Sewer System Management Plan - Update

Date adopted by the Governing Entity - IRWD Board of Directors: 4/28/25

WDID: 8SSO10587 – Michelson WRP

WDID: 9SSO10669 – Los Alisos WRP CS

WDID: 8SSO11513 – IRWD OCSD Regional 1 CS

WDID: 8SSO11518 – IRWD OCSD Regional 2 CS

WDID: 9SSO11514 – IRWD El Toro CS

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Terms, Abbreviations and Definitions

Annual Report - An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the Enrollee provides a calendar-year update of its efforts to prevent spills.

Basin Plan - A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

Beneficial Uses - The term "Beneficial Uses" is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Management Practices (BMP) - Refers to the procedures employed in commercial kitchens to minimize the quantity of grease that is discharged to the sanitary sewer system. Examples include scraping food scraps into the garbage can and dry wiping dishes and utensils prior to washing.

California Integrated Water Quality System (CIWQS) - CIWQS is the statewide database that provides mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

Capital Improvement Program (CIP) - Refers to the document that identifies planned capital improvements to the District's wastewater collection system.

Closed Circuit Television (CCTV) - Refers to the process and equipment that is used to internally inspect the condition of gravity sewers.

Computerized Maintenance Management System (CMMS) - Refers to software utilized to manage maintenance and condition assessment data including the production of work orders and the recording of work completed.

Data Submitter - A Data Submitter is an individual designated and authorized by the Enrollee's Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

Disadvantaged Community - A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income. For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

District - Refers to the Irvine Ranch Water District.

Drainage Conveyance System - A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

Enrollee - An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including: A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems; greater than one (1) mile in length (each individual sanitary sewer system); one mile or less in length where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order, or; A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

Enhanced Maintenance Area - A gravity sewer identified as requiring frequent preventive maintenance to reduce the likelihood of SSOs.

Environmentally Sensitive Area - An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

Exfiltration - Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

Fats, Oils, and Grease (FOG) - Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

Fiscal Year (FY) - IRWD's fiscal year starts July 1 and ends the following year on June 30.

Flood Control Channel - A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

Food Service Establishment (FSE) - Refers to commercial or industrial facilities where food is handled/prepared/served that discharge to the wastewater collection system.

Full-time Equivalent (FTE) - Refers to the equivalent of 2,080 paid labor hours per year by a regular, temporary, or contract employee.

Geographical Information System (GIS) - Refers to the District's system that it uses to capture, store, analyze, and manage geospatial data associated with the District's wastewater collection system assets.

Governing Entity - A governing entity includes but is not limited to the following: A publicly elected governing board, council, or commission of a municipal agency; A Department or Division director of a federal or state agency that is not governed by a board; A governing board or commission of an organization or association; and A private system owner/manager that is not governed by a board.

Grease Removal Equipment (GRD) - Refers to grease traps or grease interceptors that are installed to remove FOG from the wastewater flow at food service establishments.

Infiltration/Inflow (I/I) - Refers to water that enters the wastewater collection system from stormwater and groundwater that increases the quantity of flow. Infiltration enters through defects in the wastewater collection system after flowing through the soil. Inflow enters the sanitary sewer without flowing through the soil.

Hydrologically Connected - Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)

Lateral (including Lower and Upper Lateral) - A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership. A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations. An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

Legally Responsible Official - A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

Maintenance Hole (MH) - Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

Monitoring and Reporting Program (MRP) - Refers to the State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ, including all future revisions.

NPDES - National Pollution Discharge Elimination System

Nuisance - For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements: Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or

damage inflicted upon individuals may be unequal; and Occurs during, or as a result of, the treatment or disposal of wastes.

OCSD – Orange County Sanitation District.

Online SSO Reporting System - Refers to the California Integrated Water Quality System (CIWQS).

O&M - Operations and Maintenance.

PM - Preventive Maintenance - Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

Potential to Discharge, Potential Discharge - Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

Private Sewer Lateral - A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

Private Sanitary Sewer System - A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

Receiving Water - A receiving water is a water of the State that receives a discharge of waste.

Resilience - Resilience is the ability to recover from or adjust to adversity or change and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

Sanitary Sewer System - A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including: Laterals owned and/or operated by the Enrollee; Satellite sewer systems; and/or Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures. For the purpose of this Order, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

Satellite Sewer System - A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

SERP – Spill Emergency Response Plan. (See Attachment 1)

Sewer System Management Plan - A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

Sewage - Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system.

Spill - A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

State Water Resources Control Board (SWRCB) - State Water Resources Control Board and staff responsible for protecting the State's water resources.

Supervisory Control and Data Acquisition (SCADA) - Refers to an electronic system that is used to monitor lift station performance and to initiate alarms when monitored parameters exceed pre-set limits.

Training - Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with this General Order.

VCP - Vitrified Clay Pipe.

Waste - Waste, as defined in Water Code section 13050(d), includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of disposal.

Waste Discharge Identification Number (WDID) - A waste discharge identification number (WDID) identifies each individual sanitary sewer system enrolled under this General Order. A WDID number is assigned to each enrolled system upon an Enrollee's approved regulatory coverage.

Waste Discharge Requirements (WDR) - Refers to the State Water Resources Control Board General Order WQ 2022-0103-DWQ.

Waters of the State - Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States - Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

Water Quality Objective - A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

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Element 1 - SSMP Goal and Introduction

The purpose of this document is to provide the Irvine Ranch Water District's **(IRWD)** Collection System with a system-wide living management plan for the operation, maintenance, expansion, repair, and replacement of IRWD's sewer collection system.

This document intends to be a day-to-day working management plan that also meets Attachment D - Sewer System Management Plan (SSMP) – Required Elements of California's Statewide Waste Discharge Requirements (WDR) for Sanitary Sewer Systems General Order WQ 2022-0103-DWQ.

Per delegated authority from the IRWD's Board of Directors and the General Manager, as of March 2025 the Executive Director of Operations Wendy Chamber is designated as the Legally Responsible Official (LRO) to make all necessary changes to the SSMP and is overall responsible regarding all components in policy and procedure for IRWD's Collection System.

On September 30th, 2005, IRWD certified that the mandatory "Goals" element of the SSMP was complete.

The goal of IRWD's SSMP is: "to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce/prevent spills and mitigate any spills that do occur."

A copy of the Order and the certified SSMP is available to personnel operating and maintaining the IRWD sanitary sewer system. Pursuant to California Water Code Section 13267(b), IRWD will also comply with the Spill Monitoring and Reporting Program No. 2006-0003-DWQ" as amended by Order No. WQ 2013-0058-EXEC, and all future revisions, included by reference in the Order. A copy of the WDR and MRP Order No. WQ 2013-0058-EXEC amending the original MRP is included in Appendix A of this SSMP.

This SSMP is written to be in compliance with California's Statewide Re-Issued Waste Discharge Requirements (WDR) for Sanitary Sewer Systems General Order WQ 2022-0103-DWQ.

On May 17th, 2023, Karen Mogus, Deputy Director - Division of Water Quality for the State Water Resource Control Board issued 5 letters to IRWD staff confirming certification of IRWD's Continuation of Existing Regulatory Coverage in the California Integrated Water Quality System (CIWQS) database for all 5 WDID's. Please see Attachment 2, which details the certification letters received.

1.1 Regulatory Context

The first version of the Statewide WDR for Sanitary Sewer Systems was General Order No. 2006-0003-DWQ, adopted on May 2, 2006. It required publicly owned sewer collection systems that meet the order's requirements to complete an SSMP Development Plan and Schedule and implement an SSMP formally approved by the agency's governing body.

IRWD submitted its initial Notice of Intent (NOI) for Coverage to the State Water Board on the following dates for the following (5) Waste Discharge Identification's (WDID):

1. #9SSO10669 and became an official enrollee effective November 17, 2006.
2. #8SSO10587 and became an official enrollee effective November 17, 2006.
3. #8SSO11513 and became an official enrollee effective December 26, 2007.
4. #9SSO11514 and became an official enrollee effective December 26, 2007.
5. #8SSO11518 and became an official enrollee effective June 2, 2011.

To comply with General Order No. 2006-003-DWQ, IRWD created an SSMP Development Plan and Schedule, which was approved and certified by IRWD's Director of Water Quality John Hills on September 30, 2005. A scanned copy of IRWD's SSMP Development Plan and Schedule has been forwarded via CIWQS under the SSMP Update upload tab within the historical versions archive. IRWD implemented its first approved SSMP on September 30, 2005.

IRWD has complied with the General Monitoring and Reporting requirements by the online reporting of Sanitary Sewer Spills in the California Integrated Water Quality System (CIWQS) since September 30, 2005.

On August 6, 2013, the State Water Board issued Order No. WQ 2013-0058-EXEC Amending Monitoring and Reporting Program (MRP) to replace the MRP established in General Order No. 2006-0003-DWQ. The MRP from Order No. WQ 2013-0058-EXEC became effective on September 9, 2013.

The latest version of the Statewide WDR General Order for Sanitary Sewer Systems, General Order WQ 2022-0103-DWQ, was approved on December 6, 2022, and became effective on June 5, 2023. To continue regulatory coverage from the previous General Order 2006-0003-DWQ to General Order WQ 2022-0103- DWQ, the Legally Responsible Official (LRO) must electronically certify the Continuation of Existing Regulatory Coverage in the CIWQS Database per the General Order WQ 2002- 0103-DWQ.

IRWD's Legally Responsible Official has certified the Continuation of Existing Regulatory Coverage in CIWQS, in addition the last date for the governing board (IRWD's Board of Directors) approving the SSMP Update is August 27th, 2018.

1.2 SSMP Update Schedule

General Order No. 2006-003-DWQ required IRWD to update its SSMP every five years, certify the SSMP by its governing board when significant updates to the SSMP are made, and upload the board-approved certified SSMP to the CIWQS Database.

Since creating and implementing the first SSMP, IRWD has reviewed and updated its SSMP when business practices, policies, and procedures changed, which is more frequent than what was required by General Order No. 2006-003-DWQ. IRWD tracks changes in a Change Log initialed and dated by the LRO in the SSMP. To comply with General Order No. 2006-003-DWQ, IRWD updated and re-certified its SSMP through its Board of Directors in August 2018. After each Board-approved update, IRWD certified its updated SSMP on the CIWQS website.

The next SSMP certification update for IRWD to comply with the General Order WQ 2022-0103-DWQ is due in CIWQS by May 2, 2025. After which, updates and certifications of IRWD's SSMP will be required every six years according to the General Order WQ 2022-0103-DWQ.

IRWD will conduct periodic internal audits at least once every three years as required by the General Order WQ 2022-0103-DWQ. IRWD is required to prepare and upload a report to the CIWQS website within six months after the end of an audit period. IRWD's next SSMP internal audit will be for the three-year period ending May 2, 2027.

In addition to the SSMP certification and Internal SSMP audit dates, IRWD has identified key near-term SSMP compliance dates as required by the General Order WQ 2022-0103-DWQ in Table 1-1, see next page.

Table 1-1 SSMP Compliance Schedule

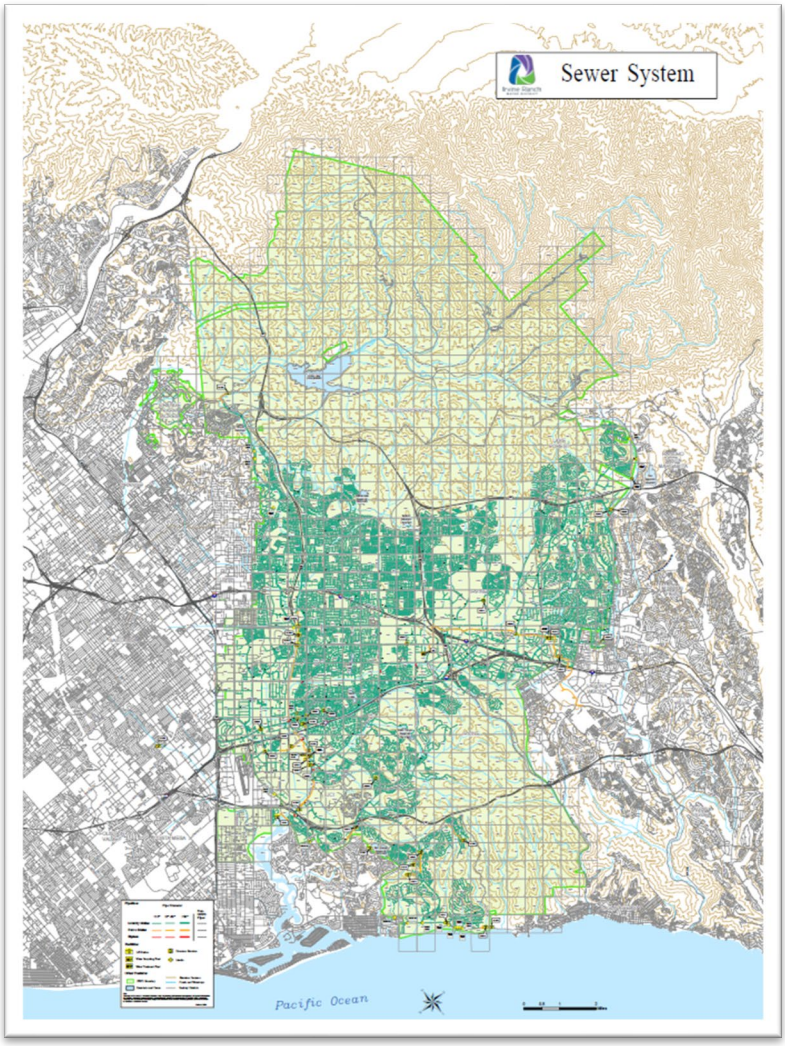
Compliance Item	Near-Term Due Date	WDR Section
Annual Report for Category 4 Non-lateral Spills	**Feb 1st of each calendar year.**	Attach E1 Sec 3.6
Annual Report for Category 2, 3 & 4 Lateral Spills	**Feb 1st of each calendar year.**	Attach E1 Sec 3.6
Annual Report	**April 1st of each year.**	5.11 Attach E1 Sec 3.9
Internal SSMP Audit	**9SSO11514 - El Toro CS -** Audit due 11/2/25 **8SSO11513 - OCSD1 CS -** Audit due 2/2/28 **8SSO11518 - OCSD2 CS -** Audit due 2/2/28 **9SSO10669 - LAWRP CS -** Audit due 2/2/28 **8SSO10587 - MWRP CS -** Audit due 11/2/27	5.4 Attach E1 Sec 10
SSMP Update and Certification	**9SSO11514 - El Toro CS -** Update due 5/2/26 **8SSO11513 - OCSD1 CS -** Update due 8/2/25 **8SSO11518 - OCSD2 CS -** Update due 8/2/25 **9SSO10669 - LAWRP CS -** Update due 8/2/25 **8SSO10587 - MWRP CS -** Update due 5/2/25	5.5 Attach E1 Sec 11
Electronic Sanitary Sewer System Service Area Boundary Map	**Wednesday, December 31, 2025**	5.14 Attach E1 Sec 8

For compliance dates related to individual and monthly reporting of spills, please see IRWD's **Spill Emergency Response Plan, Section 6** of the SSMP.

