerage agencies that drain to OC San's system. These include agreements with SAWPA and LA County Sanitation Districts, 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 5 – 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, rehabilitation and replacement program, training programs, and equipment and replacement part inventories.

5.1 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**.
- Map Books and Electronic Map Book (EMB) – Map Books are composed of a set of printed maps from the Sewer Atlas. The EMB is an on-line form of the Map Books and allows the user to link to adjacent maps and drawings.
- Electronic Document Management System (EDMS) – 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 completes the Field Discrepancy Form (**Appendix K3**), and updates are made by the responsible party.

5.1.1 Compliance Summary. The asset inventory of all collection system assets is contained in OC San's GIS, which is maintained as a part of OC San's Enterprise Information Management program. A subset of the asset register is contained in the 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.

Every two years OC San issues an updated new 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 currently are being developed. These renewed resources are being made available to all OC San employees online through SharePoint and the OMaP system, which is accessed from the OC San home page. Under the O&M Director's responsibility, OMaP is updated and expanded to match any changes made to plant processes and equipment. Upgrades for the equivalent Collection Facility service documents are underway.

5.1.2 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 Safety Office, the Control Centers and Emergency Operations Centers at Reclamation Plant No. 1 and Treatment Plant No. 2
- 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 SharePoint, and on physical stick files located in the Engineering Department. The Information Technology Department is responsible for maintaining the electronic version of all record drawings, EMB, and the Sewer Atlas.

5.1.3 Roles and Responsibilities. The annual budget document contains the 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**.

5.2 Preventive 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 at this time.

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.

The criticality assessment of collection system assets is included in the PMP Project Plan. This assessment is in progress and has been integrated into the plan in a three-phase approach. The initial phase was conducted on pump station assets and force mains as part of the pump station maintenance task analysis, with the results being entered into the CMMS. The second phase is currently underway and will rate the criticality/condition of the collection system gravity pipes, and the final phase will be the rating of the criticality/condition of the gravity system manholes and other structures. The data from the second and third phases will be stored in the Business Risk Exposure Analysis (BREA) models for gravity pipes and manholes. The information on pump station asset condition/criticality will be updated on demand, while the BREA models will be updated annually as additional condition data becomes available.

5.2.1 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 (Fats, Oils, and Grease Control Program).

5.2.2 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

5.2.3 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/>.

5.3 Rehabilitation and Replacement Plan

OC San has identified and prioritized structural deficiencies in the collection system and is in the process of implementing short-term and long-term rehabilitation actions to address each deficiency. This program will include regular CCTV inspection of sewer pipes and a system for assessing and ranking the condition of the line segments and other sewer nodes contained in the system. The rehabilitation and replacement (R&R) plan will include a financial plan that properly funds the R&R infrastructure assets. A memorandum on the R&R process is included in **Appendix J** and a list of short-term and long-term projects is provided in **Appendix H**. In addition, OC San's Capital Improvement Plan (CIP) provides information on active short-term and long-term projects. The CIP can be found within OC San's budget information which can be accessed via the OC San website at <https://www.ocsan.gov/>.

5.3.1 Compliance Summary. The proactive maintenance task descriptions for all preventive maintenance, fault-finding inspections and condition monitoring tasks are contained in the CMMS as part of the planned maintenance activity documentation, and they are printed with the activity work order documentation.

5.3.2 Compliance Documents. Documents that support compliance of this section include the following:

- Rehabilitation and Replacement Plan (**Appendix J**)

5.3.3 Roles and Responsibilities. The chart that identifies those positions responsible for the Collection Facilities O&M Division program to support OC San's Collection System Rehabilitation and Replacement program is contained in **Appendix J**.

5.4 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.

5.4.1 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 Sewer System Overflow (SSO) Response Training procedure for all collection system maintenance technologists. This training and the OC San SSO 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, vector 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.

5.4.2 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.

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

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CHAPTER 6 – 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.

6.1 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 an 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.

6.2 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

6.3 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 7 – OVERFLOW EMERGENCY RESPONSE PLAN

OC San has developed an overflow Emergency Response Plan that identifies measures to protect public health and the environment. In addition, OC San is part of the Countywide Area Spill Control (CASC) Program for additional support on containment and cleanup in the flood control channels.

7.1 Compliance Summary

OC San also maintains an SSO ERP 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 SSOs and Spill Containment. SOPs for notification are updated as needed by the Environmental Compliance staff and approved by their division Manager. The SSO ERP includes, but is not limited to the following items:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure appropriate response to all overflows;
- (c) 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. All SSOs are reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the ERP and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) 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.
- (g) A requirement for contractors to develop a Spill Prevention, Control, and Countermeasure Plan, which includes spill notification and response protocols as required by OC San or guidance provided by OC San to contractors in the event an SSO occurs is noted in the OC San Master Spec 02999 Temporary Handling of Sewage.

