Sewer System Management Plan

City of San Diego Public Utilities Department, Wastewater Collection Division

San Diego, California

FINAL – May 9, 2025

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Abbreviations, Acronyms, and Initialisms

AMP	Asset Management Planning
BCE	business case evaluation
BMP	best management practice
CCAP	Climate Change Action Plan
CCTV	closed-circuit television
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CIPRAC	Capital Improvements Program Review and Advisory
City	City of San Diego
CIWQS	California Integrated Water Quality System
CMMS	computerized maintenance management system
CPC	California Plumbing Code
CWP	Clean Water Program
DEH	Department of Environmental Health
ECP	Engineering and Capital Projects Department
EOC	Emergency Operation Center
EPA	U.S. Environmental Protection Agency
EPM	Engineering Program Management Division
ERP	Enforcement Response Plan
FEWD	Food Establishment Wastewater Discharge
FOG	fats, oils, and grease
FSE	food service establishment
GAPS	Grove Avenue Pump Station
General Order	Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems
GGI	Gravity Grease Interceptor
GIS	Geographic Information System
GPS	Global Positioning System
GRD	grease removal device
GRE	grease removal equipment
HGL	hydraulic grade line
IAPMO	International Association of Plumbing and Mechanical Officials
I/I	infiltration and inflow
IJA	Interjurisdictional Pretreatment Agreement
IMP	Integrated Master Plan
IROC	Independent Rate Oversight Committee
JRMP	Jurisdictional Runoff Management Plan
LRO	legally responsible official
MBC	Metro Biosolids Center
Metro	Metropolitan
Metro System	Metropolitan Sewerage System
Metro TAC	Metropolitan Wastewater Joint Powers Authority Technical Advisory Committee
MGD	million gallons per day
MRP	Monitoring and Reporting Program
Muni	Municipal
Muni System	Municipal Sanitary Sewer System
NCWRP	North City Water Reclamation Plant
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System

NPS	nonpoint source
NROW	non-right-of-way
ORPS	Otay River Pump Station
PA	Participating Agency
PDI	Plumbing and Drain Institute
PLWTP	Point Loma Wastewater Treatment Plant
PPS	Peñasquitos Pump Station
PUD	Public Utilities Department
RDI/I	Rainfall Dependent Infiltration and Inflow
ROW	right-of-way
RWDA	Regional Wastewater Disposal Agreement
SBWRP	South Bay Water Reclamation Plant
SCADA	Supervisory Control and Data Acquisition
SDMC	San Diego Municipal Code
SERP	Spill Emergency Response Plan
SHAPE	Sewer Hydrograph Analysis and Peak Evaluation
SME	Subject Matter Expert
SOP	standard operating procedure
SRE	Significant Rain Event
SRTP	Spill Response and Tracking Plan
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
USC	United States Code
WCD OPM	Wastewater Collection Division, Operations and Maintenance Manual
WWC	Wastewater Collection Division
WWT	Wastewater Treatment Division

1 Goal and Introduction

1.1 Regulatory Context

The City of San Diego (City) has prepared this updated Sewer System Management Plan (SSMP) pursuant to the State Water Resources Control Board's (SWRCB's) December 6, 2022, Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems (General Order). This SSMP provides a management plan for the City's collection system.

Table 1-1 summarizes the General Order requirements addressed by this SSMP.[1] These requirements are defined by General Order specifications and associated General Order attachments. All agencies that own and operate collection systems greater than 1 mile in length must comply with these requirements.

Table 1-1. Summary of General Order Requirements

Specification	Description	Linkage to SSMP
5.2 SSMP Development and Implementation	Requires development and implementation of an SSMP.	Entire SSMP
5.3 Certification of SSMP and Plan Updates	Requires the City to certify and upload the SSMP to CIWQS.	Entire SSMP
5.5 Six-Year SSMP Update	Requires update of the SSMP every 6 years, at a minimum. Requires governing board approval of SSMP. Requires the City to certify and upload SSMP to CIWQS.	Entire SSMP
5.6 System Resilience	Requires the City to include and implement system-specific procedures to proactively prioritize operations and maintenance (O&M), condition assessments and repair and rehabilitation to address system resilience.	D.4 Operations and Maintenance D.8 System Evaluation, Capacity Assurance and Capital Planning
5.10 System Capacity	Requires the City to maintain system capacity to convey dry weather and forecasted wet weather flows.	D.8 System Evaluation, Capacity Assurance and Capital Planning
5.19 Operation and Maintenance	Requires the City to maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.	D.4 Operations and Maintenance D.8 System Evaluation, Capacity Assurance and Capital Planning

[1] Summarized from the *SWRCB Order No. 2022-0103-DWQ Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems*

This document serves as the City's 2025 update to the SSMP approved by the San Diego City Council at a public meeting on April 15, 2025. Attachment 3 includes documentation of approval by the San Diego City Council. Attachment 1 includes the General Order.

A PDF copy of this SSMP is available online at:
Sewer Spill Reduction | City of San Diego Official Website

One of the goals of the SSMP is to meet all applicable regulatory notification and reporting requirements. These regulatory requirements include the following federal and State regulations and certification requirements.

1.1.1 Federal Regulations

The Federal Water Pollution Control Act, known as the Clean Water Act (33 United States Code [USC] Sections 1251 et seq.), was widely accepted in 1972 and is the principal federal statute for water quality protection. The Clean Water Act requires the State to adopt water quality standards and submit those standards for approval by the U.S. Environmental Protection Agency (EPA). For point source discharges to surface water, the Clean Water Act made it unlawful to discharge pollutants from a point source into navigable waters, and it authorizes the EPA and/or approved states (such as California) to administer the National Pollutant Discharge Elimination System (NPDES) program.

1.1.2 State Regulations

California's principal law governing water quality regulation is the Porter-Cologne Act, which establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and groundwater and to both point and nonpoint sources (NPS) of pollution, unlike the federal regulation that only addresses point sources.

Pursuant to the Porter-Cologne Act (California Water Code Section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected,
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Quality Control Board, which are charged with implementing its provisions and have primary responsibility for protecting water quality in California. The City is located in the San Diego Regional Water Quality Control Board regional jurisdiction (Region 9). The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through the issuance of NPDES permits for point source discharges and waste discharge requirements for NPS discharges.

On December 6, 2022, the SWRCB adopted the General Order, which became effective on June 5, 2023. This General Order serves as statewide waste discharge requirements

and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. The intent of the General Order is to regulate all collection systems in the State in an effort to reduce or eliminate the number of Sewer Spills which, by their nature, pollute the environment. The General Order is applicable for all publicly owned sewage collection systems with more than 1 mile of sewer pipe. The General Order requires public agencies that own or operate sanitary sewer systems to develop and implement SSMPs and report all sewer spills to the State Water Board's online sewer spill database.

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

Additional compliance performed by the City not directly associated with the General Order is the Air Pollution Control Audits. This effort is undertaken by the Permits and Compliance Section of the Environmental Monitoring and Technical Services Division to determine any issues and recommend corrective actions if needed.

1.2 SSMP Goal and System Management Objectives

The City has established a level of service that complies with State and federal sanitary sewer regulations to ensure that the collection system within its service area meets public health and safety standards. This SSMP has been developed to comply with the regulations noted.

The goal of the SSMP is to provide a plan and schedule for properly managing, operating, and maintaining all parts of the sanitary sewer system. This will help reduce and prevent Sanitary Sewer Spills, as well as mitigate and contain them if they do occur.

The City's goals for the effectiveness of the SSMP program implementation include:

- Prevent adverse impacts from sewer spills to surface waters and their beneficial uses
- Minimize and mitigate the adverse impacts of sewer spills that may occur despite best efforts through timely and effective emergency response
- Maintain or improve the condition and performance of the wastewater collection system and provide adequate capacity to convey peak wastewater flows
- Identify, prioritize, and continuously renew and replace sewer system facilities to maintain reliability
- Meet all applicable regulatory notification and reporting requirements
- Perform all operation and maintenance (O&M) activities in a safe manner
- Measure progress through performance measures so the plan can be adjusted as needed

- Develop trained City staff for effective implementation of SSMP programs and work activities

The mission of the City's Public Utilities Department (PUD) is:

"To provide reliable water utility services that protect the health of our communities and the environment."

The PUD Vision statement is:

"A world-class water utility for a world-class city."

REFERENCES FOR FURTHER INFORMATION:

- PUD Strategic Business Plan Document, FY 2017-2024

1.3 SSMP Update Schedule

Pursuant to the General Order, the City conducts program monitoring and triennial audits of its SSMP, prepares SSMP updates, and implements planned activities to achieve City collection system program objectives. The City has met all the mandatory elements of the SSMP and completed milestones for the incorporation of activities addressing the prevention of sewer spills. The SSMP must be updated every 6 years and must include any significant program changes. Program changes that are not significant are captured in the change log included in Attachment 2.

Re-certification by the San Diego City Council is required when significant updates to the SSMP are made. The certification is available in Attachment 3.

The schedule for auditing and updating this SSMP is provided in Table 1-2. Element 10 of the SSMP includes a longer-term schedule for SSMP audits and updates.

Table 1-2. SSMP Audit and Update Schedule

Activity	Due Date
2027 SSMP Audit	November 2, 2027
2030 SSMP Audit	November 2, 2030
2031 SSMP Update	May 2, 2031

1.4 Sewer System Asset Overview

The City's wastewater system consists of two sub-systems: the Municipal Sanitary Sewer System (Muni System) and the Metropolitan Sewerage System (Metro System). The Muni System is responsible for collection and conveying wastewater from residences and businesses within the City. It includes approximately 2,945 miles of gravity mains, 112 miles of force mains, and 77 sewer pump stations. The service area for the Muni System is 342 square miles and serves 1.4 million people.

The Metro System provides wastewater treatment and disposal services for both the City and 15 additional agencies and districts. Covering a 458-square-mile service area, it extends from Del Mar in the north to San Ysidro in the south and from Alpine and

Lakeside in the east, serving a total population of 2.3 million people. The Metro System includes three wastewater treatment plants—Point Loma Wastewater Treatment Plant (PLWTP), North City Water Reclamation Plant (NCWRP), and South Bay Water Reclamation Plant (SBWRP)—as well as one biosolids processing facility, Metro Biosolids Center (MBC), and four large pump stations. Currently, an average wastewater flow rate[2] of approximately 151.3 million gallons per day (MGD) is conveyed by the collection system to PLWTP, 13.5 MGD to NCWRP, and 6.2 MGD to SBWRP, while MBC receives and processes approximately 11,000 tons of dewatered biosolids per month.