1.3 Sewer System Asset Overview

Irvine Ranch Water District (IRWD) is a California Special District formed in 1961 and incorporated under the California water code. IRWD owns a sanitary sewer system with approximately 132,000 sewer connections serving 446,000 customers. IRWD operates and maintains 1,145 miles of sanitary sewer mains, is structurally responsible for 361 miles of lower lateral and operates and maintains 29 miles of force mains spanning 181 square miles (84,000 acres) of service area in Orange County. The wastewater collection system serves the City of Irvine, Lake Forest, parts of Tustin, Newport Beach, Foothill Ranch, Costa Mesa, and unincorporated areas of Orange County. There is a small amount of wastewater generated in the City of Newport Beach and Irvine that is collected by trunk sewers owned, operated, and maintained by the IRWD, then discharged into sewers owned and maintained by the Orange County Sanitation District (OCSD). See below for a current map as of March 2025.

IRWD Sewer System Map (current as of March 2025)



IRWD's sewer mains range in size from 6 to 60 inches in diameter as shown in **Table 1-2**. The sewer main material is primarily composed of vitrified clay pipe (VCP) and polyvinyl chloride (PVC), with other miscellaneous materials. Drainage patterns in the wastewater collection system are influenced by the physical geography of the service area and result in five separate wastewater collection systems (WDID's) within the IRWD service area which are covered by the Sewer System Management Plan.

Table 1-2 summarizes an approximation of various assets and service connections owned by IRWD as of March 2025. The asset and service connection counts for any given year are recorded and updated in IRWD's Annual Report in CIWQS.

Table 1-2 IRWD Sewer Main Metrics

Assets	Quantity
Number of Maintenance Holes	28,547
Number of Clean Outs	6,316
Number of Active Segments	35,448
Number of Siphons	19
Number of Pump Stations	12
Number of Diversion Structures	10
Data Management System	Maximo IBM
Lower Laterals	See Rules and Reg
Service Connections	132,000

Assets	Quantity
Sewer Main - Gravity (Miles)	1,145
Lower Lateral - Gravity (Miles)	361
Force Main - Pressurized (Miles)	29
Total System (Miles)	1535

Pipe Classification	Pipe Size	Miles
Small Main	>=6"	420
Main	8"	870
Large Main	9"-18"	194
Trunk	19"-36"	42
Interceptor	>36"-60"	9

Note: IRWD does not have a combined wastewater collection system. Thus, there are no structures diverting stormwater to the collection system.

IRWD employs a computerized maintenance management system (CMMS/Maximo/Power BI/Active-G) to document asset data, spill information, work orders, preventive maintenance (PM) schedules, emergency response, and records of completed work. Below is an illustration (Figure 1-1) of the Maximo Maintenance Dashboard utilized by management to verify condition and inspection.

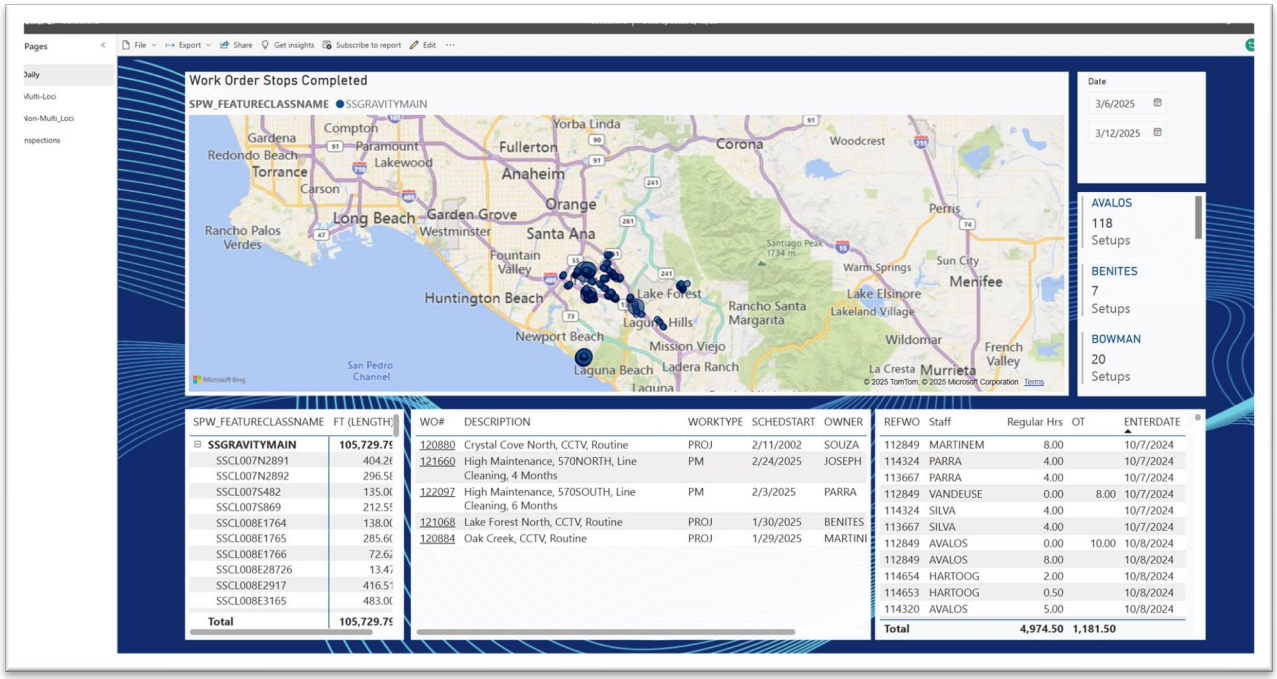


Figure 1-1 Maximo Maintenance Dashboard

IRWD utilizes a combination of multiple Geographic Information Systems (ESRI Arc Pro/Field Mapplet Console/Arc GIS Online Mobile Maps) to display location and asset data for the sewer collection system. This mapping system provides access to as-builts drawings as well as other data utilized by engineering, field inspection, regulatory, maintenance and construction staff. See Figure 1-2 for an illustration of a section of the GIS interface.

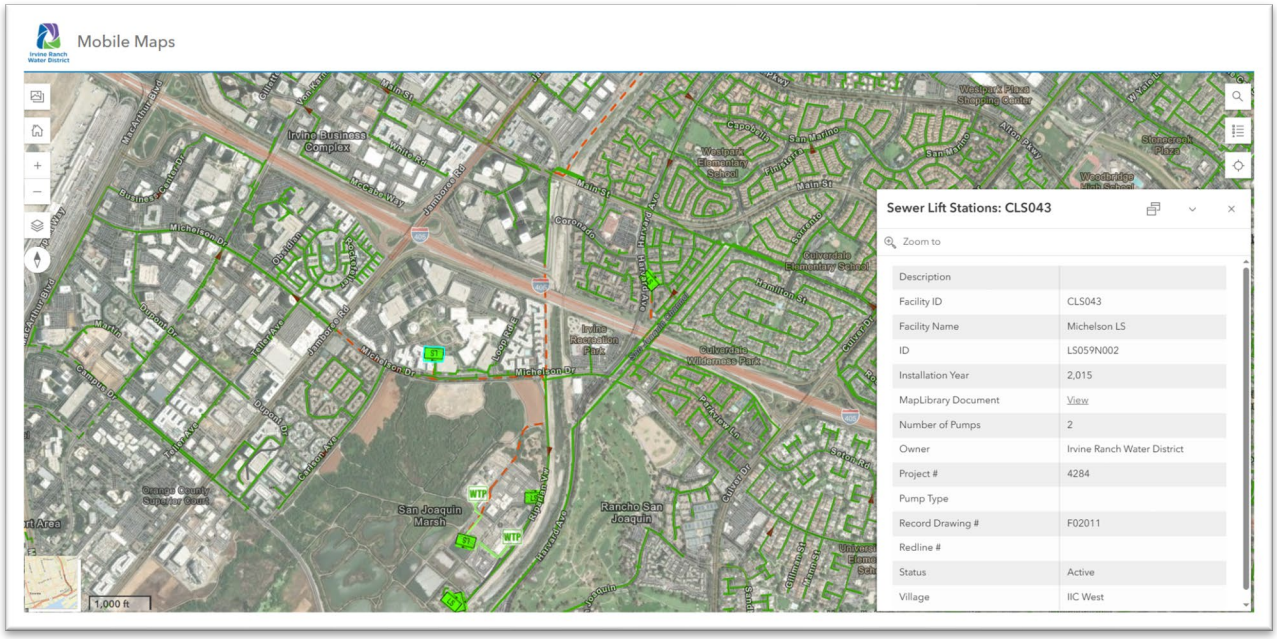
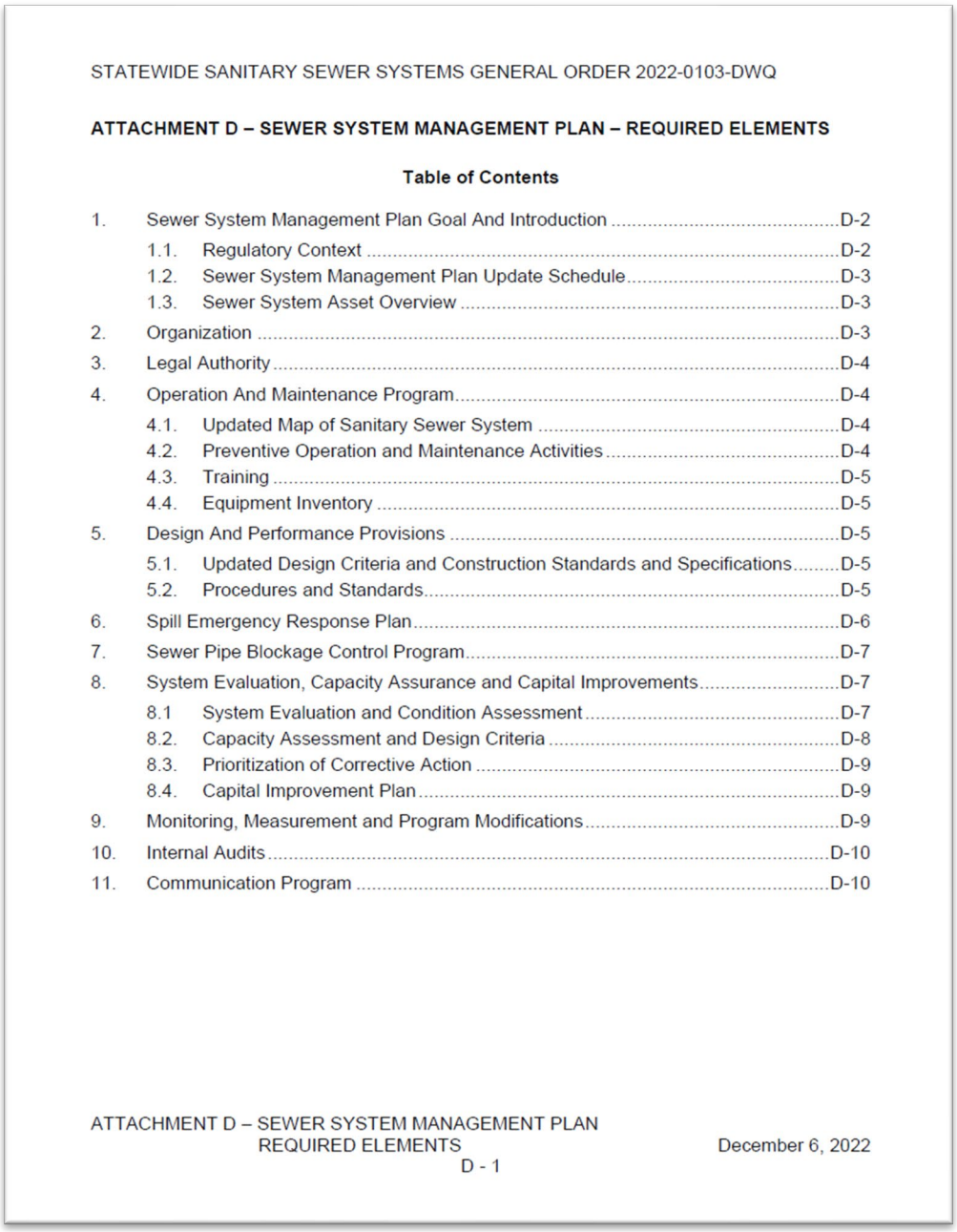


Figure 1-2 Arc GIS Online Mobile Maps

1.4 SSMP Document Overview

Attachment D of the General Order 2022-0103-DWQ specifies the mandatory elements of the SSMP. These elements are listed in Figure 1-3, below which is directly from the General Order 2022-0103-DWQ.



STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

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Figure 1-3: Attachment D of the General order 2022-0103

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Element 2 - Organization

Elements 2 requires that the plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

2.1 Name of the Legally Responsible Official

On November 2, 2007, IRWD's Board certified that the Executive Director of Operations is the responsible or authorized representative as described in Section J of Order No. 2006-0003-DWQ.

The Board of Directors and the General Manager have appointed Wendy Chambers as the current Executive Director of Operations. Under section 5.1 of the General Order WQ 2022-0103-DWQ, the Executive Director of Operations continues to be the Legally Responsible Official for IRWD.

2.2 Contact Information for SSMP Administrators

This sub-element includes the position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements.

Table 2.1 and sub-element 2.3 define and illustrate the organizational structure of IRWD staff responsible for implementing the SSMP, including the LROs, as required by the General Order WQ 2022-0103-DWQ.