Note: SSO sampling, if conducted, is performed by the OCHCA. In some instances, OCHCA may request that OC San conduct sampling. The first responders from the Laboratory, Monitoring & Compliance Division carry equipment to collect samples if necessary.

OC San maintains an SSO response training facility that safely simulates (by using potable water) an SSO on a typical city street and allows staff to prepare for the real event, from initial notification to SSO report documentation. **Appendix R** of Volume II contains guidance for calculating SSO volumes and training for the SSO 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.

7.2 Compliance Documents

The compliance documents are as follows:

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

7.3 Roles and Responsibilities

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

CHAPTER 8 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

Prior to implementation of the FOG Control Program, OC San contracted the services of a consultant to conduct a study to establish the building blocks for an effective 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 SSOs, 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 FOG Control Program effort:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- (b) 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;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install GRD (such as traps or interceptors) design standards for the GRDs, maintenance requirements, BMP requirements, 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.

8.1 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.

Based on recommendations from the Phase I report, OC San retained a contractor to conduct an additional study to field test three newer FOG control technologies (additives, nonconventional grease traps, and interceptor monitoring devices) to determine whether these technologies are effective and should be used in FOG control programs. The Phase II Report, published in March 2006, concluded that these technologies might be useful in instances where a below ground interceptor was not practical. However, all the studied control technologies had their limitations and would require extensive maintenance and/or follow-up to remain effective over the long haul. To date, none have been incorporated into OC San’s FOG control strategy.

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 administering 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 of 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.

8.2 Compliance Documents

- FOG Ordinance (**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**)

8.3 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 FOG 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 FOG 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

FOG-related 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.

CHAPTER 9 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

OC San has prepared and implemented a CIP 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) **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;
- (b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in “a” above to establish appropriate design criteria;
- (c) **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;
- (d) **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the CIP 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.

9.1 Compliance Summary

OC San has an established CIP that includes the following:

- **Evaluation:** The portions of the collection system that could experience or contribute to an SSO discharge 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.
- **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.

- **Capacity Enhancement Measures:** OC San has established a short- and long-term CIP to address identified hydraulic deficiencies. The CIP includes project cost estimates, project prioritization, alternatives analysis, and construction schedules.
- **Schedule Updates:** This CIP plan 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 on April 24, 2009 (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.

9.2 Compliance Documents

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

- Monthly SSO Reports
- Source Control Annual Report
- Flow Data
- Asset Management Plan
- System Evaluation and Capacity Assurance Plan (**Appendix M**)
- FY2022-23 and 2023-24 Budget, adopted June 22, 2022 (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

9.3 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 10 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This chapter describes OC San measures and activities.

- (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 preventive 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.

10.1 Compliance Summary

OC San has been reporting and keeping statistics on all SSOs 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 an SSO-trending metric in the future.

OC San utilizes the State of California's CIWQS database and mapping to track and illustrate trends of SSOs. OC San identifies the root cause of an SSO, 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.

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.

10.2 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 SSO Reports and Maps of Spills
- Current CMMS database showing work planned, completed and findings
- OC San GIS

10.3 Roles and Responsibilities

The Environmental Compliance Division has responsibility for the SSO 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 11 – PROGRAM AUDITS

As part of the SSMP, the OC San shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the OC San’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.

Further clarification by the State Water Board about audit frequency includes:

The SSMP requires that each enrollee conduct an internal audit of their SSMP every two years due by the anniversary date that the enrollee’s governing body approved the SSMP. It is permissible for an enrollee to conduct their internal audit earlier than their anniversary date. If an audit is conducted early the date that the audit is due is still based upon the anniversary date and not the date the last audit was completed. Although the internal audit does not have to be submitted to the state it is recommended that it be placed in the enrollee’s SSMP and may be requested by the SWRCB or the Regional Board at any time. In fact, the SWRCB is routinely requesting a copy of the internal audit to assist them in selecting possible enrollees for inspection and audit.

11.1 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.

11.2 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**)

11.3 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 12 – 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.

OC San shall also regularly communicate with agencies that are tributary and/or satellite to OC San's sanitary sewer collection system.

12.1 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 CA WDR General Group.

12.2 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, Wastewater Discharge Requirements, SSMP, Sewer System Management Plan." Information can also be accessed via the section entitled "Report a Spill" or "Transparency/Sewer System Management Plan." Sample screens from the website are included as **Appendix V**.

12.3 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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