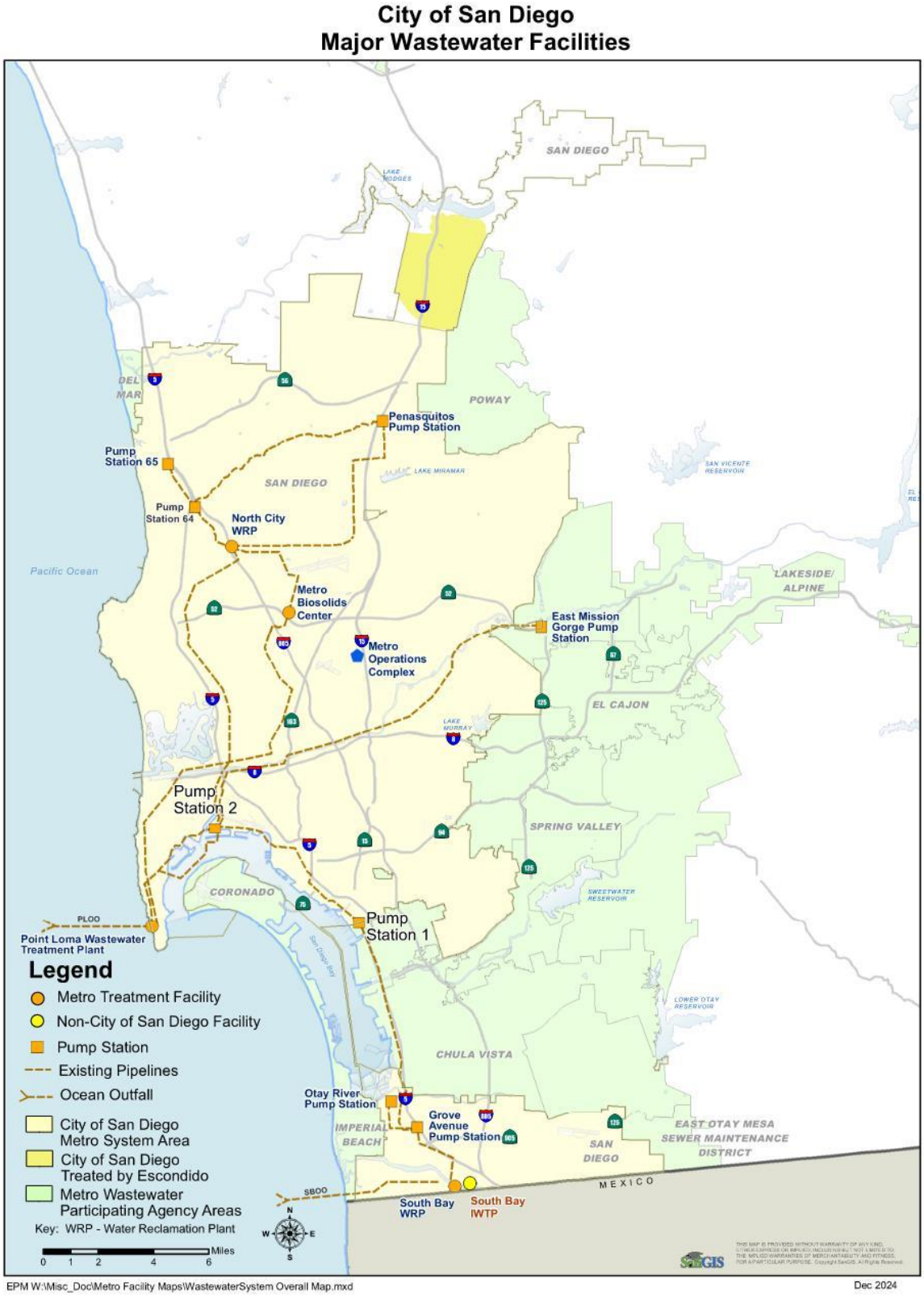
The Wastewater Collection Division (WWC) is responsible for overseeing both the Muni and Metro System assets located within the City of San Diego, excluding the wastewater treatment plants and biosolids processing facility. Table 1-3 provides a summary of the collection system assets for the Muni and Metro systems, and Figure 1-1 shows the geographic service area boundary of the City's collection system.

Table 1-3. Summary of Collection System Assets

	Collection System
CIWQS WDID	9SSO10658
Population (count)	2,300,000
Total Mains (miles)	3,057
Gravity Mains (miles)	2,945
Force Mains (miles)	112
Pump Stations (count)	81
Siphons (count)	30
Maintenance Holes	~61,234
Wastewater Conveyed (MGD)	~171
Dewatered Biosolids (Tons)	11,000/month
Treatment Facilities	Point Loma Wastewater Treatment Plant, North City Water Reclamation Plant, South Bay Water Reclamation Plant, and Metro Biosolids Center

[2] Annual Average Daily Flow rate is based on FY24 data.

Figure 1-1. City of San Diego Collection Systems



Other relevant information regarding the City's collection systems and management program includes:

- **Location:** The City's collection system is located in the City of San Diego.
- **Service Area Boundary:** Figure 1-1 shows the geographic service area boundary of the City's collection system.
- **Community Served:** The City's Muni System serves approximately 1.4 million people, with a 342-square-mile service area within the City's jurisdiction. This is made up of a diverse set of communities, including single-family residential, multi-family, and commercial/industrial. The City is comprised of 52 community planning areas, of which 51 are served by the collection system (with San Pasqual Valley being on a septic system). The Metro System jurisdiction serves approximately 2.3 million people within 458 square miles of area.
- **Data Management Systems:** The City uses the following data management systems:
    - **SAP:** A computerized maintenance management system (CMMS) used for managing maintenance activities. SAP stores the history of past maintenance events—including code-based sewer cleaning findings for each sewer cleaning event performed by sewer cleaning crews—and stores maintenance frequencies and schedules for future maintenance activities.
    - **PipeLogix:** Closed-circuit television (CCTV) inspection software. The City is in the process of moving data on premise to a SQL database.
    - **ArcGIS:** Geographic Information System (GIS) software used for managing and mapping geographically referenced City data.
    - **InfoWorks ICM:** Hydraulic modeling software used for planning capacity improvements, system expansions, emergency scenarios, and other hydraulic network elements.
    - **InfoAsset Planner:** A GIS-based modeling software used to support implementation of a risk model that developed a risk-based maintenance schedule of sewer pipelines.
    - **Salesforce:** Fats, Oils, and Grease (FOG) Control Program Permitting Information Management System used to schedule and track FOG source control inspections of industrial and commercial establishments.
    - **Blueworx:** Mobile field solution connected to SAP for entering data in the field.
    - **Opentext:** Document management software used to store historical maps, as-builts, and sewer and water permits.
    - **PSTools:** Legacy maintenance management system the City used between 2002 to 2018. PSTools collected the type and severity of materials dislodged and removed from the collection system by cleaning crews using codes to document the cleaning findings data.

  - **Get-It-Done:** Application for all public complaints for the City's Stormwater and Streets divisions. Complaints referring to the collection system are communicated on an as-needed basis.
  - **SCADA:** Supervisory Control and Data Acquisition system used to collect and store City's small pump station alarm and instrumentation data.
  - **DCS:** Automated control system used to monitor and control distributed systems for the City's large pump stations.

- **Lateral Ownership and Operational Responsibilities:** The City does not own any portion of the service lateral. The private property owner is responsible for lateral maintenance and repair from the building connection to the wye connection at the sewer mainline.
- **Breakdown of Service Connections:** The breakdown of service connections is approximately 83.77 percent single-family residential, 10.56 percent multi-family residential, and 5.57 percent commercial/industrial.
- **Unique Service Boundary Conditions and Challenges:** The City provides wastewater conveyance and treatment services to 15 satellite agencies under a contractual agreement but is not responsible for those agencies' sewer system management.

1.4.1 Access to Up-to-Date Mapping

The City can provide access to up-to-date sewer mapping upon email request through the City's LROs, Margaret Llagas or Kent Vian.

- Margaret Llagas: MLlagas@sandiego.gov
- Kent Vian: KVian@sandiego.gov

1.5 SSMP Overview

This SSMP complies with the General Order and meets the following General Order objectives:

a) Properly fund, manage, operate, and maintain with adequately trained staff and/or contractors possessing adequate knowledge, skills, and abilities, as demonstrated through a validated certification program at all times, all parts of the collection system owned and/or operated by the discharger

b) Provide adequate capacity to convey base flows and peak flows, including flows during wet weather events, to the minimum design criteria as defined in the discharger's System Evaluation and Capacity Assurance Plan (a required component of the SSMP), for all parts of the collection system owned and/or operated by the discharger

c) Take all feasible steps to stop and mitigate the impact of spills in the collection system owned and/or operated by the discharger

In compliance with the orders, the City developed this SSMP that documents its approach to properly operating and maintaining its sanitary sewer system. This SSMP contains the following mandatory elements and is organized as follows:

- Goal – The goal of the SSMP is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s); (2) reduce and prevent spills; and (3) contain and mitigate spills that do occur.
- Organization – The SSMP must identify the LRO or authorized representative as described in the General Order. It must list and identify the organization and lines of authority responsible for operating and maintaining the sanitary sewer collection system, including names and telephone numbers for management, administrative and maintenance positions, and the chain of communication for reporting sewer spills.
- Legal Authority – Each Enrollee must demonstrate through legally binding procedures such as ordinances, agreements, etc. that it possesses the necessary legal authority to do what is required by the General Order.
- Operation and Maintenance Program – The SSMP must include elements required by the General Order that are appropriate and applicable to the sewer agency's system, including system mapping, preventive operation and maintenance (O&M) activities, training, and equipment inventory.
- Design and Performance Provisions – The SSMP must demonstrate that the sewer agency has and appropriately uses design criteria and construction standards and specifications for the installation of new sewer systems and rehabilitation and repair of existing sewer systems, and has procedures and standards for inspecting and testing the installation of new sewers, pumps, etc. and for rehabilitation and repair projects.
- Spill Emergency Response Plan – Each Enrollee shall develop and implement a spill emergency response plan that meets the minimum requirements of the General Order and ensures prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills.
- Sewer Pipe Blockage Control Program – The sewer pipe blockage control plan for fats, oils, grease, rags and debris must meet all the requirements of the General Order, such as public outreach, disposal, legal authority, grease removal device (GRD) requirements, inspection, cleaning, and source control measures.
- System Evaluation and Capacity Assurance Plan – The Enrollee shall prepare and implement a Capital Improvement Plan that will evaluate system condition, provide adequate hydraulic capacity for the sewer collection system, and prioritize corrective actions required by the General Order.
- Monitoring, Measurement, and Program Modifications – The Enrollee shall maintain relevant information to establish and prioritize SSMP activities, monitor the implementation and measure the effectiveness of the SSMP activities, illustrate spill trends, and provide assessment of the performance and/or modification of the SSMP activities as required by the General Order.

- SSMP Program Audits – The Enrollee shall conduct periodic internal audits appropriate to the size of the sewer system and the number of sewer spills. At a minimum, these audits must occur every 3 years as required by the General Order.
- Communication Program – The Enrollee shall communicate with the public on a regular basis regarding spills and the development, implementation, and performance of its SSMP. The communication system shall provide the public with the opportunity to provide input to the sewer agency and shall also create a plan of communication with other local sewer agencies that may be tributary or satellite to the sewer agency's sewer collection system.

When appropriate, the SSMP references other program documentation for greater detail.

2 Organization

2.1 Overview

The City owns and operates the Muni System of the City of San Diego and provides wastewater conveyance and treatment services to 15 other cities and special districts (Participating Agencies [PAs]) under contractual agreements. It does not, however, fund, operate, or have control over the sanitary sewer systems of these communities. The City is not responsible for the organization of the satellite agencies or for implementing the General Order and SSMP measures within those organizations. The 15 satellite agencies own and operate sanitary sewer systems within their jurisdictions.

The City is governed by a mayor, who is the chief executive, and nine full-time council members. The mayor and City council authorize the necessary funding. The City attorney provides legal advice and guidance to the City and its departments in implementing City ordinances and exercising legal authorities, and represents the City and its departments, commissions, and employees in legal matters, including enforcement actions. The Water Recovery and Pure Water branch reports to the Office of the Mayor through the director of public utilities.