The Spill reporting chain of communication is located in the Spill Emergency Response Plan. The current Legally Responsible Officials as well as organizational hierarchy for assisting with implementation of the different SSMP elements are detailed below:

Title: Executive Director of Operations (Primary LRO)

- Name: Wendy Chambers
- Phone: (949)453-5720
- Email: chambersw@irwd.com
- Responsible for overall implementation of all 11 Elements of the SSMP.

Title: Director of Maintenance Operations

- Name: Jason Manning
- Phone: (949)453-5841
- Email: manning@irwd.com
- Responsibilities: Reviews with senior leadership and establishes the Collection Systems Department's goals, organization structure, legal authority, O&M program, system monitoring and SSMP audits.

Title: Collection System Manager (Secondary LRO)

- Name: William Kleinau
- Phone:(323)895-8455
- Email: kleinau@irwd.com
- Additional: Manages the day-to-day operations for the collection system, responsible for spill response, training and reporting spills to the Water Board, CAL OES, County and additional agencies.

Title: Collection System Supervisor (Data Submitter)

- Name: Brandon Jospeh
- Email: Joseph@irwd.com
- Additional: Responsible for supervising day-to-day maintenance of the collection system.

Title: Collection System Supervisor (Data Submitter)

- Name: Jeremy Hartoog
- Email: Hartoog@irwd.com
- Additional: Responsible for supervising the day-to-day inspection of the collection system.

Title: Regulatory Compliance Manager

- Name: Lori Rigby
- Email: Rigby@irwd.com
- Other: Responsible for managing the District's NPDES program as well as all sampling and field inspections regarding discharges and compliance.

Title: Water Quality Manager

- Name: Scott Giatpaiboon
- Email: giatpaib@irwd.com
- Additional: Manages the District's laboratory operations which includes performing analytics on samples taken routinely as well as sewer spill sampling analytics.

Title: Automation Manager

- Name: Joe Lam
- Email: lam@irwd.com
- Additional: Manages the District's SCADA system which enables remote monitoring and control of the District's sewer lift stations as well as historical metrics for performance. Receive After hours calls and alerts for sewer concerns via dialer system.

Title: Engineering Manager – Capital Projects and Pipelines

- Name: Malcom Cortez
- Email: Cortez@irwd.com
- Additional: Manages the District's rehabilitation program regarding sewer pipelines and structures as well as assists with long term planning.

Title: Engineering Manager – Field Mapplet/Hydraulic Modeling

- Name: Eric Akiyoshi
- Email: akiyoshi@irwd.com
- Additional: Manages the District's GIS system Field Mapplet with regards to adding new developments and remove inactive assets, also manages the District's hydraulic model and continually updates the District sewer master plan.

Title: Enterprise GIS Manager

- Name: Cameron Smith
- Email: smithc@irwd.com
- Additional: Manages the District's GIS system with regards to Arc Pro/Mobile Maps and additional applications that allow collection systems to view assets and perform maintenance.

Title: Reliability Manager

- Name: Verowin Hunting
- Email: hunting@irwd.com
- Additional: Manages the District's CMMS system Maximo and oversees updates as well as Power BI dashboard to enhance maintenance cycles as well as increase reliability.

Title: Electrical and Mechanical Manager

- Name: Owen O'Neil
- Email: oneill@irwd.com
- Additional: Manages the District's repairs and rehabilitation for lift stations and other structures related to backup generators and pumps.

Title: Customer Service Manager

- Name: Ryan Matuska
- Email: matuska@irwd.com
- Additional: Manages the District's customer service center which receives calls from the public regarding sewer spills, odors, vermin, noises and additional related concerns.

Title: Network and Cybersecurity Manager

- Name: Randy Williams
- Email: williams@irwd.com
- Additional: Manages the District's information technology cybersecurity and ensures connectivity with SCADA systems.

Title: Director of Safety and Security

- Name: Steve Choi
- Email: choi@irwd.com
- Additional: Directs the District's safety and security program.

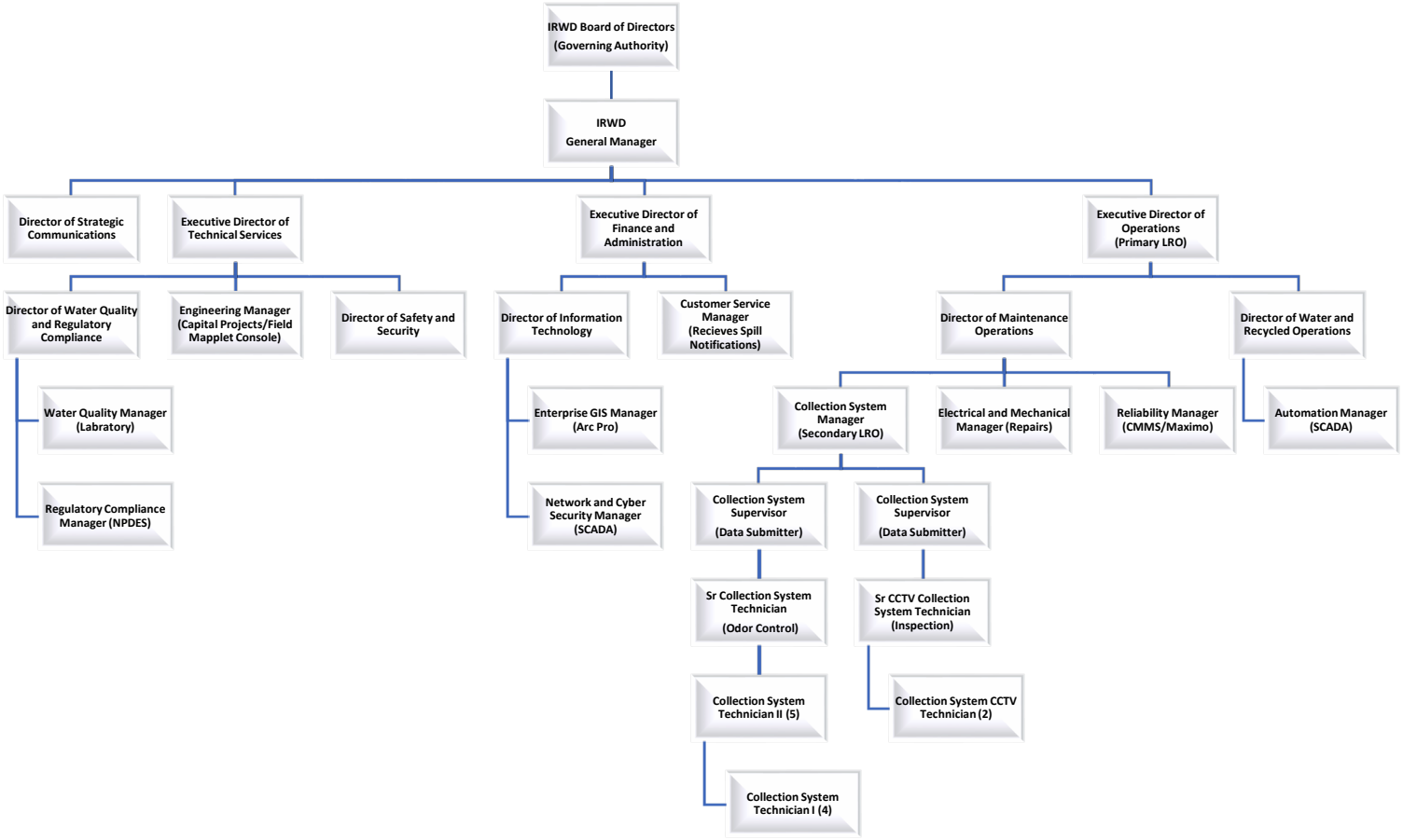
Title: Director of Strategic Communication & Advocacy

- Name: Christine Compton
- Email: compton@irwd.com
- Additional: Oversees content and graphics development, IRWD branding, customer outreach, internal communications and media communications. Monitors and guides IRWD's regional, state, and federal legislative and regulatory advocacy, and coordinates IRWD's Policy.

Table 2.1: Positions Responsible for SSMP Development and Implementation

WDR Reference	SSMP Element/Measure	Responsible Position
D-2 to D-10	Overall SSMP Development and Implementation	Executive Director of Operations
D-2	Goal	Director of Maintenance Operations
D-3	Organization	Director of Maintenance Operations
D-4	Legal Authority	Director of Maintenance Operations
D-4	Operations and Maintenance Program – Mapping	Enterprise GIS Manager
D-5,8	Operations and Maintenance Program – Sewer Pipeline and Manhole Preventive and Routine Maintenance	Collection Systems Manager
D-4	Operations and Maintenance Program – Lift Station Mechanical and Electrical Preventive and Routine Maintenance	Director of Maintenance Operations
D-4	Operations and Maintenance Program – System Inspection	Collection Systems Manager
D-4	Operations and Maintenance Program – Condition Assessment; Rehabilitation and Replacement Program	Executive Director of Technical Services
D-8	Operations and Maintenance Program – Capital Program Funding	Executive Director of Technical Services
D-4	Operations and Maintenance Program – Training	Collection Systems Manager and Safety Director
D-4	Operations and Maintenance – Critical and Replacement Part inventory	Collection System Manager
D-5	Design and Performance Provisions	Executive Director of Technical Services
D-6	Spill Emergency Response Plan	Collection Systems Manager
D-7	Sewer Pipe Blockage Control Program	Regulatory Compliance Manager
D-8	System Evaluation and Capacity Assurance Plan	Executive Director of Technical Services
D-9	Monitoring, Measurement, and Program Modifications	Director of Maintenance Operations
D-10	SSMP Program Audits	Director of Maintenance Operations
D-11	Communication Program – Public education	Director of Strategic Communication
D-11	Communication Program – Satellite agencies	Executive Director of Operations

2.3 Organizational Lines of Authority



2.4 Chain of Communication for Reporting Spills

The following sub-element summarizes the 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. For a more comprehensive view of the chain of communication see Element 6 Spill Emergency Response Plan.

Reporting Responsibilities:

- Once a detection of a spill is reported, either by the public or IRWD personnel, Collection Systems staff will be dispatched to the scene by Customer Service Representatives during normal operating hours. If notification occurs after hours, the Collection Systems Standby personnel are notified by IRWD's after-hours answering service. The Collection System Manager will coordinate information gathering and response efforts with Collection Systems staff and additional departments as needed.
- IRWD maintains a satisfactory response by ensuring all Collection Systems staff are listed as emergency responders and as such are required to be on the Collection Systems Standby rotation which provides two operators year-round to respond to all sewer-related matters. The Collection System Manager is responsible for ensuring a satisfactory response to all sewer system emergencies.
- Collection Systems staff will determine if the spill is a sewer spill and owned by the District. If not sewer, and not District-owned staff will coordinate appropriate procedures and notify the Collection System Manager. If the spill is sewer and IRWD owned, staff will take pictures immediately up arrival to the spill site and begin the spill containment/calculation investigation which will prompt a call to Cal-OES from the Collection System Manager with a preliminary calculation.
- The Collection Systems Manager is responsible for contacting the State and Regional Water Boards as well as other agencies including but not limited to Orange County Health Care Agency, Orange County Department of Public Works and Cal-OES. In the absence of the Collection System Manager the Collection Systems Supervisors will be responsible for reporting to impacted agencies.

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Element 3 - Legal Authority

Element 3 includes an electronic link to IRWD's current sewer system use ordinances, service agreements and/or other legally binding procedures which demonstrate that IRWD has the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages.
- 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.
- Require that sewer system components and connections be properly designed and constructed.
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee.
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

3.1 IRWD Rules and Regulations

The Irvine Ranch Water District Rules and Regulations adopted by the Board of Directors December 16, 2019, provides IRWD with the Legal Authority that includes the following:

When IRWD finds an inconsistency or shortcoming in the Ordinance or when IRWD programs are modified, the Ordinance is reviewed and updated as necessary. The Ordinance is aligned with current practices, ensuring the legal authority for the required SSMP elements is maintained. The Ordinance can be found on IRWD's public website at: IRWD Rules and Regulations (Weblink)

For collaboration with storm and sewer agencies to coordinate emergency spill responses, ensure access to storm and sewer systems during spill events, and prevent unintentional cross-connections of sanitary sewer infrastructure to storm sewer infrastructure, IRWD has been meeting monthly, quarterly and annually with surrounding storm collection systems that are satellites to IRWD's interceptor systems, this is accomplished through monthly SARBS Board meetings as well as quarterly OCSD-WDR group meetings attended by the Collection System Manager and Collection System Supervisors.

3.2 Legal Authorities

The District complies with the legal authority requirements of the WDR. The District's legal authorities are included in the following documents:

- Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service

- Regulations for the Discharge of Wastewater to Sewerage Facilities of the Irvine Ranch Water District that are in the South Orange County Wastewater Authority Service Area, Ordinance 2015-1
- Procedural Guidelines and General Design Requirements
- IRWD Standard Drawings and IRWD Standard Specifications for the sewer system
- Standard Specifications for Public Works Construction (Greenbook)

The primary source of IRWD's legal authorities is Section 7 of the District's Rules and Regulations, which is dedicated to "Use of District Sewerage Facilities". The following sections provide a narrative of the District's legal authorities for each of the requirements of the WDR.

Table 5-1 Summary of the District's legal authorities

Requirement	Reference to Rules and Regulations	Reference to Guidelines* or Standard Details
ILLICIT DISCHARGES		
Prevent illicit discharges into the wastewater collection system	Sec. 7.3.1	
Limit the discharge of fats, oils, and grease and other debris that may cause blockages	Sec. 7.11	
Control infiltration and inflow (I/I) from private service laterals	Sec. 7.3.2	
PROPER DESIGN AND CONSTRUCTION		
Require that sewers and connection be properly designed and constructed	Sec. 4.4.2, 5.1, 5.2	Proc Guidelines, Sec. 4
Require proper installation, testing, and inspection of new and rehabilitated sewers		Proc Guidelines, Sec. 2.5
ACCESS TO LATERALS and EASEMENTS		
Clearly define District responsibility and policies	Sec. 4.15, 5.2	
Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the District.		Stand Detail Drawing S-3
FOG SOURCE CONTROL		
Requirements to install grease removal devices (such as traps or interceptors)	Sec. 7.11.4	
Design standards for grease removal devices	Sec. 7.11.6.8	
Maintenance requirements, BMP requirements, record keeping and reporting requirements for grease removal devices	Sec. 7.11.6.8, 7.11.6.11, 7.11.7	
Authority to inspect grease producing facilities	Sec. 7.11.7.4	
ENFORCEMENT		

Enforce any violations of its sewer ordinances	Sec. 7.11.8, 14	

3.3 Prevention of Illicit Discharges

Measures prohibiting illicit discharges are included in Sections 7.3.1 to 7.3.12. The specific purpose of the Section is to prevent the discharge of any pollutant or any combination of pollutants into the sewers that would obstruct or damage the collection system, interfere with treatment, or threaten harm to human health or the environment. A full copy of the latest version of IRWD's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service is available on the District's website.

Section 7.11 of the District's Rules and Regulations also limit the discharge of fats, oils, and grease. Legal authorities regarding control of fats,

3.4 Proper Design and Construction of Sewers and Connections

The District's legal authorities pertaining to the design, construction, and inspection of sewer pipelines and connections are included in IRWD's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service, IRWD's Standard Drawings and Standard General Technical Specifications. IRWD also utilizes the Standard Specifications for Public Works Construction, popularly known as the "Greenbook".

Section 4.4.2 of the District's Rules and Regulations requires the lower lateral and lower lateral connections to be designed in accordance with the District's Procedures Guide and Construction Manual. The District also has the authority to determine and specify the size, location, and manner of installing the lower lateral.

3.5 Lateral Maintenance Access

Per Section 4.15.1 to 4.15.4 of the District's Rules and Regulations, property owners are responsible for clearing and cleaning the upper and lower laterals to their connection point with the main sewer. IRWD is only responsible for repairs to the lower lateral to the sewer main. See Section 2 for the definitions for upper lateral and lower laterals. The District's Construction Manual Standard Detail Drawing S-3 requires a clean out on the lateral at the property line or edge of easement providing the District with access to the lower lateral. The latest version of the District's Standard Detail Drawings for the sewer system are available on the District's website.

3.6 Enforcement Measures

Sections 14.1 to 14.3 of IRWD's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service describe measures available to IRWD staff for enforcement of sewer provisions. Any person, firm, corporation, association, or agency found to be violating any provision of the District's Rules and Regulations; or the terms and conditions of the applicant's, owner's, or customer's service agreement, permit; or any and all applicable Federal, State, or local statues, regulations, ordinances; or other requirement; shall be served by the District with written notice stating

the nature of the violation and providing a reasonable time limit for the satisfactory correction. The offender shall, within the period stated in such notice, permanently cease all violations. This provision is in addition to and not by way of derogation of any other remedies or procedures available to the District by law, regulation, or pursuant to any of the provisions of these Rules and Regulations including, but not limited to, Section 7.

Failure to permanently cease all violations within the time stated shall result in revocation of the permit by the District and termination of water, sewer, recycled water and/or natural treatment system service as provided in Sections 14.2 and 14.3. Violations regarding any one service may result, at the sole discretion of the Board or Manager, in termination of any combination of or all water, sewer, recycled water and natural treatment system service.

3.7 Agreements with Other Agencies

The SSMP requirements for legal authority are fulfilled by IRWD's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service. However, IRWD does have additional legal agreements with other agencies, which are described in this section for reference.

3.7.1 Orange County Sanitation District Agreement

A portion of IRWD service boundaries is currently included inside the boundaries of Orange County Sanitation District (OCSD), which has the direct responsibility for the transport and treatment of wastewater discharged to IRWD sewer system pursuant to that agency's Wastewater Ordinance. In addition, IRWD coordinates with OCSD to permit and implement the industrial waste requirements of the Clean Water Act and the State Water Resources Control Board. OCSD, in conjunction with IRWD, jointly permit all major industrial dischargers and categorical industries pursuant to its State approved pretreatment program requirements.

3.7.2 South Orange County Wastewater Authority Agreement

A portion of IRWD service boundary is included in the boundaries of the South Orange County Wastewater Authority (SOCWA), which has the responsibility to implement a pretreatment program associated with the facilities that discharge into SOCWA's Aliso Creek Ocean Outfall (ACOO) pursuant to that agency's Wastewater Ordinance. IRWD's Los Alisos Water Recycling Plant (LAWRP) discharges secondary treated effluent into the ACOO. Thus, IRWD coordinates with SOCWA to permit and implement the industrial waste requirements of the Clean Water Act and the State Water Resources Control Board. SOCWA, in conjunction with IRWD, jointly permits all major industrial dischargers and categorical industries pursuant to State approved pretreatment program requirements.

3.7.3 Satellite Systems

IRWD accepts a small quantity of wastewater into its sewer system from the University of California, Irvine (UCI) which is located within IRWD's service boundaries. IRWD has a Sewer Service Agreement with UCI regarding acceptance of their discharges and requiring UCI to amend the agreement if additional capacity is required. IRWD has verified that UCI has developed a site specific

SSMP for their sewer system. IRWD sewer system has adequate capacity to convey the minor flows it accepts from UCI.

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Element 4 - Operation and Maintenance Program

This section describes IRWD's Operation and Maintenance Program, designed to prevent spills throughout the collection system and comply with Attachment D Section 4 of the General Order WQ 2022-0103-DWQ.

IRWD is responsible for operating and maintaining both gravity and pressurized assets. Gravity assets include main line, lower lateral, and manhole pipes. Pressurized assets include force mains and pump station components. There are several different failure modes within the gravity and pressurized collection system that can cause spills or shorten asset life.

In support of IRWD's goals of reducing/preventing spills, meeting SSMP regulatory requirements, achieving identified service level targets, and operating in a cost-effective manner, IRWD's Operations and Maintenance Program is divided into seven sub-programs.

Each sub-program under the Operations and Maintenance Program consists of several strategies, maintenance programs, policies, procedures, and decision-making processes developed to sustain IRWD's assets and manage risk at a socially, environmentally, and economically viable level.

The Operations and Maintenance Program does not cover spill emergency response. All spill response activities follow the Spill Emergency Response Plan, Section 6 of the SSMP.

4.1. Updated Map of Sanitary Sewer System

An up-to-date map(s) of the sanitary sewer system has been provided in Element 1 and web link will be available in CIWQS and uploaded as a separate attachment under the name **"IRWD Mobile Maps"**, this will provide State and Regional Water Board staff access to IRWD's Sanitary Sewer System map(s) as well as as-builts.

The map(s) does show gravity line segments and maintenance holes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

4.2. Preventive Operation and Maintenance Activities

IRWD employs a Computerized Maintenance Management System (CMMS) Maximo to document asset data, work orders (WO), preventive maintenance (PM), work planning & scheduling, service requests (SR), spill emergency response, vendor, and vehicle & equipment (V&E) data. Staff collect and update data daily. IRWD utilizes the CMMS data to create reports identifying performance trends such as work orders completed on time, production rates, costs per unit completed, etc.

4.2.1 The scheduling system includes inspection and maintenance activities for:

- Lift Stations
- Siphons
- Sewer line cleaning
- Sewer line inspections
- Odor and corrosion control
- Diversion structures
- Vermin and root control
- Additional appurtenances

4.2.2 Higher-frequency inspections and maintenance of known problem areas, including areas with tree-root problems are strategically planned:

- 6-month and 4-month high maintenance categories
- Semi-annual wet well vacuum program
- Pump performance monitoring that analyses station trends and anomalies
- Quarterly and Semi-annual siphon maintenance program
- Remote monitoring of liquid level at all 19 siphon locations

4.2.3 Regular visual and closed-circuit television (CCTV) inspections:

- The District employs a team of CCTV inspection technicians which document data from system inspection and maintenance activities utilizing the most current National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP)/Manhole Assessment Certification Program (MACP)/Lateral Assessment Certification Program (LACP) coding standards.
- All Collection Systems CCTV staff are NASSCO certified and trained in how to operate the District's CCTV equipment. Staff training, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure is detailed to staff in regular meetings as well as daily work orders.
- The District plans to inspect all sewer mains on a 10-year cycle. The District's technicians utilize advanced data management systems that are consistently updated and enable decision makers to maintain information dominance regarding defects and observations which may cause disruptions in service or system failures. (Utilizing Phoenix DB)
- The District employs a contractor to perform annual corrective and preventative maintenance measures regarding root control.

4.2.4 Sewer Line and Structure Maintenance

The District proactively maintains its sewer pipes and structures utilizing a classification system that is data driven which is categorized and monitored to ensure satisfactory performance.

High Maintenance - Structures: Structures such as siphons, diversion structures, wet wells as well as other Districtwide locations that have proven to need continuous maintenance more frequently. The frequency ranges from monthly to annually.

High Maintenance - Historical: Sewer mains segments that have been identified to accumulate grease, debris, calcium and other materials based on inspection, trends from remote monitoring telemetry as well as historical data on system performance. The frequency ranges from 4-month to 6-month.

Corrosion and Odor: Locations monitored throughout the District which are prone to hydrogen sulfide accumulation are monitored with remote and stationary odor monitoring equipment. The District's corrosion and odor program are modified continuously based on weather, flow levels, pipe material, treatment plant conditions as well as odor concerns reported by the public.

Routine: IRWD's Routine preventive maintenance program ensures all "non-high maintenance" sewers are scheduled for maintenance and cleaning, but on a less frequent basis than pipes with a history of concerns.

- All "non-high maintenance" pipes that are 15 inches and below in diameter are cleaned on a 3-year cycle.
- Pipes that are 16-30 inches are cleaned on a 5-year cycle.
- Pipes greater than 30 inches are cleaned as needed and are part of an inspection program.

The District is continuously evaluating its cleaning program and has plans to utilize enhanced data integration with remote monitoring, inspection data and historical data input into our CMMS Maximo to create a highly enhanced routine cleaning schedule.

4.2.5 Lift Station Operation and Maintenance

The District currently owns, operates, and maintains 12 sewage lift stations. Each of the lift stations is equipped with SCADA and monitored daily by the Collection System Supervisors. The Collection System Manager and Supervisors can monitor lift station SCADA data from the office or remotely on laptop computers. The District addresses SCADA alarms daily. A collection system maintenance crew visits each lift station at least once weekly to perform operational inspections.

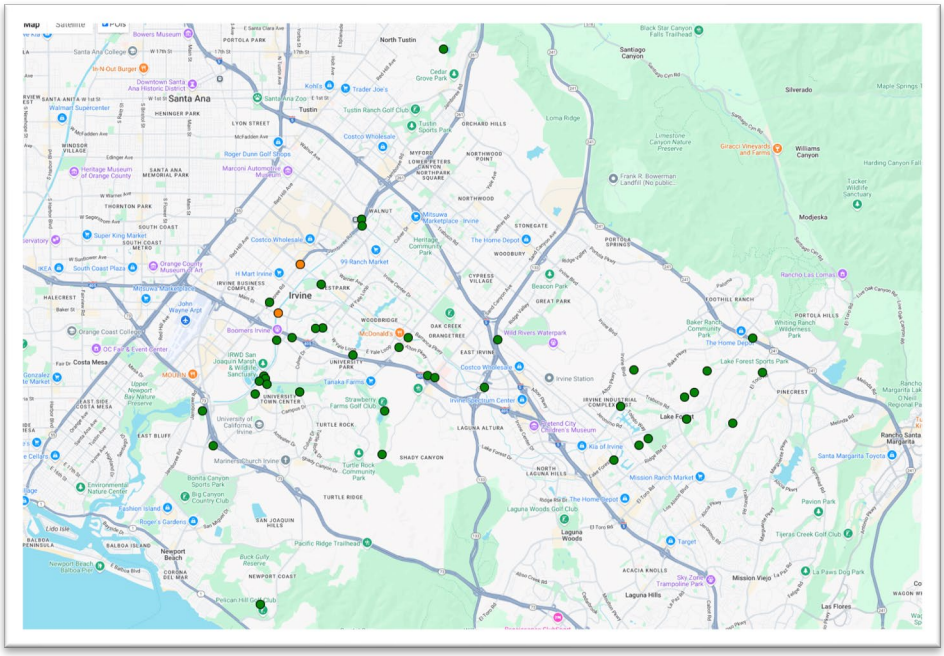
The collection system crew documents weekly operational inspections using a Lift Station Inspection form located in EzMax Mobile which is an application within Maximo. Collection System Supervisors coordinate maintenance of electrical and mechanical equipment with the District's Electrical and Mechanical Services Department.

The District has installed quick-connect connections and isolation valves at critical lift stations to easily bypass the station in the event of lift station mechanical or electrical failure. The District has many replacement pumps and components for most of its lift stations.

4.2.6 System Monitoring

The District has 41 maintenance holes/vaults with sensor technology at strategic locations in the sewer system. These are strategically installed in pipelines and siphons with potential capacity constraints and maintenance holes with potential vandalism or illegal dumping. The sensors trigger alarms in the case of surcharging beyond a preset levels or in the case of intrusion.

Figure 4.2.6 (Remote Monitoring Locations)



The District has also installed redundant level controls at each lift station. In addition to redundant level controls, the District has installed Mission Control Units, which are secondary communication systems in the event of loss of SCADA communication, loss or power, and/or high wet well. In the case of a high wet well, floats are in place to trigger all pumps to turn on. In the event of loss of SCADA communication or power, an alarm is sent to the Collection System Manager, Supervisors, Primary and Secondary Responders.

4.2.7 Customer Service Requests

In addition to documenting preventive maintenance activities, the District replaced the Customer Service Request System with the Oracle Customer Care and Billing system (Oracle CC&B) in FY 2015.

- Customer Service documents show the customer complaints using the Oracle CC&B system. Customer Service sends a Customer Service Request as both a text and e-mail notification to the Collection System Manager and Collection System Supervisors.
- Customer Service also follows up with a phone call to the Collection System Manager or Collection System Supervisors. During after-hours, when Customer Service is not on duty, all calls are forwarded to the District's answering service.
- The answering service contacts the Primary Responder using a text, e-mail notification, and a phone call. The answering service does not enter calls into the Customer Service Request system.
- During the after-hours, the Primary Responder or Collection System First Responder will

enter the service call into the Customer Service Request system. The responding Collection System Supervisor will document findings and close-out the Customer Service Request in the Customer Service Request system.