The Water Recovery and Pure Water branch is comprised of three divisions:

- Wastewater Collection Division (WWC)
- Wastewater Treatment Division (WWT)
- Pure Water Program

The WWC manages, operates, and coordinates all activities associated with the Muni System. All Capital Improvement Program (CIP) projects are designed and constructed through the Engineering and Capital Projects Department (ECP). The WWC works closely with the ECP to ensure that CIP projects meet the PUD Sewer Design Guide, are operator-friendly, and require minimal maintenance cost.

Many WWC Division administrative functions are also coordinated and provided in conjunction with other PUD divisions such as the Engineering Program Management Division (EPM), WWT, Finance Division, IT Division, and Employee Services and Quality Assurance Division, as well as other City departments such as Personnel, Purchasing and Contracting, Office of the City Comptroller, Risk Management, and the Office of the City Attorney. This service arrangement is typical of other large governmental organizations.

2.2 Authorized Representatives

The City has designated an LRO pursuant to General Order Specification 5.1 Designation of a Legally Responsible Official. Contact information for the City's LROs is provided in Table 2-1 below.

Table 2-1. List of Authorized Representatives

	Contact Information
LRO	Margaret Llagas, Deputy Director Wastewater Collection Division 9150 Topaz Way San Diego, CA 92123 (858) 654-4494 MLlagas@sandiego.gov
LRO	Kent Vian, Assistant Deputy Director Wastewater Collection Division 9150 Topaz Way San Diego, CA 92123 (858) 654-4251 KVian@sandiego.gov

2.3 Positions Responsible for Implementing Specific SSMP Elements

2.3.1 Positions Responsible

Table 2-2 and Table 2-3 identify the management, administrative, and maintenance positions responsible for implementing specific measures of the SSMP program. Telephone numbers for these positions are included in Appendix A of the City's Spill Emergency Response Plan (SERP). The SERP is included in Attachment 5.

2.3.2 Lines of Authority

Figure 2-1 is an organizational chart identifying the management, administrative, and maintenance positions responsible for implementing specific measures of the SSMP program, including lines of authority. For more specific or detailed information, see the City's master organization charts. Telephone numbers for these positions are included in Appendix A of the SERP in Attachment 5.

2.4 Spill Reporting Chain of Communication

The PUD WWC Division has procedures for notification of sewer spills through a clear, step-by-step communication method by Division staff at different levels. These reporting procedures are incorporated herein and detailed in Attachment 5.

REFERENCES FOR FURTHER INFORMATION:

- WWC Event Notification List
- Notification Contact List

Table 2-2. Positions Responsible for SSMP Development and Implementation, Excluding Operations and Maintenance Program Element

Order Reference	SSMP Element/Measure	Responsible Positions
D	Overall SSMP Development and Implementation	Legally Responsible Official
D.1	SSMP Goal and Introduction	Legally Responsible Official
D.1.1	Regulatory Context	Legally Responsible Official
D.1.2	SSMP Update Schedule	Legally Responsible Official
D.1.3	Sewer System Asset Overview	Legally Responsible Official
D.2	Organization	Legally Responsible Official
D.3	Legal Authority	Legally Responsible Official
D.5	Design and Performance Provisions	Associate Civil Engineer – EPM – Technical Resources
D.5.1	Updated Design Criteria	Associate Civil Engineer – EPM – Technical Resources
D.5.2	Construction Standards and Specifications	Associate Civil Engineer – EPM – Technical Resources
D.6	Spill Emergency Response Plan	WWC PWUS, Emergency Response
D.7	Sewer Pipe Blockage Control Program	WWC FEWD Program Manager
D.8	System Evaluation, Capacity Assurance and Capital Improvements	Senior Civil Engineer – EPM
D.8.2	System Evaluation, Capacity Assurance and Capital Improvements – Capacity Assessment and Design Criteria	Senior Civil Engineer – EPM – WW Planning / Sewer Modeling & CCTV Condition Assessment
D.8.3	System Evaluation and Capacity Assurance Plan – Prioritization of Correction Action	Senior Civil Engineer – EPM – WW Planning / Sewer Modeling & CCTV Condition Assessment
D.8.4	System Evaluation and Capacity Assurance Plan – Capital Improvement Plan	Senior Civil Engineer – EPM
D.9	Monitoring, Measurement, and Program Modifications	Legally Responsible Official
D.10	Internal Audits	Legally Responsible Official
D.11	Communication Program	Legally Responsible Official

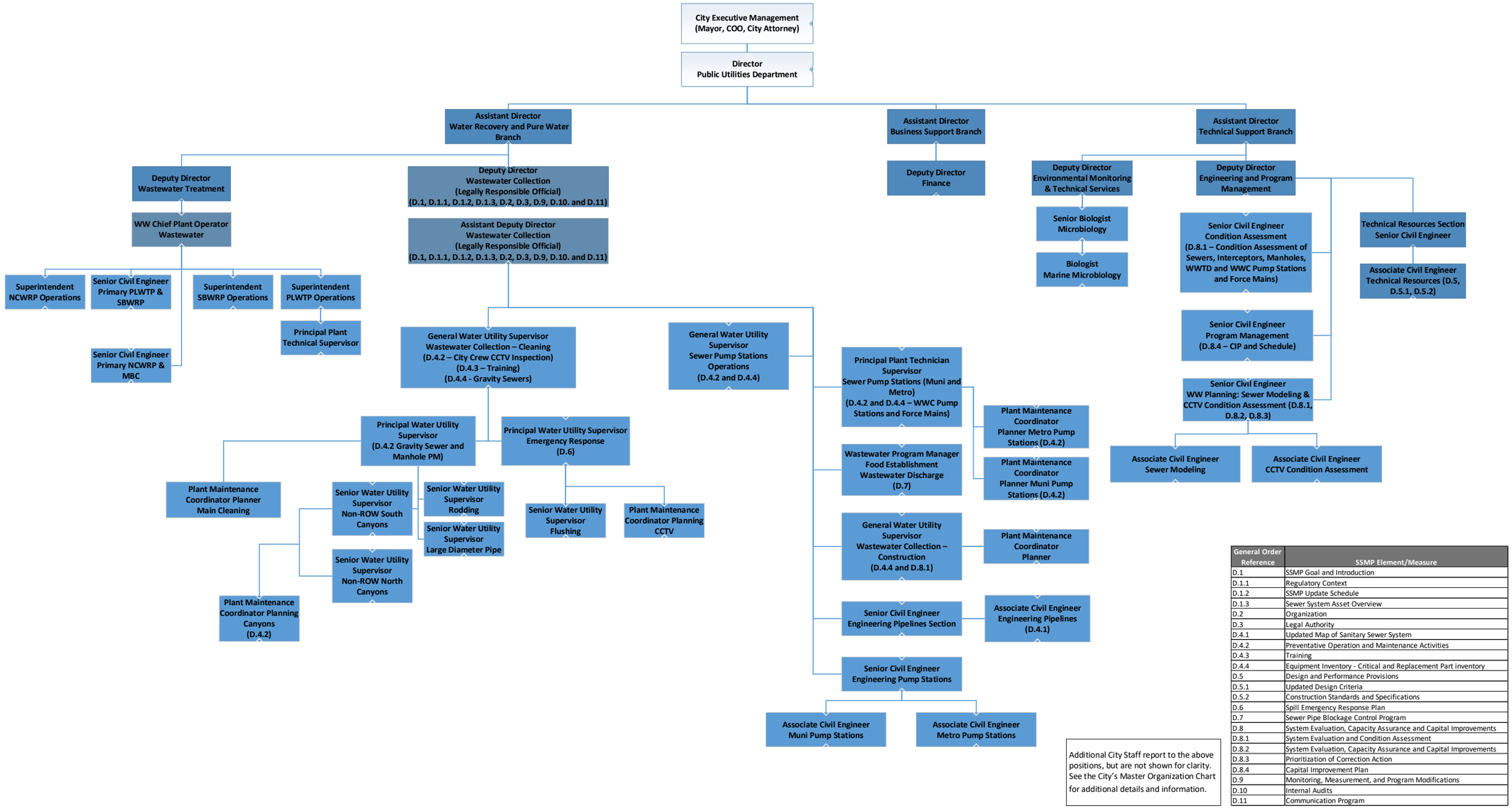
Table 2-3. Positions Responsible for SSMP Operations and Maintenance Program Development and Implementation

General Order Reference	SSMP O&M Program Measure	Responsible Positions
D.4.1	Update Map of Sanitary Sewer System	Associate Civil Engineer – WWC Operations Engineering
D.4.2	Preventive Operation and Maintenance Activities – Gravity Sewers	WWC GWUS – Cleaning
D.4.2	Preventive Operation and Maintenance Activities – Planning and Scheduling for WWC	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planning and Scheduling)
D.4.2	Preventive Operation and Maintenance Activities – WWC Pump Stations and Force Mains	WWC SWOS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)
D.4.2	Preventive Operation and Maintenance Activities – Pump Stations No. 1 and No. 2 and Force Mains	WWC SWOS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)
D.4.2	Preventive Operation and Maintenance Activities – Other Pump Stations and Force Mains	WWC SWOS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)
D.4.3	Training	WWC GWUS, Cleaning and Emergency Response
D.4.4	Critical and Replacement Part inventory – WWC Pump Stations and Force Mains	WWC SWOS – Sewer Pump Station WWC Plant Maintenance Coordinators (Planners)
D.4.4	Critical and Replacement Part inventory – Pump Stations No. 1 and No. 2 and Force Mains	WWC SWOS – Sewer Pump Stations Operations WWC Principal Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)

General Order Reference	SSMP O&M Program Measure	Responsible Positions
D.4.4	Critical and Replacement Part Inventory – Other Pump Stations and Force Mains	WWC SWOS – Sewer Pump Stations Operations WWC Principal Plant Technician Supervisor, WWC Plant Maintenance Coordinators (Planners)
D.4.4	Critical and Replacement Part inventory Gravity Sewers	WWC GWUS, Cleaning and Emergency Response WWC GWUS Construction WWC Plant Maintenance Coordinators (Planners)
D.8.1	System Evaluation and Condition Assessment – Planning and Scheduling for WWC	Senior Civil Engineer – EPM - Condition Assessment Senior Civil Engineer – EPM – WW Planning / CCTV Condition Assessment
D.8.1	System Evaluation and Condition Assessment – Condition Assessment of Trunk Sewers, Interceptor Sewers, Gravity Sewer Mains, Manholes, Muni and Metro Pump Stations and Force Mains	Senior Civil Engineer – EPM WW Planning / Sewer Modeling and CCTV Condition Assessment
D.8.1	System Evaluation and Condition Assessment – CIP and Schedule	Senior Civil Engineer – EPM WW Planning / Sewer Modeling and CCTV Condition Assessment
D.8.1	System Evaluation and Condition Assessment – City Crew Repairs and Rehabilitation	WWC GWUS, Construction
D.8.1	System Evaluation and Condition Assessment – City Crew CCTV Inspection	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planners)

Figure 2-1. Organization Chart Identifying Positions and Staff Responsible for Implementing Specific Measures of the SSMP Program

City of San Diego Public Utilities Department SSMP Organization Chart



Additional City Staff report to the above positions, but are not shown for clarity. See the City's Master Organization Chart for additional details and information.