4.3. Training

In-house and external training are provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors, which includes:

- Annual refresher training reviewing the General Order 2022-0103 DWQ
- Spill Emergency Response Plan procedures and practice drills.
- Skilled estimation of spill volume for field operators.
- Electronic CIWQS reporting procedures for Data Submitters and LRO's.
- Contractors awarded a job or a project by IRWD are responsible for their own training program in addition to being trained in IRWD's spill response procedures.

4.3.1 CWEA - Collection Systems Maintenance Certification:

All Collection System employees have earned or are in the process of earning the California Water Environment Association Collection System Maintenance certification.

- Employees responsible for performing collection system maintenance activities that are journeymen and just entering the collections dept of IRWD as a Collection Systems Tech I required to obtain CWEA Collection System Maintenance Grade 1 certification and CDL Class A within one year of employment.
- Collection System Technician II employees are required to have three years of field experience, Class A CDL and CWEA Collection Systems Maintenance Grade 1 certification.
- The CCTV Technician classification is an entry-level position and requires a collection system maintenance grade 1, Class A CDL and NASSCO PACP certificate.
- Senior Technicians require CWEA Collection Systems Maintenance Grade 2 certification, Class A CDL and a NASSCO PACP certificate.
- The Collection System Supervisor position requires possessing a CWEA Collection System Maintenance Grade 3 certification, Class A CDL and a NASSCO Certificate.
- The Collection System Manager is required to have a CWEA Collection System Maintenance Grade 4 certification, a bachelor's degree in business, public administration, or related field, six years of management experience in the collection system field, and three years of experience as a supervisor.

4.4. Equipment Inventory

An inventory of sewer system equipment, including the identification of critical replacement and spare parts, is maintained in the District's CMMS(Maximo) as well as within our inventory management system which is maintained by the Purchasing Manager and Collection Systems Manager.

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Element 5 - Design and Performance Provisions

IRWD maintains Standards and Specifications (Standards) that comply with Attachment D Section 5 of the General Order WQ 2022-0103-DWQ.

The Standards include updated design criteria and construction standards and specifications for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components. It also contains procedures and standards for inspecting and testing newly constructed, installed, repaired, and rehabilitated sewer system assets. The Standards are reviewed annually and updated as changes are needed.

The Standards can be found on IRWD's public website at:

https://www.irwd.com/images/pdf/doing-business/engineering/2025/IRWDConstructionManualFeb2025.pdf

https://www.irwd.com/doing-business/engineering

5.1. Updated Design Criteria and Construction Standards and Specifications

If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in Element 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria.

The District has developed design and construction standards for the installation of new sewer systems, pump station components, and other appurtenances.

The latest versions of all of the District's design and construction standards, guidelines, specifications, and details are publicly available on the internet at The District's webpage include the following documents:

Procedural Guidelines and General Design Requirements

- Standard Drawings
- General Technical Specifications

In addition, anyone interested in automatically receiving updates to the District's documents, guidelines, and requirements can sign up for IRWD eNotify: which will send e-mail notifications when changes are made to any of the documents or when a change is posted to the IRWD website.

The District's Procedural Guidelines and General Design Requirements include:

- Development Plan and Permit Processing Procedures
- District authority to access work site
- Sewer system inspection standards and procedures for construction

Design Criteria for Sewer Facilities

- Pipe size, material, minimum and maximum slope, and flow design criteria.
- Standard location and alignment, stationing, and minimum depth.
- Manhole location, size, type, frame and covers, and lining.
- Cleanout design criteria.
- Force main design criteria.
- Sewer lateral design criteria.
- Sewer pump stations design criteria; and,
- Design criteria for easement and right-of-way for sewer.

The District's Sewer Standard Drawings includes the following eight standard details for the sewer system listed in **Table 5-1**.

Table 5-1: Sewer Standard Drawings

Drawing No.	Description
S-1	Manhole
S-2	Drop Manhole
S-3	Sewer Lateral
S-4	Cut-in Wye Connection
S-5	Terminal Cleanout
S-6	Sewer Trench
S-7	Steel Casing for Sewer Pipe
S-8	Concrete Slope Anchors

The District's General Technical Specifications, for use in all District construction contracts, includes a comprehensive set of specifications for sewer system pipelines and facility construction. The District contracts with a design engineer for the development of design drawings and specifications for sewer pipeline and pump station rehabilitation and replacement projects. In addition, IRWD has adopted and uses Standard Specifications for Public Works Construction (Greenbook).

5.2. Procedures and Standards

IRWD uses the inspection and testing requirements detailed in the District's Procedural Guidelines and General Design Requirements, General Technical Specifications, and the Standard Specifications for Public Works Construction (Greenbook).

The District's Procedural Guidelines and General Design Requirements requires sewer inspections at the following intervals:

- Trench excavation and bedding
- Placing of pipe, fittings, and structures
- Placing and compacting the pipe zone backfill
- Backfill of the trench to grade
- Raising of manhole and clean-outs and during system cleaning
- Pipeline CCTV inspection at completion of construction

Prior to pipelines CCTV inspection, pipelines must be balled and flushed, air-tested, and mandrelled.

CCTV inspection is then performed to determine if any of the following defects exist:

- Off grade - 0.08 foot, or greater, deviation from grade.
- Joint separations exceeding ¾-inch.
- Misaligned joints (none permitted on straight runs or on wrong side of pipe curves). Joint spaces exceeding ¾-inch on designed curves.
- Chips in pipe ends more than ¼" deep.
- Cracked or damaged pipe or evidence of presence of an external object bearing upon the pipe (rocks, roots, etc.).
- Dropped joints.
- Infiltration in excess of maximum permissible specified in the District Standard Specifications, Section 15043.
- Debris or other foreign objects in the line.
- Other obvious deficiencies.

Any defects found must be corrected prior to final acceptance. Inspection and testing standards for sewer pipeline repair and rehabilitation projects are developed by the design engineer during the design phase of the project. Similarly, inspection and testing requirements for pump station repair or rehabilitation projects are developed by the design engineer during the design phase of the project.

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Element 6 - Spill Emergency Response Plan

IRWD maintains a Spill Emergency Response Plan (SERP) containing procedures that comply with Attachment D Section 6, E1, and E2 of the General Order WQ 2022-0103-DWQ. **See Attachment 1.**

IRWD collaborates 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, IRWD has been meeting annually with surrounding collection systems that are satellites to the Interceptor System.

The Spill Emergency Response Plan must include an up-to-date Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for the prevention of future spills.

IRWD's Spill Emergency Response Plan includes procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner.
- 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.
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders.
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained.
- Address emergency system operations, traffic control and other necessary response activities.
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system.
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State.
- Remove sewage from the drainage conveyance system.
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters.
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery.
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event.
- Conduct post-spill assessments of spill response activities.
- Document and report spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

No later than the next business day, a completed internal Spill Report Form should be forwarded to the Collection Systems Manager and Director of Maintenance. Any debriefings of the respondents to the Spill will occur at the Senior Management level. The internal Spill Reporting form is utilized to document the Spill event, communicate Spill event to all appropriate IRWD staff internally, enter all required information into the CIWQS on-line database, and to certify the Spill by the LRO.

For more details, please see Attachment 1(Spill Emergency Response Plan).

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Element 7 - Sewer Pipe Blockage Control Program

IRWD recognizes the need for a sewer pipe blockage control program to control fats, oils, grease, rags and debris. Substances such as FOG, roots, rags, and debris represent a required element in IRWD's efforts to successfully operate its collection system in a manner that meets regulatory requirements, achieves identified service level targets, and is cost-effective.

The procedures IRWD adheres to include:

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

- Regulatory Compliance hands out educational materials at multiple District events throughout the year which include grease removal containers for customers as well as educational information. Ongoing outreach involves a multi-media webpage title, "Beware of FOG: Fats, Oils & Grease", and the Sewer Savvy Business Recognition Program.
- The District utilizes education as the primary method for controlling the discharge of FOG to the sewer system from multi-family housing and single-family homes. The District provides educational information concerning FOG in the District's Quarterly Newsletter at least once annually. In addition, the District mails FOG education brochures with utility bills on an annual basis to educate District customers.
- The District conducts more frequent mailing of FOG brochures for areas identified as potential upstream sources of FOG in the sewer system. Additionally, the District provides FOG brochures and educational material to multi-family housing for posting in common areas.
- FOG Control Program staffing consists of a combination of District staff and contractor staff. The District employs a Regulatory Compliance Manager (FOG program manager), along with two additional staff members in the Regulatory Compliance Department. The Regulatory Compliance Manager and applicable staff are responsible for management of the following activities:
    - FOG Control Program implementation, performance monitoring, and reporting
    - FSE inspections
    - FSE compliance follow-up
    - FOG Control Program enforcement

7.2 A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area:

- Collection Systems has a dedicated debris decant area located at the Michelson Water Reclamation Plant which is utilized for disposal of grease, calcium, grit and additional debris. This additional waste accumulated while performing jetting operations is hauled away per our agreement with our waste hauler contractor and is scheduled based on the needs of the District.
- Grease hauling companies serving the IRWD area are shown in Table 7-1, and Grease Rendering facilities serving the IRWD area are shown in Table 7-2.

Table 7-1: Grease Hauling Companies Serving Orange County

Company	Phone Number
Ameriguard Maintenance Services	(800) 347-7876 x14
JR Grease Traps and Interceptor Service	(714) 739-4628
New Leaf Biofuel	(619) 236-8500
One More Time	(323) 268-2801
SMC Grease Specialist	(951) 788-6042
Superior Service Recycling	(714) 502-0240

Table 7-2: Grease Rendering/Drop Off Points for Irvine Area

Company	Address	Phone Number	Type of Operation
Baker Commodities, Inc.	4020 Bandini Blvd Los Angeles, CA (Vernon, CA)	(323) 269-6177 or (800) 427-0696	Grease recyclers. Drop off location and grease trap cleaning/hauling.
Darling International	10441 Stanford Ave Garden Grove, CA	(714) 556-7867	Drop off location and grease trap cleaning/hauling.
OCC Recycling	2701 Fairview Road Costa Mesa, CA	(714) 432-5131	Used cooking oil only
One More Time	4144 Bandini Blvd Los Angeles, CA (Vernon, CA)	(323) 268-2801	Used cooking oil only
Orange County Sanitation District, Plant No. 1	**10844 Ellis Avenue, Fountain Valley, CA 92708**	**(714) 593-7428**	**Primary grease drop off point for grease haulers serving IRWD**
Southwest Processors Inc.	4120 Bandini Blvd Los Angeles, CA (Vernon, CA)	(800) 900-3366	Grease recyclers. Drop off location and grease trap cleaning/hauling.

Note: Listed above are FOG disposal facilities serving the IRWD area. The primary grease drop off location is Orange County Sanitation District's Plant No. 1.

7.3 The legal authority prohibits discharges to the system and identify measures to prevent spills and blockages:

- Per the last SSMP (2018) that was adopted by the board and all subsequent WDR updates have been recognized and implemented in perpetuity. Measures that have been identified include advanced telemetry remote monitoring which are strategically placed throughout the District as well as routine inspections performed in high maintenance areas as well as additional locations of concern.
- The District has incorporated both measures to prevent spills and blockages caused by FOG into the District's Rules and Regulations and has the authority to identify additional measures as deemed necessary. The District's Rules and Regulations require the following measures to prevent spills and blockages caused by FOG:
    - Implementation of Best Management Practices to minimize discharge of FOG (Section 7.11.3.4)
    - Requirement to install a grease removal device (Section 7.11.4)
    - Requirement for grease removal equipment maintenance (Section 7.11.6.3)
    - All new construction of FSEs after December 30, 2004, are required to install grease interceptors prior to commencing discharges of wastewater to the sewer system as identified through the FSE FOG Plan Review Process.

- Existing FSEs determined to be the cause or contributor of FOG related blockages or spills are required to install grease interceptors within 180 days of identification.
- Existing FSEs undergoing remodeling or a change in operations or ownership are required to install grease interceptors as identified through the FSE FOG Plan Review Process.

- Legal Authority to Support FOG Source Control Program - The District's legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages caused by FOG is included in Section 7.11 of the District's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service. Table 7-3 summarizes the legal authorities related to FOG source control and references the relevant section of the District's Rules and Regulations that establishes these authorities.

Table 7-3 Legal Authority

FOG Legal Authority	Section of IRWD's Rules and Regulations
FOG Discharge Prohibition	7.11.3.1
Food Service Establishment Prohibitions	7.11.3.2
Requirement for FOG Wastewater Discharge Permit	7.11.3.3
Requirements for Implementation of FOG Best Management Practices	7.11.3.4
Requirement to Install, Operate, and Maintain Grease Removal Equipment	7.11.4
Grease Interceptor and Grease Trap Requirements	7.11.6.8 & 7.11.6.9
Authority to Require Monitoring, Reporting, Inspection, and Sampling for FOG Source Control Compliance	7.11.7
Record-Keeping Requirements	7.11.7.2
Authority to Perform Inspection and Sampling	7.11.7.4
Enforcement	7.6 & 7.11.8

7.4 Requirements to install grease removal devices, design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements:

- IRWD Rules and Regulations ensure all plumbing and health codes are followed which verifies grease removal devices are installed and sized correctly per drainage fixture unit (DFU) calculation tables as well as District inspectors. Pursuant to Section 7.11.4 of the District's Rules and Regulations, FSEs are required to install, operate and maintain approved type and adequately sized grease interceptors.

- The District's general FOG Wastewater Discharge Permit requires FSEs to conform with the following record keeping and notification requirements:
- Record Keeping requirements
    - Logbook of employee training
    - Records of spills and/or cleaning of the lateral or sewer system
    - Logbook of grease control equipment cleaning activities
    - Copies of grease control equipment records or waste hauling manifests
    - Records of sampling data and height monitoring of FOG and solid accumulation in the interceptor
    - Notification requirements
        - Notification of a spill
        - Notification regarding planned changes
- The District's general FOG Wastewater Discharge Permit requires the implementation of the following Best Management Practices:
    - Installation of drain screens
    - Segregation and collection of waste cooking oils
    - Disposal of food waste into trash or garbage, and not into sink
    - Employee training
    - Kitchen signage
- The District's FOG regulation requires grease removal equipment sizing and installation to conform to the current edition of the California Plumbing Code and requires grease removal equipment to be constructed and located in accordance with the requirements and criteria set forth in the FOG Control Program. The District's Fats, Oils, and Grease (FOG) Control Program Manual, dated December 15, 2004, documents the current approach utilized by the Regulatory Compliance Manager to size grease interceptors.
- The District's Regulatory Compliance Manager reviews and approves the sizing and installation of grease removal devices. The design and sizing are based on the current version of the California Plumbing Code Section 1014.3. The Regulatory Compliance Manager will also consider the potential for large grease interceptors to become septic

and may compare the California Plumbing Code sizing against other sizing formulas and use best judgment based on other factors (e.g. FSE cooking equipment, menu, frequency of use of drainage fixture units) to determine the final size of the interceptor.

- The FOG Control Program Manual also requires the floor of an interceptor to be shallow enough to allow for proper cleaning and an individual interceptor not to be larger than 3,000 gallons for most installations. FSEs with very large flows may be required to install multiple interceptors. Finally, an FSE calculation of 375 to 750 gallons is required to install a 750-gallon interceptor.
- The District's general FOG Wastewater Discharge Permit requires FSEs to perform grease removal equipment maintenance as frequently as is necessary to ensure FOG and/or solids in the device do not exceed 25 percent of the capacity of the equipment. Typically, the maintenance frequency required is quarterly yet no less frequent than once every six months. If FSE inspections identify non-compliance with the District's FOG regulation, the Regulatory Compliance Manager may require an FSE to perform more frequent maintenance.

7.5 Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance:

- IRWD's Regulatory Compliance Department oversees the FOG inspection program and designates authority to implement oversight by having staff and consultant support for emergency response and routine inspections.
- Section 7.11.3.2 of the District's Rules and Regulations applies the following prohibition to all FSEs:
    - Installation of food grinders is prohibited. This includes a requirement to remove existing food grinders.
    - Use of additives to emulsify FOG is prohibited.
    - Disposal of waste cooking oil into drainage pipes is prohibited.
    - Discharge of wastewater from dishwashers to any grease removal equipment is prohibited.
    - Discharge of wastewater with temperatures in excess of 140 degrees F to any grease removal equipment is prohibited.
    - Use of any biological additives for grease remediation or as a supplement to grease removal equipment maintenance is prohibited.
    - Discharge of waste from toilets, urinals, and other fixtures containing fecal materials to sewer lines connected to grease removal equipment is prohibited.
    - Discharges of any waste including FOG and solid material removed from grease removal equipment to the sewer system is prohibited.
    - Diluting discharge as a substitute for treatment is prohibited.
- Section 7.11.7.4 of the District's Rules and Regulations provides the District with the authority to perform inspection and sampling at FSEs and Section 7.11.8 provides authority

to enforce provisions of the Fats, Oils, and Grease Control program.

- The District has developed an enforcement response guideline to respond to Non-Compliance issues identified during the inspection process. The District bases the enforcement response on the severity of the non-compliance and the history of non-compliance at the FSE. The enforcement response follows a tiered approach consisting of three tiers: Notice of Non-Compliance, Notice of Violation, and Assessment of Penalties. Table 7-4 lists the levels of enforcement response.

Table 7-4: Levels of FSE Enforcement Response

Tier	Enforcement Trigger
Tier 1 – Notice of Non-Compliance	A Tier 1 enforcement response is typically utilized for isolated deficiencies that are not serious non-compliance issues. No enforcement action is taken after correction of the deficiency. For example, a single BMP non-compliance finding would result in a Tier 1 enforcement response.
Tier 2 – Notice of Violation	A Tier 2 enforcement response is triggered due to the severity of non-compliance, an FSE that is non-responsive to previous requirements, or an FSE that remains in non-compliance beyond required timelines. This level of enforcement is triggered by multiple deficiencies identified in an inspection. An example of a serious non-compliance issue would be a deficiency in grease removal equipment maintenance or functionality. Another example is when a grease discharge from an FSE directly identified as the cause of a spill or blockage event.
Tier 3 – Assessment of Penalties	Similar to Tier 2, a Tier 3 enforcement response is triggered due to the severity of non-compliance, an FSE that is non-responsive to previous requirements, or an FSE that remains in non-compliance beyond required timelines. A Tier 3 enforcement response is rare and is utilized by the District as a last resort to generate FSE compliance. This level consists of assessment of non-compliance fees; increased assessment of fees; revocation of FSE's Conditional Waiver requiring installation of a grease interceptor; and the potential loss of the FSE's right to discharge wastewater to the sewer system.

- The District has an appeals process for FSEs to appeal the decisions of the Regulatory Compliance Manager or General Manager. A hearing is conducted and the FSE will be given the opportunity to present information supporting the FSE's position. A FSE affected by a Notice of Violation from an inspector or by the action or determination of the Regulatory Compliance Manager may file a request for a hearing with the General Manager. The General Manager will conduct a hearing with the FSE, review the facts, and make a determination concerning the appeal. An FSE affected by the action or determination of the General Manager may file a request for an appeal hearing with the

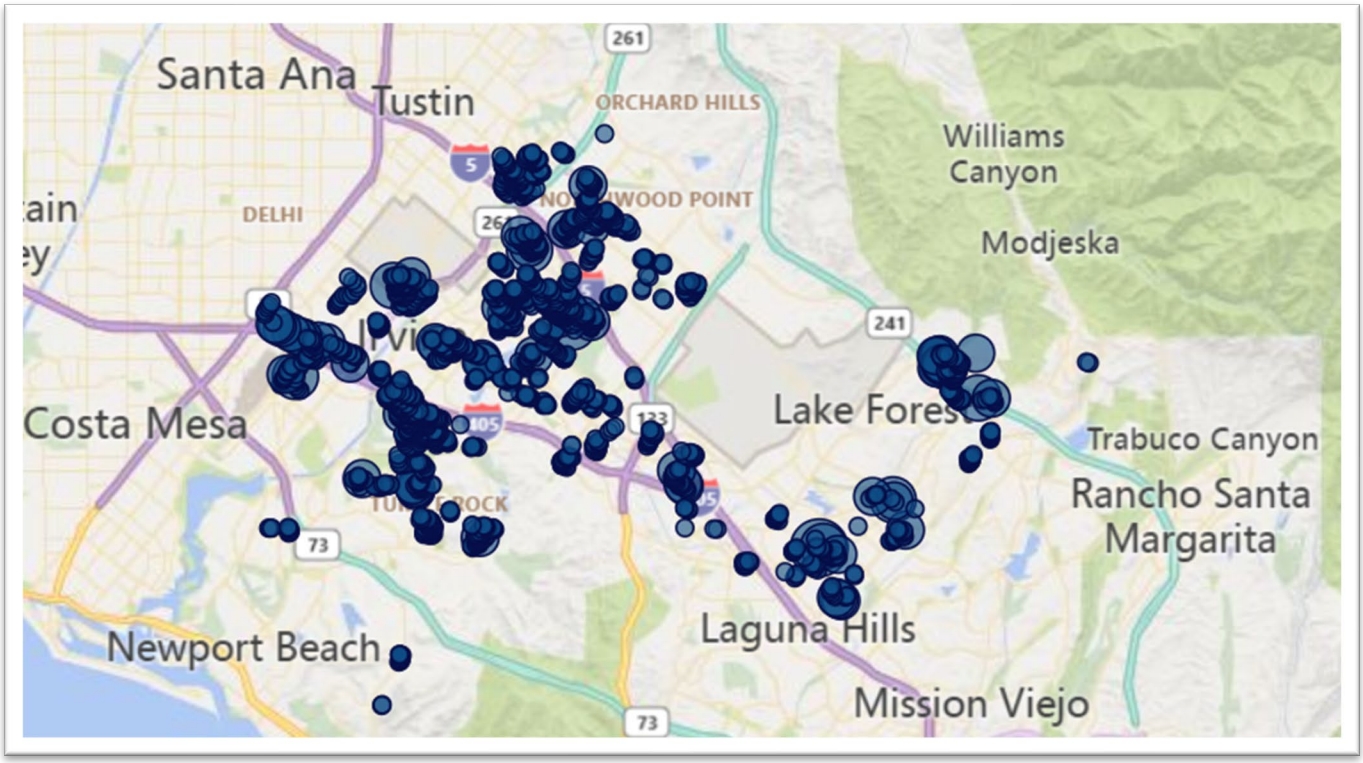
Board of Directors who will review the facts and make a determination.

- The District utilizes a contractor to perform FSE inspections, issue Notice of Violation letters, and to perform compliance follow-up inspections. District staff perform FOG Control Program enforcement activities if the contractor determines compliance is not achieved at the time of the compliance follow-up inspection. The District also dedicates a portion of the District's sewer cleaning crews to FOG-related preventive maintenance activities.

7.6 An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section:

- District staff monitors High Maintenance locations through our CMMS system (Maximo IBM) and has two scheduled cycles for the areas labeled: 4-month and 6-month High Maintenance in Maximo IBM.

4- and 6-month high maintenance locations(illustration)



- The District employs preventive maintenance to address areas prone to FOG accumulation in the system. The District has identified areas in the sewer system with FOG issues through a combination of maintenance crew knowledge, past grease-related spills and stoppages,

CCTV inspection data, and the FOG characterization study performed in 2004. Staff maintain a database of all of the FSEs within the District. The District will continue to adjust the sewer cleaning frequency of pipes to address the FOG issue while optimizing the amount of sewer cleaning performed. The District employs the methods outlined in Chapter 4 – Operations and Maintenance Program to optimize its preventive maintenance activities.

- The District also has an on-going CCTV inspection program that will continue searching for sewer pipes with FOG issues. In addition, sewer cleaning crews record the type and severity of material found during cleaning activities and the District utilizes this information to identify new areas with FOG issues and to adjust sewer cleaning frequencies as described in Section 6.3.

7.7 Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above:

- All Food Service Establishments are required to implement Best Management Practices (BMPs) in their operations to minimize the discharge of FOG to the sewer system and our annual inspection verifies implementation. All Food Service Establishments are required to pretreat their wastewater using grease interceptors to remove FOG prior to discharge to the sewer system. Administer enforcement measures and costs associated with FOG discharge and blockages. Review waste oil and grease removal manifest from FSE's.
- The District utilizes the Orange County Sanitation District's (OCSD) source control program to regulate wastewater discharges from Industrial users into the District's sewer collection system. The District will coordinate with OCSD for regulation and enforcement of industrial dischargers for any FOG related discharges identified by the District.
- Section 7.11.3.1 of the District's Rules and Regulations prohibits a Food Service Establishment (FSE) from discharging FOG that may accumulate and/or cause or contribute to blockages in either IRWD's sewer system or sewer system lateral connecting the FSE to IRWD's sewer system.

The District performs several types of FSE inspections to ensure FSEs comply with FOG regulations and FOG Control Program requirements. **Table 7-2** lists the different types of inspection performed by the District.

Table 7-2 Types of FOG Source Control Inspection Performed by IRWD

Inspection Type	Description
Initial Inspections	These inspections are conducted to identify and classify each FSEs potential to generate FOG and its potential to discharge the FOG to the sanitary sewer system. If not adequately controlled, this FOG can lead to sewer blockages and, potentially, spills. The inspection identifies the type of food, equipment, and kitchen practices that contribute to FOG discharges and the equipment (e.g., grease interceptors, grease traps) that may reduce the discharge of FOG to the sewer. These initial inspections also provide the opportunity to educate the FSEs on the impact of their grease discharges, what they can do to minimize grease discharges, and how the District's FOG regulations could potentially impact them.
Best Management Practices Inspection	These inspections are conducted to evaluate compliance with the facility's best management practices requirements.
Grease Removal Equipment Inspections	These inspections are conducted to evaluate compliance with the facility's grease removal equipment requirements.
Compliance Inspections	These inspections are conducted where it is determined by the Regulatory Compliance Manager that a follow-up inspection is required for a Non-Compliance issue that has been identified in previous BMP, GRE, or FOG source sewer pipe inspections.
Enforcement Inspections	These inspections are conducted when elevated enforcement of the Permit requirements is required or when the revocation of the FSEs grease interceptor installation Conditional Waiver, Waiver or Variance is required.

- The District focuses inspections on FSEs in the vicinity and upstream of areas in the sewer system with known FOG issues and on FSEs identified as having a greater potential to generate FOG and discharge FOG to the sewer system. FSE inspections are conducted approximately annually and more frequently for FSEs with greater potential to discharge grease to the sewer system.

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Element 8 - System Evaluation, Capacity Assurance and Capital Improvements

Element 8 contains multiple components which include the following procedures and activities:

- Routine evaluation and assessment of system conditions.
- Capacity assessment and design criteria.
- Prioritization of corrective actions.
- A capital improvement plan.

8.1 Routine Evaluation and Assessment of System Condition

IRWD's plan includes 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 in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas.
    - Are within the vicinity of 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 the 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: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

The new Irvine Ranch Water District System Capacity Plan (System Capacity Plan), formerly referred to as the Sewer Collection System Master Plan (2017) is updated continuously.

The System Capacity Plan has the following two major components:

1. An evaluation of the existing system's capacity performance and identification of potential relief projects
2. Design of a new trunk sewer system to serve future development

The District performs capacity assurance planning for both the trunk sewers as well as for sewer pipelines within smaller planning areas. The District performed capacity assurance planning for the trunk sewers in March 2017. The District also prepares water, sewer, and reclaimed water facility planning studies, also known as a Sub-Area Master Plans (SAMP), on areas after a developer has generated a specific plan of development with a planning area. The District has not experienced any capacity-related sewer overflows.

The System Capacity Plan establishes performance criteria and storm events used to evaluate the system performance, identify potentially capacity-deficient locations, develop preliminary relief solutions, and size new facilities to serve future development.

IRWD's 10-year Design Storm and 5-year Performance Storm are applied to the hydraulic models to assess how IRWD's system would perform under existing and build-out conditions. Model-predicted spills identify potentially capacity-deficient systems, which are organized into two different planning periods:

8.2 Capacity Assessment and Design Criteria

IRWD's Plan 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 contribute to spill events.
- The appropriate design storm(s) or wet weather events that cause or contribute 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 because 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.