General Order Reference	SSMP Element/Measure
D.1	SSMP Goal and Introduction
D.1.1	Regulatory Context
D.1.2	SSMP Update Schedule
D.1.3	Sewer System Asset Overview
D.2	Organization
D.3	Legal Authority
D.4.1	Updated Map of Sanitary Sewer System
D.4.2	Preventative Operation and Maintenance Activities
D.4.3	Training
D.4.4	Equipment Inventory - Critical and Replacement Part inventory
D.5	Design and Performance Provisions
D.5.1	Updated Design Criteria
D.5.2	Construction Standards and Specifications
D.6	Spill Emergency Response Plan
D.7	Sewer Pipe Blockage Control Program
D.8	System Evaluation, Capacity Assurance and Capital Improvements
D.8.1	System Evaluation and Condition Assessment
D.8.2	System Evaluation, Capacity Assurance and Capital Improvements
D.8.3	Prioritization of Correction Action
D.8.4	Capital Improvement Plan
D.9	Monitoring, Measurement, and Program Modifications
D.10	Internal Audits
D.11	Communication Program

3 Legal Authority

3.1 Overview

The City's legal authorities satisfy the requirements of the General Order and are included in the City's municipal codes, Sewer Design Guide, Clean Water Program (CWP) Guidelines, and Council Policies. These codes, guides, and policies provide the City with the authority to prevent illicit discharges, collaborate with Storm Sewer Agencies, require that sewers be properly designed, limit discharge of FOG, obtain easement accessibility agreements when applicable, and enforce violations of sewer ordinances.

Table 3-1 below identifies linkages to the City of San Diego Municipal Code, City Council Policy, Wastewater Collection Division Operations and Maintenance Manual (WCD OPM) directives, regional wastewater disposal agreements, and engineering guidelines. The remainder of this section details the legal authorities the City has in place to support management, operation, and maintenance of the sewer system.

3.1.1 General Legal Authority of the City of San Diego to Adopt and Enforce Ordinances

The California State Constitution provides in Article 11, Section 7 that "a county or city may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws."

The City of San Diego Charter provides in Section 2 that "the City of San Diego, in addition to any of the powers now held by or that may hereafter be granted to it under the Constitution or Laws of this State, shall have the right and power to make and enforce all laws and regulations in respect to municipal affairs, subject only to the restrictions and limitations provided in this Charter; provided, however, that nothing herein shall be construed to prevent or restrict the City from exercising, or consenting to, and the City is hereby authorized to exercise any and all rights, powers and privileges heretofore or hereafter granted or prescribed by General Laws of the State."

Section 26.1 of the Charter establishes that "it shall be the obligation and responsibility of the City of San Diego to provide public works services…."

3.1.2 Regional Wastewater Disposal Agreement

The Metro System is owned and operated by the City of San Diego and provides wastewater transportation, treatment, and disposal services to 15 PAs that discharge wastewater into the system, in addition to the City. Since 1963, the City has entered into transportation and disposal agreements with each contributing jurisdiction. In 1998, a new Regional Wastewater Disposal Agreement (RWDA) that supersedes the 1963 agreements was executed with each of the PAs including, as amended: the City of Chula Vista, City of Coronado, City of Del Mar, City of El Cajon, City of Imperial Beach, City of La Mesa, Lakeside/Alpine Sanitation District, Lemon Grove Sanitation District, City of National City, Otay Water District, Padre Dam Municipal Water District,

City of Poway, Spring Valley Sanitation District, Winter Gardens Sewer Maintenance District, and East Otay Sewer Maintenance District. Section II F of the RWDA places limitations on the types and condition of wastewater discharged by the PAs to the Metro System. These are described more fully below, where applicable.

Table 3-1. Summary of City Legal Authorities

Requirement	Authority
Prevent Illicit Discharges	
Prevent illicit discharges into the wastewater collection system	Municipal Code, Sections 64.0307, 64.05, 64.0501, 64.0512, and 64.0513
Limit the discharge of FOG and other debris that may cause blockages	Municipal Code, Section 64.0512 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Control infiltration and inflow (I/I) from private service laterals	Municipal Code, Section 64.0512.b
Proper Design and Construction	
Require that sewers and connection be properly designed and constructed	Municipal Code, Section 64.0400, 64.0401, Sewer Design Guide; Clean Water Program Guidelines
Require proper installation, testing, and inspection of new and rehabilitated sewers	Sewer Design Guide; Clean Water Program Guidelines
Access to Sewer Laterals and Sewer Mains	
Clearly define City responsibility and policies	Council Policy 400-10; Wastewater Collection Division Operations and Maintenance Manual (WCD OPM) C.12, C.13, and C.14
Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the City	Council Policy 400-10; WCD OPM C.12, C.13, and C.14
Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable	Sewer Design Guide
Sewer Pipe Blockage Source Control	
Installation of grease removal device (GRD)	Municipal Code, Section 64.0708 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Design standards for GRD	Municipal Code, Section 64.0708 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Maintenance and BMP requirements	Municipal Code, Section 64.0708 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Record keeping and reporting	Municipal Code, Section 64.0709 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Authority to inspect grease producing facilities	Municipal Code, Section 64.0709 and 2016 California Plumbing Code 1014.0 Grease Interceptors
Enforcement	
Enforce any violations of sewer ordinances	Municipal Code, Sections 11.0101-11.0401, 12.0101-12.1101, 13.0101-13.0401, 64.0504, 64.0301, and 64.0710

3.1.3 Participating Agency Sewage Transportation Agreements

The PAs and the City are responsible for the "retail" wastewater collection operations within their respective jurisdictions. The PAs also send collected wastewater through large City-owned trunk lines (the Muni System) to the City's Metro System for treatment and disposal. Transportation of wastewater through the City's Muni System to the Metro System is facilitated by 11 separate transportation agreements, each between the City and an individual PA. Each PA is charged individually for such transport, utilizing a per gallon/per mile/per day rate that is intended to recover the PA's proportionate share of O&M expenses for the Muni System. Additionally, each PA contributes a proportionate share of capital improvement funds for improvements or rehabilitations to the specific infrastructure through which that PA's flows are transported.

3.2 Prevention of Illicit Discharge and Infiltration/Inflow

The City of San Diego Municipal Code Chapter 6: Public Works, Article 4: Sewers

The San Diego Municipal Code (SDMC) establishes requirements and provides authority necessary to implement the Pretreatment Program required by the NPDES permits. The codes provide for the maximum beneficial public use of the City's wastewater system through adequate regulation of sewer construction, sewer use, and industrial wastewater discharges.

The ordinance provides for the regulation of sewer construction in areas within the City's boundaries, the quantity and quality of discharged wastes, the degree of waste pretreatment required, the approval of plans for sewer construction, the issuance of Permits for Industrial Wastewater Discharge, and the establishment of penalties for violation of the ordinance.

SDMC Section 64.0307 establishes that any unauthorized entering, breaking, damaging, destroying, uncovering, defacing, or tampering with any structure, equipment, or appurtenance which is a part of the City's wastewater system shall be a violation of the sewer ordinance.

SDMC Section 64.05 requires that any person, municipality, sanitation district, or governmental agency desiring to discharge industrial waste into a public sewer, which may interfere with the operation and maintenance of the sewer system or with the wastewater treatment facilities, shall obtain a permit to discharge wastes into the system from the City.

Industrial User Discharge Permits are issued, administered, and enforced by the Industrial Wastewater Control Program. Permits include applicable federal categorical pretreatment discharge standards and requirements, local limits, and general and specific prohibitions.

SDMC Section 64.0501 establishes that "the Permit for Industrial Wastewater Discharge or Discharge Authorization shall require compliance with applicable National Pretreatment Standards and requirements, State discharge requirements, and local limits and requirements. It is unlawful to discharge industrial wastewater in excess of the

quantity or quality limitations set by the Permit for Industrial Wastewater Discharge or Discharge Authorization."

SDMC Section 64.0511 requires that each permittee shall provide protection from non-routine, episodic discharges of prohibited materials or other substances regulated by SDMC Division 5, including but not limited to an accidental spill or a non-customary batch discharge.

SDMC Section 64.0512 sets forth general and specific prohibitions which apply to each User introducing pollutants into a Publicly Owned Treatment Works, whether or not the User is subject to other national pretreatment standards or any national, State, or local pretreatment requirements. **SDMC Section 64.0512** incorporates the Federal General and Specific Prohibitions for discharges to sewer set forth at 40 CFR 403.5. These General and Specific Prohibitions apply to all users of the Metro System. A User may not introduce into a public sewer which directly or indirectly connects to the City's wastewater system any pollutant which causes pass-through or interference. Specifically prohibited discharges include, but are not limited to: matter which may cause fire or explosion; toxic matter in quantities that could cause acute health and safety problems; matter which will cause corrosive damage; solid or viscous substances or other matter of such quality, size, or quantity that it may cause obstruction to flow in the sewer; rainwater, stormwater, groundwater, and any other uncontaminated water; matter having a temperature higher than 150 degrees Fahrenheit; radioactive matter, except in conformance with CA Radiation Control Regulations; and trucked wastes, except at the City's designated dump site.

Currently, however, the City has installed and operates several dry-weather stormwater diversion systems to ensure that pollutants present in dry-weather urban runoff will not reach receiving waters. During wet weather, the dry-weather flow diversion ceases, and stormwater is handled by the stormwater drainage system.

SDMC Section 64.0513 requires that the Industrial Wastewater Control Program shall develop, apply, and enforce specific limits or best management practice (BMP) requirements as necessary to implement the General and Specific Prohibitions; such limits are termed "Local Limits" and are enforceable as Pretreatment Standards.

Regional Wastewater Disposal Agreements

Section F.1 requires that each PA will comply with all applicable laws, rules, and regulations, including its regulatory obligations associated with the discharge of wastewater into its respective system and from such system into the Metro System.

- Industrial Wastewater Control Program

Section F.2 requires that each PA will minimize, to the maximum extent practicable, the infiltration and inflow of surface, ground, or storm waters into its respective wastewater systems. Each PA has included a specific prohibition in its governing legislative authority. Furthermore, Industrial User Discharge Permits issued to Users in PAs pursuant to Interjurisdictional Pretreatment Agreements (IJAs) specifically prohibit the discharge to the sanitary sewer of any rainwater, stormwater, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds, or lawn sprays, or any other uncontaminated water.

Section F.3 requires each PA to ensure that all industrial users of its wastewater system are regulated by an effective industrial pretreatment program that conforms to all applicable laws, rules, and regulations, and that is acceptable to the City.

Interjurisdictional Pretreatment Agreements

The City has entered into IJAs with each PA comprising the Metro System. Condition (1) of these agreements requires each agency to adopt and diligently enforce an ordinance that conforms to the minimum legal requirements contained in the Federal Pretreatment Regulations (40 CFR Part 403) and which incorporates any other legal authorities necessary to implement procedures outlined in the IJA or in the Federal Pretreatment Regulations. Condition (3) requires that each PA adopt amendments to ordinances when necessary to ensure the effective administration and operation of the pretreatment program. Condition (4) requires that each PA adopt, as part of its ordinance, and enforce specific discharge limits at least as stringent as the specific discharge limits established in the City ordinance. Condition (10) allows for a service agreement providing the City with the legal authority and responsibility for the performance of technical and administrative activities necessary for the implementation of the pretreatment program within the PA; at this time, the City implements the pretreatment program in all PAs.

3.3 Authority to Collaborate with Storm Sewer Agencies

Spills from the City collection systems may, at times, flow into City storm drainage systems. The City has established and maintains a Jurisdictional Runoff Management Plan (JRMP) that encompasses City-wide programs and activities designed to prevent and reduce stormwater pollution within City boundaries. This document provides information on communication procedures and responsibilities for when spills enter the storm conveyance system. The City also maintains a hotline to promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the storm drain system using the “Get It Done” website (https://www.sandiego.gov/get-it-done).

The City has keys to access storm drainage system channels and open lines of communication to access support, if needed.

To prevent cross-connections of sanitary sewer infrastructure to storm sewer infrastructure, the City has a permitting process to prevent utility conflict and unintentional cross-connections for all work performed on the sewer system. The City requires post-CCTV activities to be performed on installed sanitary sewer infrastructure to ensure that no cross-connections into the storm sewer infrastructure occur.

3.4 Authority to Require Proper Design and Construction of Sewers

SDMC Article 4: Sewers, Division 4: Construction, Maintenance, Funding, and Use of Wastewater Facilities establishes at 64.0400 that it is a misdemeanor for any person to connect any pipe on private property with any pipe in the street that is connected with the public sewer of the City, or to construct any sewer in the City, without first obtaining a permit from the City; it also provides that all connections shall be installed under City

supervision. Application must be made in writing to the City by the owner of the property or their agent. A permit must be obtained prior to the installation of any plumbing fixtures.

SDMC Section 64.0401 establishes that only employees, contractors, or maintenance workers of the City may construct or cause to be constructed, or alter or cause to be altered, any public sewer, lateral sewer, house connection, or industrial connection to sewer or wastewater pumping station within the City where existing or proposed wastewater flows will discharge directly or indirectly to the City's public sewer without first obtaining approval of wastewater facility construction plans from the City. The applicant must submit to the City for approval, construction plans and such specifications and other details as required to describe fully the proposed wastewater facility. The plans shall have been prepared under the supervision of and shall be signed by an engineer of suitable training registered in the State of California.

Ordinance Number O-20897-3, which passed on January 18, 2018, adopted the 2016 California Plumbing Code, with State and local amendments. Service connections must be designed and constructed to meet the 2016 California Plumbing Code, as adopted.

3.5 Authority to Ensure Access to Publicly Owned Portion of Lateral

The City does not maintain private lateral sewer lines on private property or in easements or encroachments. Property owners are responsible for maintaining approved lateral installations. ECP performs site inspections during construction of all approved laterals in the public right-of-way (ROW).

3.6 Authority to Limit the Discharge of FOG and Other Debris

SDMC Section 64.0512 (4) specifically prohibits the discharge to the sewer of "any solid or viscous substance or other matter of such quality, size, or quantity that it may cause obstruction to flow in the sewer or be detrimental to proper wastewater treatment plant operations.

These objectionable substances include but are not limited to asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, fatty acids, grease and oil, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

SDMC Section 64.0512 (8) prohibits FOG of animal or vegetable origin in a concentration that exceeds 500 mg/L.

SDMC Section 64.0512 (19) prohibits petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.

As discussed earlier, the general and specific prohibitions set forth at SDMC 64.0512 apply to all users of the sewer system. They are also included in all Industrial User Permits issued for industries located within the City and in the PAs.

3.6.1 Food Establishment Wastewater Discharge Program

SDMC Article 4; Sewers, Division 7: The Food Establishment Wastewater Discharge (FEWD) program provides that (non-residential) facilities engaged in preparing food for consumption by the public desiring to discharge wastewater into the public sewer, shall obtain a permit to discharge, known as an FEWD Permit.

SDMC Section 64.0708 establishes that all permittees shall be required to install an approved type of grease pretreatment device in the waste line leading from the food preparation area or from sinks, drains, appliances, and other fixtures or equipment used in food preparation or cleanup where grease may be introduced into the sewerage system. Such grease pretreatment devices shall be installed to remove grease from wastewater and shall be maintained in efficient operating conditions by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping or public sewer.

Each permittee shall also be required to provide a collection drum or container for the purpose of physically segregating oils, greases, and greasy solids. Permittees shall establish procedures for personnel to practice maximum segregation of oils, greases, and greasy solids to the collection drum or container prior to washing and other water cleaning that goes into sewers. The permittee shall be responsible for the proper removal and disposal by appropriate means of the material captured from either grease pretreatment devices on wastewater lines or the collection drum for segregating oil, greases, and greasy solids.

3.7 Authority to Enforce Violations of Sewer Ordinances

SDMC Section 64.0504 establishes that the conditions of Industrial Wastewater Discharge Permits shall be uniformly enforced by the City in accordance with the ordinance and applicable local, State, and federal regulations. The City ensures compliance with permit requirements and general and specific prohibitions by taking administrative enforcement actions consistent with the Program's EPA-approved Enforcement Response Plan (ERP) in the event of non-compliance. The ERP was submitted to the EPA on December 15, 1993.

The ERP describes criteria and other considerations for responding to violations of pretreatment regulations and discharge standards in a consistent and timely manner. The ERP provides for a range of enforcement responses including but not limited to: Notice of Violation, administrative orders, permit suspension, permit revocation, sewer service termination, and/or referral for civil or criminal prosecution.

SDMC Section 64.0710 provides for penalties for violation and civil liability related to misdemeanor discharges of wastewater in any manner in violation of SDMC Article 4, Division 7.

SDMC Section 64.0301 establishes penalties for Violations of Chapter 6, Article 4: Sewers, and declares discharges of wastewater in any manner in violation of the ordinance to be a public nuisance and a misdemeanor. The section provides for relief through Injunction, Liability for Costs of Damage, Termination of Service, Civil Penalties not to exceed $2,500 per day per violation, and Criminal Penalties in the amount of $25,000 per day per violation or imprisonment for not more than 1 year or both.

SDMC Division 8 of Article 2 of Chapter 1 governs the administrative assessment of civil penalties for violations of the Municipal Code and applicable State codes. Section 12.0803 (a) provides that any person violating any provision of the SDMC may be subject to the assessment of civil penalties pursuant to the administrative procedures provided in Sections 12.0804 through 12.0810 of Division 8. Section 12.0803 (b) provides that each and every day a violation of any provisions of the SDMC exists constitutes a separate and distinct violation. Section 12.0803 (c) provides that civil penalties may be directly assessed by means of a Notice and Order issued by the Director or affirmed by an Enforcement Hearing Officer. Civil penalties may be recovered by assessment of an Enforcement Lien or subsequent legal action brought by the City Attorney. Section (d) provides that civil penalties for violations of any provision of the Municipal Code or applicable State codes shall be assessed at a daily rate determined by the Director or Enforcement Hearing Officer. The maximum rate shall be $2,500 per violation. The maximum amount of civil penalties shall not exceed $250,000 per parcel or structure for any related series of violations. The Industrial Wastewater Control Program issues 2 types of Notices and Orders: Compliance Orders, and Penalty Orders.

Participating Agencies: Inter-Jurisdictional Pretreatment Agreements provide that any inspector of the City may enter and inspect at any reasonable time any part of the sewer system of the PA. The right of entry and inspection shall extend to public streets, easements, and property within which the system is located. Additionally, inspectors of the City shall be permitted, as appropriate, to enter onto private property to inspect industrial waste dischargers. When, based on the Program's approved Enforcement Response Plan, the Industrial Wastewater Control Program determines that an Administrative Penalty Notice and Order is appropriate, the Program prepares the Penalty Order and submits it to the PA's legal staff for issuance under the Agency's letterhead and collection.

3.8 Authority to Obtain Easement Accessibility Agreements When Applicable

The City has no known locations requiring O&M where access is restricted. Processes are in place to identify and address potential needs for sewer easements in coordination with the Department of Real Estate and Airport Management. To facilitate access, the City utilizes a Property Easement Acquisition Checklist and includes detailed procedures in the Sewer Design Guide for obtaining easements in areas currently lacking accessibility.

REFERENCES FOR FURTHER INFORMATION:

- City of San Diego Charter: Section 2; Section 26.1 – https://www.sandiego.gov/city-clerk/officialdocs/legisdocs/charter
- Regional Wastewater Disposal Agreements
- San Diego Municipal Code – https://www.sandiego.gov/city-clerk/officialdocs/legisdocs/muni
- Interjurisdictional Pretreatment Agreements
- Sewer Design Guide – www.sandiego.gov/mwwd/pdf/sewerdesign.pdf

4 Operation and Maintenance Program

The City's O&M program incorporates preventive and predictive maintenance strategies to manage system risk. It is recognized as one of the leading maintenance programs in California by the California Water Environment Association's Collection System Committee, winning the Collection System of the Year award in 2022. The O&M programs are monitored and updated as system performance changes.

4.1 Up-to-Date Map of the Collection System

A comprehensive set of sewer maps show all the features of the City's sanitary sewer systems. These maps have been converted to electronic GIS maps that are used in the field for locating pipelines, maintenance holes, service connections, and other features of the City's systems. Modern state-of-the-art customized electronic GIS maps of the entire sanitary sewer system and other information layers are actively used in system management, work prioritization, and management decisions. The maps are routinely updated to include new or rehabilitated sewers. ECP is responsible for providing as-built information to the City's PUD for updating maps on a continual basis. WWC also performs field verification to confirm changes to system mapping.

The ESRI-based Compass GIS and SAP software products are easy-to-use desktop applications combining the power of electronic mapping with useful layers of data, linked databases, and reports. This mapping is a valuable data source for field locating utilities and avoiding damage and service disruption. These software applications are also used for initial planning studies to locate potential conflicts to new construction or rehabilitation. In 2019, the City migrated from desktop computer applications to SAP-based software. The City's PUD utilizes GIS-based stormwater conveyance facility maps online on an as-needed basis. These GIS-based stormwater conveyance maps are provided by the Transportation Department and Stormwater Department.

4.1.1 Procedures for Maintaining and Providing Access to Water Boards Staff

The City can provide access to up-to-data sewer mapping upon email request through the City's LROs, Margaret Llagas or Kent Vian.

- Margaret Llagas: MLlagas@sandiego.gov
- Kent Vian: KVian@sandiego.gov

4.2 Preventive Operation and Maintenance Activities

The City operates and maintains the Metro System with the following characteristics:

- Population Served = Approximately 2.3 million
- Service Area = Approximately 458 square miles
- Length of Sewer Mains = Approximately 3,057 miles
- Number of Maintenance Holes = Approximately 61,234

- Number of Pump Stations = 81

In addition, there are about 280,000 privately owned sewer laterals with a total length of more than 1,500 miles. The City also provides wastewater conveyance and treatment services to 15 satellite agencies under contractual agreements but is not responsible for those agencies' sewer system management.

The PUD's WWC Division uses a computerized maintenance management system (CMMS) and Standard Operating Procedures, along with equipment-specific manuals, to guide the frequency of sewer cleaning and pump station maintenance. Task schedules are based on operational experience, past performance, manufacturer recommendations, and site-specific conditions. Preventive maintenance frequencies for pumps and appurtenances are established in SAP and adjusted as conditions evolve, incorporating root cause analysis, operator input, and maintenance observations. Work orders in SAP, FEWD scheduler (Salesforce), and Compass GIS catalog and track scheduled and completed tasks, with Compass GIS also providing access to sewer, water, and CCTV history.