One of the primary objectives of the former Sewer Collection System Master Plan (2017), developed by the District and AKM Consulting Engineers, was to determine the available capacity of the collection system and to identify any deficiencies resulting from those system capacities. To accomplish this objective, the District created a hydraulic model of the collection system. The hydraulic model is composed of both the physical characteristics of the system and the flows the District estimates will be conveyed by the system. Analyses were performed to determine the water demand and sewage flow generation factors for representative land uses throughout the District's service area. This analysis was documented in a Water Demand and Flow Generation Factor Study, which includes the procedures used to calculate water demands and sewage flow generation factors as well as the results of those analyses.

Hourly variations in wastewater flows are an important part of determining the hydraulic capacity of the sewer collection system. The District's Flow Measurement Program characterized the flow volumes per d use and this information was used to define the hourly flow variations for residential and non- residential land use types.

Under the first phase of the flow measurement program, several flow measurement devices (monitors) were installed throughout the collection system. These devices were positioned to measure flow from generally homogenous land use areas. Each device sampled the flow rate within the sewer system on a five-minute interval. For each measurement site, hourly average flow rates were used to define the diurnal pattern of the actual flow in the system. Hourly peak flow factors were calculated to allow comparison of the flow measurement results between drainage basins with different flow volumes. Hourly peak flow factors are calculated by dividing the average hourly flow rate by the average daily flow rate.

Figure 8-1 and **Figure 8-2** show the observed diurnal curves for residential and non-residential flows. These flow patterns are documented in Section 4 of the Sewer Collection System Master Plan (2017).

Figure 8-1: Residential Diurnal Curve

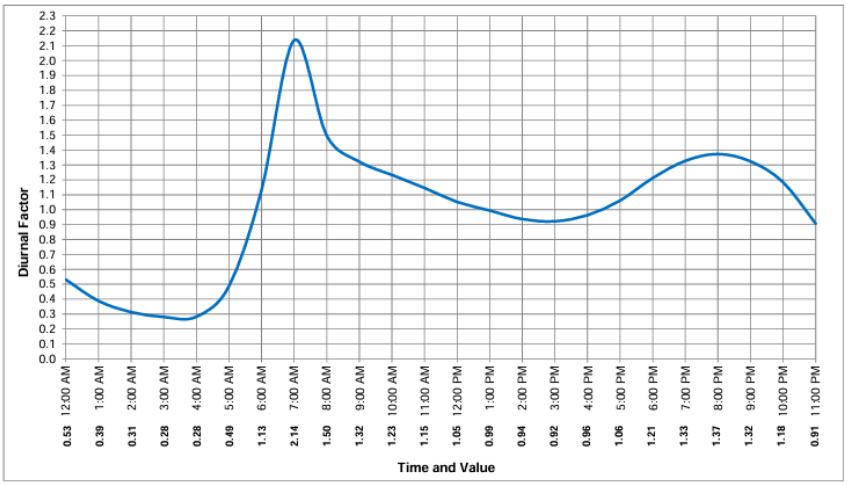
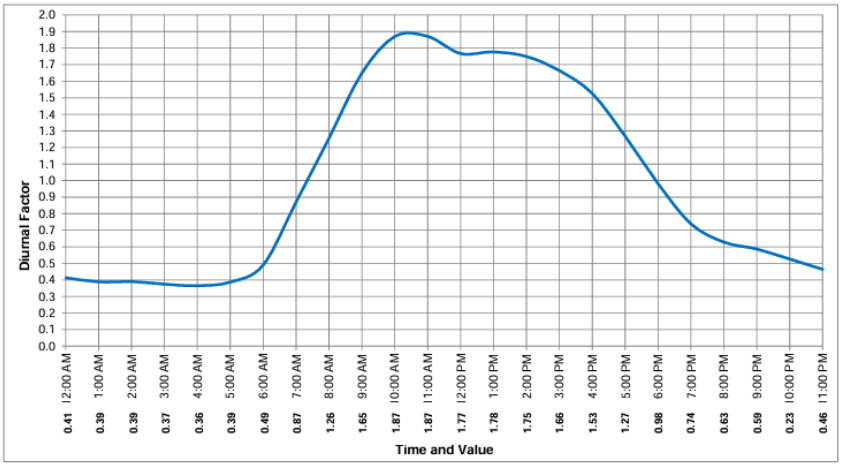


Figure 8-2: Commercial Diurnal Curve



In June 2012, the District's Sewer System Management Plan Program Audit included an audit finding indicating the District's current planning criteria of accounting for inflow/infiltration (I/I) using conservative depth over diameter (d/D) ratios may be inadequate for areas with high levels of I/I.

In November 2012, the District performed a preliminary study from data collected at selected lift stations between January 1, 2010, and March 31, 2012. The study concluded that normalized volumetric RDII responses from the evaluated tributary basins are considered moderate. Furthermore, RDII peak factors associated with the Canada, Coastal Ridge and Coyote lift stations suggest that peak flows leading to the wet wells of those stations were likely significant during the two large, system-stressing storms evaluated. Based on the results of this preliminary evaluation, the District plans on performing additional analysis during the next System Capacity Plan project to determine if a change to the planning criteria for accounting for I/I is needed in areas with high levels of I/I.

8.2.1 Design and Performance Criteria

Section 4 of the Sewer Collection System Master Plan (2017) documents the District's design and performance criteria for gravity pipelines including the allowable sewer main slope, peaking factors, and minimum depth. Section 4 also includes performance criteria for force mains, sewer pump stations, and siphons.

8.2.2 Gravity Mains

The District requires design flows for residential sewer mains to be calculated based on the flow generation factors presented in Table 4-4 of the Sewer Collection System Master Plan (2017) according to the most appropriate land use category. The District encompasses a variety of land use types: residential and non-residential. The District requires Residential and Commercial/Industrial flow design criteria to be calculated by the design engineer based on projected generation rates for specific commercial or industrial development. Peak dry weather design flows for sewer mains are to be designed to maintain a specific depth (d) to diameter (D) ratio, based on the selected diameter of the pipeline as shown in Table 8-1.

Table 8-1: d/D Performance Criteria for Gravity Sewer Pipes[6]

	Peak Dry Weather Flow d/D		
	Diameter < 15"	**Diameter = 15"**	**Diameter > 15"**
Priority 1	> 82%	> 82%	> 82%
Priority 2	75% - 82%	75% - 82%	75% - 82%
Priority 3	67% - 75%	67% - 75%	-
Priority 4	50% - 67%	-	-
Design Requirement	**≤50%**	**≤67%**	**≤75%**

Maintenance of specific d/D ratios under peak dry weather flow conditions provides sufficient pipeline capacity to accommodate wet weather flow, including infiltration, inflow and other storm related water, over and above the actual wastewater. This additional headspace also provides a margin of safety for variations in flow estimation. The overall intent is to provide a factor of safety within the pipeline for wet weather and other unexpected flows.

Design criteria establish a means of selecting a pipeline size and vertical slope that provides the required capacity and flushing velocity for projected flows and the available head space above the water surface for potential unexpected peak flows above normal projected conditions. Such instances of peak flows exceeding design conditions may occur during rain events where any number of potential avenues of water conveyance may allow rainwater into the sewer collection system. Groundwater is another potential source of

defect flow that may contribute to overall Inflow and Infiltration (I&I) that can occur during the life span of a pipeline segment. Excessive I&I within a collection system will increase the risk of sanitary sewer overflows.

The design criteria for gravity pipelines provides for an industry standard margin of safety from sanitary sewer overflows by dedicating the remaining head space (air space above the water level) for unexpected I&I situations. Once in operation for a long period of time, if a pipeline operates with a peak flow higher than the design criteria, it is not necessarily a trigger for upsizing the pipeline segment capacity. This is particularly relevant for areas that have already reached their ultimate build-out condition and do not expect any further increase in flows.

The District's Sewer Collection System Master Plan (2017) included gravity pipeline performance criteria to provide a means to prioritize existing pipeline segments experiencing flows above design standards. As shown in Table 8-1 above, a ranking system of one to four was created for different pipe size categories and d/D ratio ranges to evaluate the performance of pipelines and focus on segments presenting the highest risk of flowing at full capacity.

Sewer mains are required to be designed and constructed to provide mean velocities as described in Section 4-2 of the District's Procedural Guidelines and General Design Requirements[7] at the design depth defined in Table 8-1 above. Table 4-7 of the Sewer Collection System Master Plan (2017) documents the design criteria for allowable sewer main slope.

The adequacy of a sewer collection system is based upon its ability to convey the peak flows. District sewer mains are required to be designed and sized using peak flow conditions, determined by multiplying average flow conditions by a peaking factor. The capacity of the sewer collection system was validated by developing a calibrated hydraulic modeling and verifying with field observations. The methodology described below provides a representative understanding of the hydraulic modeling analysis supports the SSMP: The average base loads were established to match the flow monitoring and SCADA data at various lift stations, treatment plants, and 65 temporary sewer flow monitors. The average flows routing the tributary areas were loaded in the hydraulic model over a 24-hour period. The instantaneous model flows are generated from the average flow conditions and the corresponding hourly diurnal patterns. Section 6-9 of the Sewer Collection System Master Plan (2017) included the diurnal patterns for residential, commercial, and specific customers developed for the peak dry weather scenario simulations. Once the model was calibrated, the system was analyzed and verified for adequate capacity.

Additionally, developments containing more than 400 dwelling units are required to provide the District with a Sub-Area Master Plan (SAMP). The SAMP includes an analysis of the proposed sewer system using a computerized hydraulic model, a complete description of the facilities to be constructed, maps, and computations providing the design criteria meeting the requirements of the Sewer System Guidelines. The Sewer Collection System Master Plan (2017) incorporates the information provided by SAMPs where appropriate and available.

8.2.3 Force Mains

Section 4-10 of the IRWD Procedural Guidelines and General Design Requirements documents the design and performance criteria for force mains.

8.2.4 Sewer Pump Stations

Pump stations design and performance criteria included in the Sewer Collection System Master Plan (2017) conforms to Section 4-13 of the District's Procedural Guidelines and General Design Requirements.

8.2.5 Siphons

Section 4-8 of the Sewer Collection System Master Plan (2017) documents performance criteria utilized in evaluating the existing siphons. Final criteria for ultimate upgrades will be at the discretion of IRWD and addressed during the design phase of the project. Siphons are only used when specifically approved by the District Engineer, and after all other design options have been investigated.

8.2.5 Reliability and Redundancy

The District performed a system reliability and redundancy analysis documented in Section 7 of Sewer Collection System Master Plan (2017). As part of the Sewer Collection System Master Plan (2017), a Criticality based Reliability and Redundancy analysis of the gravity system pipes, siphon, force mains, and lift stations was conducted. The analysis utilized the existing closed-circuit television (CCTV) inspection data, the developed hydraulic model data, as well as other elements deemed of importance to the analysis. InfoMaster, an ArcGIS based asset integrity management and capital planning software package, was utilized to conduct the analysis. It is a tool that assists in characterizing the likelihood and consequence of failure for individual pipes in the network. IRWD's CCTV inspection data and hydraulic analysis data were used by the InfoMaster software to assist in the analysis. InfoMaster relates the combination of both Likelihood of Failure and Consequence of Failure to risk. Risk takes into account the asset's physical condition, as well as the impact that its failure would have on system performance and stakeholders.

8.2.6 Gravity Pipe Risk Analysis

The resulting gravity system risk profile and recommended action items are included in Section 7-2 of Sewer Collection System Master Plan (2017). A decision tree shown in Figure 7-4 of Sewer Collection System Master Plan (2017) is used to determine the action items related to each gravity pipe.

8.2.7 Siphon Risk Analysis

The siphon risk analysis was conducted along with the gravity main pipes. Because siphons for the most part flow under pressure, and have a d/D greater than 0.75, all siphons are classified in the "Extreme Risk" or "High Risk" category. The list of siphons and their risk profile is shown in Table 7-2 of the Sewer Collection System Master Plan (2017).

8.2.8 Force Main Risk Analysis

In the Force Main Risk Analysis, the overall Likelihood of Failure and Consequence of

Failure scores are calculated as a weighted average of all individual Likelihood of Failure and Consequence of Failure scores. Each of the Likelihood of Failure and Consequence of Failure elements are assigned different weighting factors depending on the goals and priorities of IRWD. The detail of risk analysis for force main is included in Section 7-5 of Sewer Collection System Master Plan (2017).

8.2.9 Lift Station Risk Analysis

The weighted Scores for all Likelihood of Failure and Consequence of Failure Elements for Lift Station are shown in Table 7-5 of Sewer Collection System Master Plan (2017). The Condition Grade is weighted heavily because it is based on actual observations made during the field visits to each lift station. Proximity to Major Waterways and Rate of Flow are weighted heavily because in the event of a spill, these lift stations would have the most impact on the community and the environment. Based on the Likelihood of Failure and Consequence of Failure scores and weightings, the resulting Lift Station Risk Profile is shown in Table 7-6 of the Sewer Collection System Master Plan (2017).

8.3 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.

The Sewer Collection System Master Plan (2017) documents the priority of the pipe segments experiencing flows above the design standard d/D. Using the Performance Criteria, Plate 4 of Sewer Collection System Master Plan (2017) developed recommended action items from the risk analysis conducted on gravity pipes. IRWD conducts on-going maintenance and rehabilitation efforts for capacity enhancement, reliability, and redundancy measures. IRWD performs CCTV inspections on the sewer collection system and takes necessary steps to maintain and rehabilitate the gravity and force main sewer pipe. Since 2014, IRWD rehabilitated approximately 12,000 LF of 8-inch, 10-inch, 12-inch, and 15-inch sewer pipe with Cure-in-Place (CIP) Lining. In addition to CIP pipe lining, sewer pipe rehabilitation projects involve sewer line cleaning, additional CCTV inspections, mechanical root removal process, Calcium removal, and spot repairs.

The Sewer Collection System Master Plan (2017) provides the risk profile of Siphons and Lift Stations. In addition to the scored based risk assessment, IRWD performed condition assessment of the facilities to prioritize the rehabilitation projects. The IRWD goal is to rehabilitate one Siphon and one Lift Station annually to meet the capacity enhancement and improve reliability and redundancy measures.

8.4 Capital Improvement Plan

IRWD's capital improvement plan includes 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.
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects.
- Interagency coordination with other impacted utility agencies.