The maintenance program includes preventive, proactive, predictive, and corrective maintenance, along with maintenance engineering and quality control. These software applications are used to manage work, track warehouse inventory, and streamline maintenance purchases. Global Positioning System (GPS) devices are used on maintenance vehicles to enhance activities. Table 4-1 outlines preventive O&M activities, the three bullets specified in the General Order, and the scheduling and data collection system used. The following sections describe each preventive O&M activity in more detail.

Table 4-1. Summary of Operation and Maintenance Activities

Preventive Operation and Maintenance Activity	Inspection and Maintenance Activity	Higher-Frequency Activities of Problem Areas	Regular Visual and CCTV Inspections	Scheduling and Data Collection System
Gravity Sewer System Preventive and Proactive Maintenance	✓	✓	✓	SAP
Gravity Sewer and Maintenance Hole Inspection	✓	✓	✓	SAP
Non-Right-of-Way (NROW) Maintenance	✓	✓		SAP
Inspection of Sewers Associated with a Sewer Spill			✓	SAP
Cleaning Quality Assurance and Quality Control	✓		✓	SAP
Fats, Oils, and Grease (FOG) Cleaning	✓			FEWD
Root Control Strategy	✓	✓		SAP
Pump Stations and Force Main Maintenance	✓			SAP
Pump Station Site Visits and Operational Data Review	✓			SAP
Pump Station Back-Up Power		✓		SAP
Comfort Pump Stations with Automatic Shut-Off		✓		SAP
Predictive Maintenance Program for WWC Pump Stations	✓			SAP
Force Main Air Relief Valve Preventive Maintenance		✓		SAP
Peak Wet Weather Flow Management Procedures	✓			
Inspection of NROW Canyons and Environmentally Sensitive Areas	✓	✓		SAP
Odor Control Strategy	✓	✓		SAP

4.2.1 Sewer Main and Maintenance Hole Activities

The following sections describe preventive O&M activities for sewer main and maintenance hole infrastructure.

Gravity Sewer System Preventive and Proactive Maintenance

The City has a proactive and preventive maintenance program for its sewer system. to improve the City's ability to service and respond to complaints in these areas by reducing

travel time, two centralized maintenance yards are strategically located: one in the Kearny Mesa area and the other in the Chollas area, south of I-8. Preventive maintenance is focused on critical and problematic areas. Problem sewers are identified, prioritized, and scheduled for maintenance based on a comprehensive review of the maintenance history and system characteristics of all the sewers in the City, including spills, blockages, excessive maintenance, age, material, condition, etc.

Maintenance includes high-velocity sewer flushing, bucketing and sailing, and mechanical and manual rodding of sewers. The City's sewers are classified into two groups: trunk sewers (greater than 15 inches in diameter) and secondary sewers (15 inches or smaller in diameter). The City's sewers are maintained either on a 5-year cycle (System-Wide Cleaning Program) or on an accelerated cycle of 24 months or less (Accelerated Cleaning Program), depending on the individual maintenance history of each pipe.

The City developed a sewer maintenance optimization risk model to assess the relative risk of each sewer pipe segment based on numerous factors. The risk model quantifies relative risk on a scale of zero (lowest risk) to 100 (highest risk), adjusts the cleaning frequency for each pipe segment accordingly, and then groups them by maintenance zones. The results of the risk assessment are reviewed and updated by City staff periodically. Maintenance hole inspections are also put on accelerated inspection programs based on previous findings, typically with frequencies of 3 to 12 months. Siphons are typically cleaned by contractors.

In addition to the preventive maintenance program, the City implements a proactive maintenance program where "non-problem" sewers are also scheduled for maintenance and cleaning, but on a less frequent basis. The City's proactive maintenance program provides cleaning and maintenance of the "non-problem" secondary sewers at least once every 5 years. The City has also developed and implemented a system-wide 5-year maintenance hole inspection program.

Gravity Sewer and Maintenance Hole Inspection

PUD WWC CCTV crews perform CCTV inspection of the system as part of post-failure sewer spill inspections, post-repair inspections, cleaning quality control CCTV, pre-scheduled cleaning CCTV for cleaning optimization, FEWD program referrals, and ad-hoc requests from the Engineering Branch or other departments. All CCTV is uploaded to Compass GIS and is available for EPM to evaluate as part of their condition assessment process. WWC keeps hard copies on DVD of all CCTV videos completed by WWC crews. All databases are uploaded to the U: drive. Post-failure inspections are sent to Maintenance Planners for review, to determine whether issues will be repaired by WWC crews or referred to Engineering for further evaluation and potential renewal.

Maintenance hole inspections are documented and managed through SAP. During mainline cleaning operations, both upstream and downstream maintenance holes are inspected, and observations are recorded in SAP. If issues requiring follow-up are identified, work orders are generated through the system. Certain maintenance holes are subject to more frequent inspections based on operational needs. These inspections are scheduled in SAP as specific activities, each associated with a unique work order to facilitate proper tracking and management of findings.

In addition to mainline CCTV inspection performed by PUD WWC CCTV crews, the City utilizes contractors to perform additional mainline CCTV inspection to systematically assess the condition of sewer pipelines. The CCTV inspection program has been beneficial and instrumental in assessing condition of sewer pipelines, updating City GIS databases, creating CIP and rehabilitation contracts, and reducing sewer spills. The reports submitted by the CCTV contractor include digital videos, an access database with inspection records, and an electronic report detailing the sewer pipe and manhole observations. Systematic inspection and condition assessment is further documented in Section 8.1.3.

REFERENCES FOR FURTHER INFORMATION:

- Condition Assessment Program: Wastewater Condition Assessment – Pipelines & Maintenance Holes (January 2017)

Non-Right-of-Way Maintenance

The City has a robust preventive and corrective maintenance program for gravity sewer mains located in the City's non-right-of-way (NROW) areas. The City has invested heavily in the development of a highly capable internal workforce dedicated to establishing access to NROW sewer maintenance holes as well as cleaning, inspection, and corrective maintenance of NROW mains and maintenance holes. NROW maintenance crews have specialized equipment for performing NROW maintenance in canyons. The following list presents typical canyon preventive maintenance:

- Flushing and rodding sewer mains in the canyon using a 4-by-4 Rodding Truck or flushing equipment
- Cleaning large-diameter sewer mains (18 inches to 24 inches)
- Performing confined space entries
- Performing trail maintenance: removing vegetation from the Canyon Access trails and from around the maintenance holes
- Replacing sewer maintenance hole frame and covers (24 inches and 36 inches).
- Working with the Environmental Section on long-term Canyon Access projects, such as cutting in new access roads and improving old ones
- Various additional projects as needed, such as repairing walking trail improvements or repairing the canyon with Erosion Control, including natural wood-chipping or mulching and hydroseeding after a sewer main break, spill, or other construction project

Inspection of Sewers Associated with a Sewer Spill

All problem sewers are inspected as soon as possible, usually within 24 hours after the initial occurrence of a spill, including upstream and downstream pipes if appropriate, by CCTV to identify any necessary repairs or special, additional maintenance needs.

Cleaning Quality Assurance and Quality Control

The City implements a quality control/quality assurance test designed to examine the effectiveness of cleaning. After cleaning a sewer, a sampling of pipes is inspected by CCTV to ensure that cleaning has restored the flow area of the sewer to at least 95 percent of the pipe diameter. Any sewer that fails the test is re-cleaned, and the crew is trained as necessary on proper procedures. Maintenance and repair activities are tracked and documented in SAP.

Fats, Oils, and Grease Cleaning

Spills caused by FOG blockages are monitored and reviewed for location and cleaning frequency. The City has increased the cleaning in sewers with repeated FOG-related blockages or spills. A more detailed description of the City's FOG Program can be found in Section 7.

Root Control Strategy

In 2010, the City implemented more efficient mechanical main cleaning tools and equipment and discontinued chemical root control based on the improved effectiveness of main cleaning techniques. The City uses a combination of mechanical and hydraulic cleaning to reduce root-related sewer spills in the wastewater collection system.

4.2.2 Pump Station and Force Mains Activities

The following sections describe preventive O&M activities for the pump station and force main infrastructure.

Pump Station and Force Main Maintenance

Pump Station O&M is performed by WWC at all 81 pump stations. WWC operates and maintains seven large wastewater collection system pump stations, as shown in the following list:

- Pump Station No. 1 (Metro)
- Pump Station No. 2 (Metro)
- Grove Avenue Pump Station (GAPS) (Metro)
- Otay River Pump Station (ORPS) (Metro)
- Peñasquitos Pump Station (PPS) (Municipal)
- Pump Station No. 65 (Municipal)
- Pump Station No. 64 (Municipal)

The list identifies in parentheses which pump stations are funded by Metro and which are funded by Municipal funding sources. The remainder of the lift stations are operated by WWC and funded by Municipal funding sources.

Any pump station within the fence line of a Wastewater Treatment Facility or Reclamation Plant and force mains or outfalls leaving a Wastewater Treatment Facility or Reclamation Plant are not included in this SSMP. These facilities include:

- Point Loma Wastewater Treatment Plant (PLWTP) – outfall and digested sludge force main
- Metro Biosolids Center (MBC) – centrate force main
- South Bay Water Reclamation Plant (SBWRP) – outfall and blended sludge force main
- North City Water Reclamation Plant (NCWRP)
- North City Pure Water Facility

Pump Station Site Visits and Operational Data Review

Pump Stations Nos. 1, 2, and 64 are staffed full-time. WWC pump station crews visit all other pump stations at least weekly. In addition, operational data for all pump stations are reviewed continuously through SCADA alarms, which are overseen by COM-C. SCADA alarms include flow rate, pumping pressure, wet well levels, motor overload and overheating, and check valve failure.

Pump Station Back-Up Power

The City has equipped 60 of its pump stations, including all 7 large pump stations, with built-in emergency generators. Of the 21 that do not have built-in emergency generators, 7 are smaller comfort stations, 2 overflow into gravity mains, and 12 are considered low-flow stations. At critical flow and pump station locations in the system, pre-rainy season and post-rainy season data are monitored. WWC maintains a monthly call-out list with contacts for emergency response for 24/7 on-call. WWC also has 24/7 standby personnel.

Comfort Pump Stations with Automatic Shut-Off

There are several comfort station pump stations for public bathrooms located in Mission Bay Park. These stations utilize a solenoid valve to shut off the water supply whenever a power failure or sewer pump failure occurs.

Predictive Maintenance Program for WWC Pump Stations

The City has a mature predictive maintenance program to perform reliability-centered maintenance and optimization for pump station equipment, including odor control. The City surveys equipment using non-destructive testing technologies and analyzes data to assist with prioritizing projects based on historical records and testing. Non-destructive testing performed by City staff includes oil analysis, vibration testing, infrared thermography, carbon testing, and laser alignment. The AMS Machine Health Manager software is used for oil and vibration data analysis, and additional software is used for infrared analysis.