IRWD's capital budget (FY25/26/27) included several on-going capacity, reliability, and redundancy projects including:

The Sewer Collection System Master Plan (2017) documents the priority of the pipe segments experiencing flows above the design standard d/D. Using the Performance Criteria, Plate 4 of Sewer Collection System Master Plan (2017) developed recommended action items from the risk analysis conducted on gravity pipes.

IRWD conducts on-going maintenance and rehabilitation efforts for capacity enhancement, reliability, and redundancy measures.

IRWD maintenance staff performs CCTV inspections on the sewer collection system and takes necessary steps to maintain and rehabilitate the gravity and force main sewer pipe.

Since 2014, IRWD rehabilitated over 12,000 LF of 8-inch, 10-inch, 12-inch, and 15-inch sewer pipe with Cure-in-Place (CIP) Lining. In addition to CIP pipe lining, sewer pipe rehabilitation projects involve sewer line cleaning, additional CCTV inspections, mechanical root removal process, Calcium removal, and spot repairs.

Tables 7-2 and 7-4 of Sewer Collection System Master Plan (2017) provided the risk profile of Siphons and Lift Stations. In addition to the scored based risk assessment, IRWD performed condition assessment of the facilities to prioritize the rehabilitation projects.

IRWD's sewer system includes 19 inverted siphons in various locations. In 2016, the District completed a preliminary assessment and ranking of the siphons considering their risk of failure. The siphons are being rehabilitated in two phases, four (4) siphons were rehabilitated in Phase I, and (7) in Phase II (See project below). The remaining siphons will be included in the future capital budget as needed. IRWD will continue to monitor the condition of collection facilities and implement capital plans as to rehabilitate one Lift Station and one siphon annually to meet the capacity enhancement and improve reliability and redundancy measures.

In 2020, a risk assessment was completed on all vertical facilities and updates consequence of failure and likelihood of failure scores for all lift stations. The result of the project recommends that, before 2030, detailed condition assessments be conducted on 4 lift stations:

1. Harvard Avenue Trunk Station (HATS)
2. Canada
3. Coyote
4. Irvine Park

IRWD's capital budget includes the following projects:

- Michelson Force Main Rehabilitation Project – This project will install CIP Pipelining on approximately 3,400 LF of force main sewer pipe.
- Lake Forest Woods Sewer Improvements – This project will relocate approximately 1,500 LF of sewer gravity main pipelines from within a creek to outside the creek. Additionally, riprap check dams will be constructed to slow creek flow velocities and reduce erosion near the new sewer alignment.
- Newport Coast Lift Station Rehabilitation Project – This project rehabilitates CIP Pipelining on approximately 3,000 LF of force main sewer pipe and installs a new portion of epoxy-lined Ductile Iron Pipe that connects the rehabilitated force main to the lift station drywell
- Sewer Siphon Rehabilitation – This project uses the results from the Criticality analysis a nd implements the identified rehabilitation. Phase I has been completed, and Phase II is in process and scheduled for completion in 2025.
- Sewer System Calcium Removal – As discussed earlier, the routine sewer line cleaning and inspection identify areas for calcium removal, this project implements this maintenance task.
- Sewer Line Repairs – This project is an on-going annual project put in place for, previously unidentified, sewer repairs.
- Update Capacity Analysis – By December of 2026 the District will have completed an updated capacity analysis of the entire system.

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Element 9 - Monitoring, Measurement and Program Modifications

IRWD's plan includes an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement, including:

9.1 Maintaining relevant information, including audit findings, to establish and prioritize appropriate planned activities:

(a) *Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.* IRWD maintains relevant information by continuously utilizing data from our CMMS as well as data analyzed from our robust CCTV program which utilizes new approaches as well as technological advances in monitoring equipment.

(b) *Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.* IRWD staff monitors and measures the effectiveness of the SSMP by meeting with staff to ensure elements are understood and goals are communicated and tracked daily.

(c) *Assess the success of the preventative maintenance program*. The newly adopted preventative maintenance program in coordination with GIS has led to an overall reduction in spill events as well as an increase in performance metrics for sewer line cleaning and inspection.

(d) Update program elements, as appropriate, based on monitoring or performance evaluations. Elements for preventative maintenance and inspection are updated on a continuous basis due to our new odor and corrosion control program identifying new areas of needed maintenance as well as areas that can be reduced with maintenance efforts.

(e) *Identify and illustrate spill trends, including frequency, location, and volume.* These are illustrated in CIWQS system performance graphs available in the Audit report.

9.2 Monitoring the implementation and measuring the effectiveness of each Plan Element:

The District utilizes data captured in the District's geographical information system (GIS), computerized maintenance management system (CMMS), and the State Water Resources Control Board's California Integrated Water Quality System (CIWQS) SPILL database to monitor and measure the performance of the SSMP and SSMP implementation. The District monitors sewer spill performance to accomplish the following:

- Establish and prioritize appropriate SSMP activities
- Monitor the implementation and effectiveness of the SSMP
- Assess the success of the preventative maintenance program
- Identify and illustrate spill trends including frequency, volume, and location

The District's computerized maintenance management system contains information on the effectiveness of preventative maintenance activities and allows for historical review of pipeline work order history to adjust maintenance and repair priorities. The District also performs a failure cause analysis of all individual sewer overflow events and based on this review, identifies corrective actions to SSMP program elements as appropriate.

9.3 Assessing the success of the preventive operation and maintenance activities.

IRWD's system performance graphs as well as comparison in relation to other Regions 8 and 9 WDID's are superior and among the highest performing. Please see Table 9-1 below:

Table 9-1: Performance Metrics for Monitoring and Measurement

Type	Performance Measure	Source
System Statistics	Total miles of gravity sewer	GIS
	Total miles of pressure sewer	GIS
	Total number of sewage pumping stations	GIS
Measures Based on Spill Number	Total number and percentage of spills by Category	CIWQS
	Number and percentage of dry weather versus wet weather spills	CIWQS
	Number of spills by cause:	CIWQS
	Number of spills per 100 miles of sewer per year	CIWQS
	Number of locations with more than one spill in the past year	CIWQS
Measures Based on Spill Volume	Volume of spills per 100 miles per Year	CIWQS
	Number and percentage of spills by Size Class	CIWQS
	Total volume of spills	CIWQS
	Mean and median spill volume	CIWQS
	Total spill volume recovered and percentage of overall total spill volume	CIWQS
	Net volume of spills (total minus recovered) and percentage of overall total spill volume	CIWQS

	Total volume reaching storm drainage channel and not recovered or reaching surface waters and percentage of overall total spill volume	CIWQS
Spill Response Time	Average response time during business hours	CIWQS
	Average response time outside of business hours	CIWQS
Maintenance Program	Number of blockages in the past year by cause	CMMS
	Planned cleaning (LF)	CMMS
	Planned cleaning versus goal (LF) – Gap analysis	CMMS
	Planned CCTV inspection (LF)	CMMS
	Planned CCTV inspection versus goal (LF) – Gap analysis	CMMS

9.4 Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations:

The District will update its SSMP at least every six years. The District will determine the need to update its SSMP prior to a 6-year update based on the results of the biennial audit and the performance of its sanitary sewer systems.

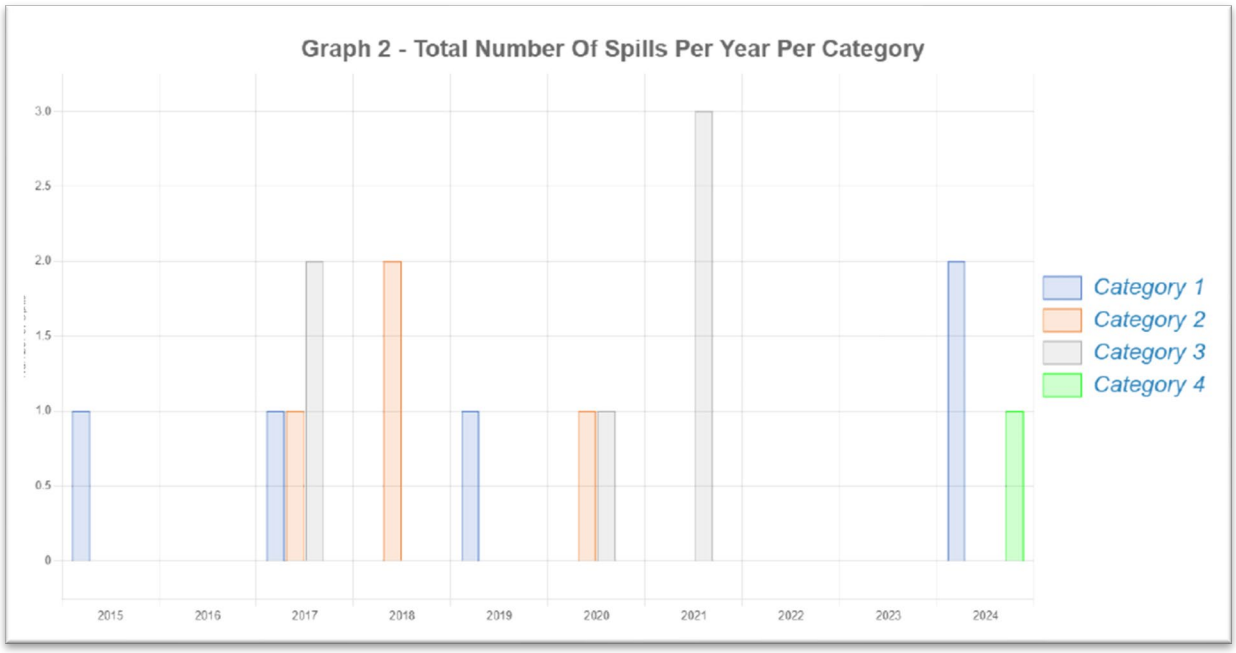
District staff will seek approval from the District Board for any significant changes to the SSMP. The authority for approval of minor changes such as employee names, contact information, or minor procedural changes is delegated to the Director of Maintenance Operations. Copies of the current SSMP document will be available to all interested parties on the District's website.

9.5 Identification and Illustration of trends:

IRWD owns and operates a variety of physical assets. It is important to monitor the most common causes of failure, recognize the consequences of failure, and identify the best practices to prevent failures. By doing this, IRWD can refocus efforts, move financial resources, and implement program modifications that will help reduce spills and sustain asset life.

- See system performance graphs available in CIWQS. (see below)

Graph 9-1 CIWQS System Performance for Michelson WRP



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Element 10 - Internal Audits

IRWD is required to conduct an internal audit of its SSMP at a minimum frequency of once every three years, as required by the General Order WQ 2022-0103-DWQ.

A report will be prepared after an audit period, and within six months after the end of an audit period, the Legally Responsible Official must submit and certify the audit report to the CIWQS website.

IRWD uses the SSMP Audit Procedures, Section 5.4 of the Reissued "ORDER WQ 2022-0103-DWQ", as guidance when conducting an internal audit.

The next audit for IRWD is listed in element 1 for the compliance schedule. The audit report will be submitted to CIWQS by November 2, 2024.

Section 5.4 for Order WQ 2022-0103-DWQ - Sewer System Management Plan 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 this 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 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.

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Element 11 - Communication Program

IRWD's Communication Program was designed to comply with Attachment D Section 11 of the General Order WQ 2022-0103-DWQ. IRWD has provided and will continue to provide information to its customers and the public about the SSMP as described below. IRWD communicates with tributary and satellite sewer systems as needed, see below.

11.1 Communication with the Public

The District communicates on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system provides the public with the opportunity to provide input to the District's SSMP and SSMP implementation. This communication occurs in the form of notices in the newsletter and on the District web site. Public comments are accepted at all monthly District Board meetings and the District will evaluate public input, when provided, and will address as appropriate.

The District's Board of Directors presents a report of sewer spills volume and location as a part of the quarterly dashboard report of strategic measures during Board meetings. This information is available to the public in the monthly agenda and Board packets available on the internet. These quarterly sewer overflow performance reports are the primary means for the District to communicate the on-going performance of the SSMP and SSMP implementation to the public. District Board Meetings are open to the public with agendas posted on the District website prior to the meeting.

Table 11-1 lists the various strategies the District employs to communicate with the public on the development, implementation, and performance of the District's SSMP.

11.2 Communication with Tributary and/or Satellite Systems

The District's wastewater collection system serves the City of Irvine, Lake Forest, as well as parts of Tustin, Newport Beach, Foothill Ranch, Costa Mesa, and unincorporated areas of Orange County. These areas are within the District service area and are not considered tributary or satellite system.

IRWD does accept a small quantity of wastewater into its sewer system from the University of California, Irvine (UCI), which is located within IRWD's service boundaries. UCI has provided the District with a copy of the SSMP for the UCI sewer system. The District has communicated to UCI the commitment to provide mutual assistance in the event of a sewer overflow, if UCI requests support. The IRWD sewer system has adequate capacity to convey the minor flows it accepts from UCI. IRWD does not currently have a formal agreement with UCI regarding discharge of wastewater into the District's collection system.

There is a small amount of wastewater generated in the City of Newport Beach and Irvine that is collected by trunk sewers owned, operated, and maintained by the IRWD, then discharged into sewers owned and maintained by the Orange County Sanitation District (OCSD). The District

communicates with the City of Newport Beach and OCSD through quarterly Orange County Waste Discharge Requirements Steering Committee and general meetings.

Table 11-1 Communication Table

Subject Matter	Strategy	Description	Frequency
SSMP Development	Website	SSMP presented to the Board for approval. The document is available for public review prior to the Board meeting. The public can provide input and comments to the Board at any Board meeting.	During and after development of SSMP update
SSMP Implementation	Website	The District has a webpage dedicated to the collection system. The page includes a link to the District's SSMP and contact information with any questions regarding SSMP content, implementation, and performance.	Always available on District webpage
Spill Emergency Response	Website	IRWD website has Emergency and IRWD Alert button on homepage. Emergency and IRWD Alert webpage have contact information for who to call in case of an emergency.	Always available on District webpage
Fats, Oils, and Grease Best Practices	Website	IRWD website has a webpage providing the public with information relating to FOG control best practices.	Always available on District webpage
SSMP Performance	Board Meeting	Quarterly report on spill performance included with Strategic Measures.	Quarterly for Board Meetings
SSMP Performance	CIWQS Website	Spill performance information is available to the public on the State Water Resources Control Board (SWRCB) California Integrated Water Quality System (CIWQS).	Always available on internet