The City is currently performing predictive maintenance on the 7 large pump stations operated and maintained by WWC. Vibration and other analyses are performed on smaller pump stations on an ad-hoc basis when issues are identified. Contractors and consultants utilized for training have Category 4 certifications by the Vibration Institute, and contractors and consultants utilized for analysis have Category 4 or 2 certifications

by the Vibration Institute. Reports are developed and provided to facility chief operators, facility senior operators, safety consultants, and the WWC Deputy Director. Reports include condition scoring to identify the level of risk. Facility chief operators and senior operators are responsible for deciding which work is needed and creating work orders. The program has resulted in improved pump station performance, with these stations experiencing fewer identified issues over time. In addition to predictive maintenance, the City routinely replaces and rotates equipment to increase pump station reliability and for predictive maintenance testing purposes.

Force Main Air Relief Valve Preventive Maintenance

In November 2022, the City initiated a program to perform air relief valve inspection and maintenance. The City identified and placed a total of 30 sewer pump stations that are within 1,000 feet of a surface water body on a high-priority assessment and repair list. Out of these, 4 pump stations had air relief valves, for a total of 12 valves. This new inspection and maintenance program first targeted the 12 high-priority air relief valves and then moved on to the rest of the City's 37 air relief valves. This program assessed, prioritized, and repaired air relief valves and all associated piping to prevent future spills. The City completed this program in November 2023.

4.2.3 Other Activities

The following sections describe preventive O&M tasks for all other activities.

Peak Wet Weather Flow Management Procedures

During the rainy season, the City monitors multiple observation points at three designated strategic locations that are checked during significant rain events (SREs) to assess the potential of a spill due to a surcharge and backup at Pump Stations No. 1 and No. 2. These locations are Famosa Slough, Pacific Highway, and Sweetwater River. If a spill does occur, City crews will record the time and volume of the release and conduct water quality sampling at these locations, shown in Appendix F of the City's SERP.

Inspection of Non-Right-of-Way Canyons and Environmentally Sensitive Areas after Rain Events

The City established a WWC Division Operations and Policy Manual in 2008 that includes procedures for SRE inspections of designated NROW canyons and environmentally sensitive areas. An SRE is any rain event that results in more than 0.5 inches of measured rainfall in a 24-hour period, generates substantial runoff into canyon drainage systems, and can lead to significant erosion to canyon areas as well as potential damage to collection system infrastructure.

Odor Control Strategy

The City investigates all complaints of bad sewer odors and employs a chemical odor control program to deal with noxious sulfide-generated odors in certain neighborhoods. This program entails analyzing the best strategies to resolve the odor complaint, which includes injecting chemicals (Bioxide, Alkegen, ferric chloride, or hydrogen peroxide) at key locations, reducing the hydrogen sulfide (H_2S) levels (source of the foul odors) in

sewers. Ferrous chloride is used at Pump Station No. 1, PPS, and Pump Station No. 65. Ferric chloride and hydrogen peroxide are used at the NCWRP and PLWTP. Hydrogen peroxide is used at Pump Station No. 2, and the City could use ferric chloride if needed.

The City's program has been effective in reducing the H_2S levels in those key areas. The City utilizes carbon odor scrubbers on an as-needed basis along several sewers in odor-prone, "hot-spot" areas. The City seals sewer maintenance holes in specific areas where odors can be problematic; it also installs collector sewer mains and replumbs sewer laterals to the collector mains or installs flapper valves on the sewer laterals to prevent sewer gases from traveling back up into sewer laterals and into residents' homes. Overall, the City continues to strive to be on the cutting edge of odor control efforts through the combined use of technology, engineering, and chemical solutions.

4.3 Training

As one of the City's SSMP implementation goals, training falls under various City programs and includes formal classroom training, informal on-the-job training, and hands-on training. Training is facilitated by both City staff and outside training consultants. Most of the internal functional and safety training is currently provided through the PUD's Employee Services and Quality Assurance staff and Success Factors online training. Most required training is conducted through the Fall Classic sessions, which are 2-day mandatory training events, as well as the WWC's Operators Academy. Training courses are added, and existing courses are modified, to stay current with the rapidly changing technology and requirements, including computer-aided and online training. The training program includes the review of Standard Operating Manuals for sewer cleaning, CCTV, and repair. On-the-job cross-training is actively pursued to ensure that staff has a proficient working knowledge of each and every specific part of a task. City staff is cross-trained on an as-needed basis so that critical tasks can be performed without interruption, even when the crew members change.

Crews are initially trained in the proper O&M of all new major mobile equipment and facilities by the contractor/manufacturer. Written O&M manuals are used as resource material for initial start-up training as well as new staff training. Safety training is also provided, such as railroad safety and safety tailgates. WWC Division supervisory staff are responsible for providing operational training on sewer cleaning equipment. Consultant trainers are periodically brought in to provide additional technical training for sewer crew members on sewer cleaning equipment. In addition, the City hires a consultant on an annual basis to conduct field and classroom training of crews, refresh them on proper cleaning and repair methodologies, and identify areas needing improvement through field observations. CCTV contractors and CCTV inspection staff are trained and certified in a nationally recognized NASSCO PACP defect coding system. Table 4-2 summarizes the training provided to staff for O&M of the sewer system.

Table 4-2. Summary of Training Program

Training Type	Description	Recurrence
General Order Requirements	Training on General Order requirements incorporated into onboarding and annual spill emergency response training provided to all staff operating and maintaining the sewer system.	Onboarding for new employees, annually for all staff
Spill Emergency Response and Spill Volume Estimation	All crews responsible for responding to sewer spills receive training on response and reporting protocols and volume estimation methods. Re-training is provided when significant updates to standard procedures are made. Tailgate and tabletop exercises for major/regional events are held periodically.	Onboarding for new employees, annually for all staff
Electronic CIWQS Reporting	The primary method for electronic CIWQS reporting training is through on-the-job training with experienced data submitters showing new data submitters how to enter reporting data.	As needed
Safety	Safety training is integral to the City's training program. All staff receive formal classroom training on important safety topics (e.g., hazardous material management). Crews are not allowed to begin work until proficiency is demonstrated. Training on a variety of safety topics is performed via bi-weekly "tailgates."	Onboarding for new employees, bi-weekly tailgates and annually for all staff
Confined Space Entry Training	Staff that require Confined Space Entry training and certification are provided this training on an on-going basis.	As needed
Equipment	Crews are initially trained in the proper O&M of all new major mobile equipment and facilities by the contractor/manufacturer. Wastewater Collection Division supervisory staff are responsible for providing operational training on sewer cleaning equipment. Consultant trainers are periodically brought in to provide additional technical training on sewer cleaning equipment for sewer crew members.	As needed
SOPs	On-the-job and classroom training for standard operating procedures is provided for the following functions: Sewer Cleaning, CCTV, and Repair.	As needed
Large Scale Emergencies	The City prepares employees to respond to major emergencies and disasters and has established an Emergency Operation Center (EOC) and emergency response teams. Emergency training exercises are conducted and documented on a regular basis. The EOC is assisted in these efforts by the PUD's Department Operations Center.	Annually for all staff
Technology	Training courses are added, and existing courses are modified, to stay current with the rapidly changing technology and requirements, including computer-aided and online training.	As needed

Training Type	Description	Recurrence
Cross-Training	City staff is cross-trained on an as-needed basis so that critical tasks can be performed without interruption, even when the crew members change. WWT has set up significant training for electricians and instrumentation staff, including training from manufactures, training for CA state electrical licensure, and training on motor controls and schematics.	As needed
FOG Inspection	FOG inspection training occurs for new staff. Additional training occurs when new products are introduced for use in the City.	Onboarding for new employees
Certifications/ Professional Development	See Table 4-3 below.	Ongoing continuing education credits, continued training to advance

4.3.1 Training from Professional Associations

The City identifies staff development training needs in its annual budget and provides adequate funding for tuition reimbursement (such as for certifications). Training is also provided through various professional associations. Examples of technical training and training materials the City's collection staff may take advantage of are listed in Table 4-3.

Table 4-3. Training Resources (Conferences, Seminars, and Courses)

Sponsor	Event	Timeframe	References
Water Environment Federation	Collection System Specialty Conference	Periodically	www.wef.org
	WEFTEC	Periodically	www.weftec.com
California Water Environment Association	San Diego Section	Annually	www.cwea.org
	State Conference	April	
	Southern Regional Safety Conference	May	
	Southern Sections Collection Systems Committee	Quarterly	
Southern California Alliance of Publicly Owned Treatment Works	Collection System Committee	Quarterly	www.scap1.org
Tri-State Conference	Annual Conference	September	www.tristateseminar.com
Southern California Collection System Committee Training and Vendor Fair	Annual Training and Vendor Fair	Fall	N/A

REFERENCES FOR FURTHER INFORMATION:

- City of San Diego and Public Utilities Department Training Materials for Fall Classic
- Success Factors Online Training

4.4 Equipment Inventory

4.4.1 Equipment and Replacement Part Inventory

The City maintains an electronic inventory of equipment, replacement parts, and supplies and follows a structured process to ensure up-to-date accounting and a complete inventory of equipment and replacement parts for their specific duties. The PUD maintains a tool room for specialized hand and power tools. PUD personnel also have full access to City-wide storerooms to procure a wide variety of consumable tools, equipment, and supplies that are associated with their daily tasks.

As noted previously, City crews maintain pump stations and perform repair or replacement of underground pipelines. Routine repair and replacement of underground pipelines associated with CIP projects are contracted out to licensed contractors who have the equipment, materials, and staff to complete the work.

As part of its Integrated Master Plan (IMP) for asset management, the City is in the process of performing a complete inventory of current equipment for all pump stations. Upon completion of this inventory, WWC will be updating the bill of materials for all pump stations and force main appurtenances. Bills of materials are also being developed when equipment is broken down and repaired in the City's repair shop. Stocking levels consider the frequency of use, lead time for restocking, and criticality in that stocking quantities are greater when failure rates are higher, lead times are longer, and equipment is more critical. The process for ensuring adequate spare parts for infrastructure is to replace a spare part each time one is used. All pump station and force main spare parts are tracked in SAP, which is inclusive of critical spares.

4.4.2 Critical Spare Parts

The City has equipped 60 of the City's pump stations, including all 7 large pump stations, with built-in emergency generators. Many of the City's pump stations are aging and will be modernized in the future to improve reliability and performance. Maintaining these facilities has become increasingly challenging due to the difficulty of sourcing critical spare parts, which are often outdated or have extended lead times. In response, the City has prioritized asset rehabilitation, successfully implementing upgrades and improvements to extend the service life of these critical assets.

The City maintains equipment such as portable pumps, portable generators, traffic control devices, and night lighting systems in a ready state for immediate deployment in an emergency. The City has a procedure for pre-qualifying manufacturers and equipment vendors and, in some cases, purchasing sole-source equipment to standardize equipment and parts. This additional procurement option reduces inventories, simplifies procurement procedures, and reduces training and O&M costs.

Parts that are needed for preventive maintenance are identified ahead of time for each specific maintenance task. Parts are secured prior to the start of preventive maintenance. Redundancy is provided for key pump station equipment.

5 Design and Performance Provisions

5.1 Design and Construction Standards and Specifications

New sewers and pump stations are planned, designed, and constructed per the City of San Diego's Sewer Design Guide (www.sandiego.gov/mwwd/pdf/sewerdesign.pdf). This guide summarizes and outlines relevant City policies, applicable codes, and engineering standards for planning and designing wastewater infrastructures, which consist of new sewer mains, pump stations, force mains, and other appurtenances.

Sections include:

- Sewer System Planning
- Gravity Sewer System Design
- Easements and Encroachments
- Sewer Main Bridge Crossing Design
- Abandonment of Existing Sewer Mains, Maintenance Holes, and Easements
- Corrosion Control
- Sewer Pump Station Design Criteria and Equipment Design Guidelines

5.1.1 Updating Standards and Specifications

The PUD is responsible for updating and maintaining the City's Sewer Design Guide and Approved Materials List. The Sewer Design Guide is updated as needed to incorporate improved materials, methods, and processes. The City's WWC Division provides input for improved system component performance based on experience gained in O&M. Proposed changes to design criteria are evaluated by the Sewer Design Guide Committee before implementation.

As new products are introduced, they go through a review and are evaluated by City staff against the Standard Specifications for Public Works Construction (Green Book). Prior to adding new products to the City's Approved Materials List, the City's Approved Materials Committee makes a recommendation to the Public Utilities Director for approval. Once approved, the new products are then added to the City's Approved Materials List. The City participates on the Green Book Committee and references applicable "Green Book" specifications as appropriate for the construction of new sewer projects.

The ECP is responsible for updating the San Diego Regional Standard Drawings and the City's master specifications for construction projects. All City Engineering Documents and References are available online at the City's website: https://www.sandiego.gov/ecp/edocref

The ECP is also responsible for enforcing compliance with the plans and specifications for installing new sewers, pumps, and other appurtenances. All system components are designed to meet permit requirements of the various federal, State, and local agencies. In addition, environmental documents are prepared to comply with the California

Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or both as appropriate. This process ensures that projects meet regulatory requirements and benefit from the input of all affected and interested parties, including the communities.

5.2 Procedures and Standards for Inspecting and Testing System Improvements

The Field Engineering Division of the ECP provides inspection on all new and rehabilitated sewer and pump station construction contracts. Inspection procedures are followed to ensure that sewer system facilities are built per the plans and specifications. Inspections are conducted both at the job site and as required at material fabricators during manufacturing and testing. The Field Engineering Division coordinates its work with the project engineer to ensure that the design criterion is met. The City issues final acceptance for projects when they have met all required performance tests and have received a field acceptance from the operational staff. City Engineering documents and references also include standards for inspection and testing of new or remediated infrastructure.

5.2.1 Construction-Related Spill Prevention

The City has issued construction contract provisions that require construction contractors to prepare and utilize sanitary sewer spill plans and procedures when they perform City contract work. These provisions further require that flow control requirements be explained to potential bidders at the pre-bid meeting. The contractor is required to provide an Emergency Response Plan for controlling sewage flow during the construction. The City's Engineering Branch of the ECP and WWC reviews and approves the contractor's Emergency Response Plan prior to the start of construction.

A map of all sewer construction projects is periodically updated by the ECP staff. Contact information for each ongoing construction project, including the names and telephone or pager numbers of the inspector, the inspector's supervisor and contractor's contact person, is available to all City Department's staff.

ECP and WWC staff communicates the City's "no-spills" policy and project plans and specifications to the contractor, enforcing plans and specifications and ensuring the contractor responds appropriately in case of emergencies, notifying the contractor of its responsibility to prevent spills and respond with quick mitigating action if a spill does occur. A City inspector is required to be present on-site to inspect construction project-related sewage bypass equipment prior to the start of construction activities.

REFERENCES FOR FURTHER INFORMATION:

- City-Approved Materials List
- Standard Specifications for Public Works Construction, referred to as the "Green Book"

6 Spill Emergency Response Plan

Each Enrollee shall develop and implement a SERP that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- 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 SERP 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 to, 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 the effectiveness of the SERP and update the plan as needed.

The City has developed a SERP documenting response protocols from call receipt through clean-up and reporting. The City's SERP meets the requirements of the General Order and MRP. The SERP is updated with current information on a regular, ongoing basis. The latest version is included in Attachment 5 of this SSMP.

6.1 Site-Specific Pump Station Response Plans

The City has developed site-specific response plans to improve sewer spill response in the case of pump station failure. Each site-specific response plan identifies the location where the sewage will spill from the collection system or pump station, the bypass

pumping strategy, the amount of flow requiring bypass during average and peak flows during both wet and dry weather, and the location or where to place the bypass pumping inlet and outlet.

6.2 Annual Review and Update

Annually, the City will review and assess the effectiveness of the SERP and update the plan as needed.

7 Sewer Pipe Blockage Control Program

7.1 Program Overview

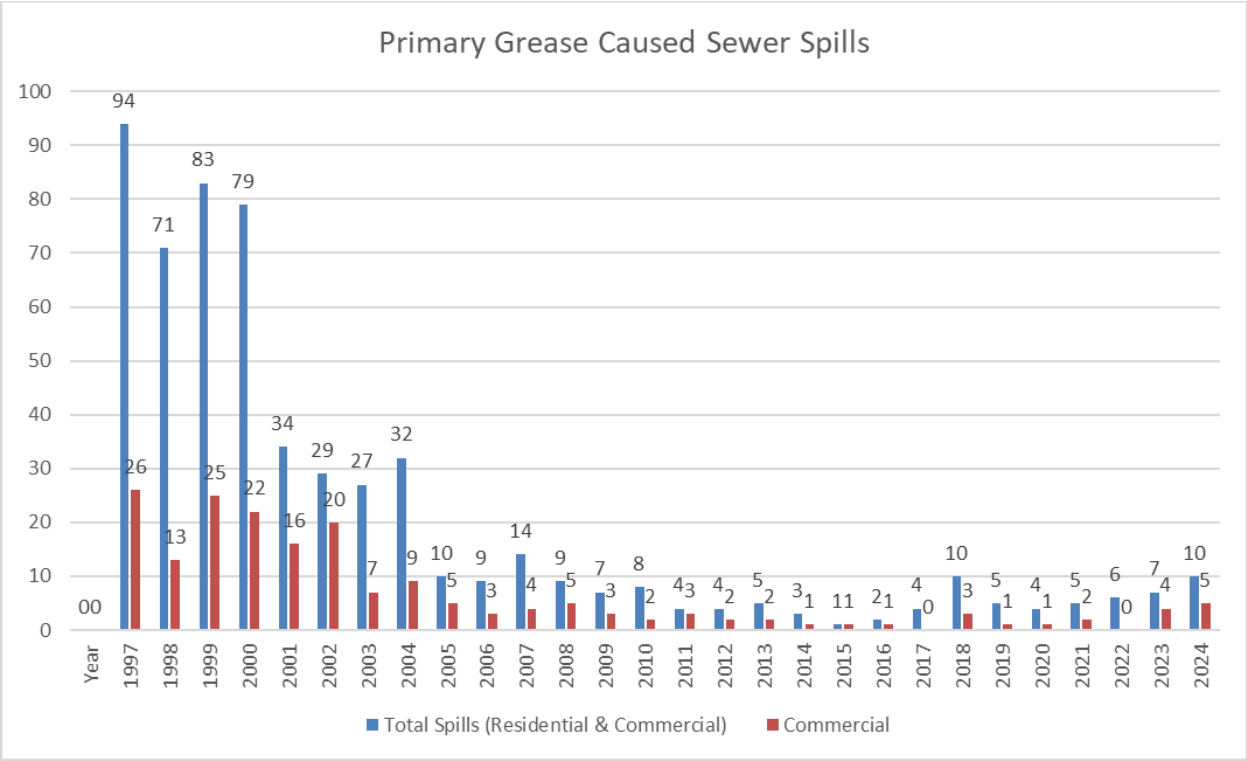
In July 1988, the FEWD Permit Program was created following the adoption of Municipal Code, Chapter VI, Article 4, Section 64, “Food Establishment Wastewater.”

The FEWD program initially had the following goals:

1. Permits for all food establishments were to be issued no later than June 30, 1991.
2. All required grease removal equipment was to be installed no later than September 30, 1991.

The FEWD Program has continually worked to reduce FOG, rag, and debris-related sewage spills. The City has approximately 6,000 restaurants and historically had a significant number of FOG, rag, and debris-related sewer spills. As shown on Figure 7-1, FOG, rag, and debris-related sewer spills were reduced by 90 percent from 1997 to 2024, dropping from a total of 94 FOG-related spills in 1997 to only 10 in 2024 (the last full year of data available). In addition, of the 10 FOG, rag, and debris-related spills in 2024, 5 involved residential areas and 5 were attributable to commercial food service establishments (FSEs). This significant reduction and low count of grease-caused sewer spills with commercial distributors demonstrate the effectiveness of the FEWD program.

Figure 7-1. Sewer Spills Caused by Grease



7.2 Implementation Plan and Schedule for Public Outreach

Public education outreach has been an ongoing effort, including educational videos and a postcard describing the best practices for residents to follow to help keep FOG, rags, and debris out of the sewer system. In addition, the City's PUD maintains an up-to-date website, which serves as an additional source of information for the food service industry and the community at large. General information about eliminating FOG, rag, and debris discharges into the sewer system is among the information provided on the website (https://www.sandiego.gov/mwwd/sewerspill/grease). Other public outreach and education efforts include public events described below and the residential grease waste recycling collection center at the Miramar Landfill.

FEWD distributes FOG, rags, and debris postcards to all addresses upstream of a reported spill due to a grease blockage within 10 working days of the event and participates in the San Diego County Apartment Association annual convention to communicate its FOG Control Program and pass out FOG brochures. FEWD also takes the names, addresses and number of brochures each member needs for their condominium or apartment complex to be mailed later.

In an effort to expand the Residential FOG Outreach efforts, FEWD began partnering with the WWT Division and EMTS Division to form the Water Stewardship Community Outreach Team. This joint outreach program aims to educate the public not just about FOG issues but also about being good stewards of the wastewater collection system and of the environment as a whole. The purpose of these efforts is to try to reduce the costs and strain on the collection system and treatment plant processes. In the calendar year 2024, FEWD and WWT attended two events, the Science Fair at Snapdragon Stadium and the Barrio Logan Science and Art Expo.

7.3 Plan and Schedule for Disposal of FOG within the Service Area

The City does not own or operate any FOG disposal facilities. The FSEs must collect the waste FOG and prevent the waste FOG discharge into the sewer system by installing GRE. FSEs are responsible for the proper disposal of the collected FOG (see Section 7.5 below for approved maintenance methods).

Local grease haulers such as Affordable Grease Pumping, Atlas Pumping Service, and Dar Pro Solutions service FSEs and remove and properly dispose of the grease. The Miramar Landfill Recycling Center is equipped to receive residential grease waste in quantities of up to 30 gallons per resident disposal.

7.4 Authority to Prohibit FOG Discharges and Identify Measures to Prevent FOG SSOs

The City's FOG Control Municipal Code, Chapter VI, Article 4, Section 64, "Food Establishment Wastewater," effective July 1988, mentioned in Section 7.1 above, provides the legal authority to prohibit FOG discharges by FSEs. To mitigate sewer spills resulting from blockages caused by FOG accumulation, the City's WWC Division implements its Spill Response and Tracking Plan (SRTP). FEWD provides an

investigation of all FOG-related sewer spills and takes enforcement and corrective actions with FSEs as needed to prevent future FOG-related sewer spills.

7.5 FOG Program Requirements and Design Standards

Major provisions of the FOG Control Ordinance and its Rules and Regulations address requirements related to GRDs—specifically, installation, design standards, maintenance, BMPs, and record keeping and reporting. They are summarized in the sections below.

The City's Municipal Code Chapter VI, Article 4, Section 64, "Food Establishment Wastewater" states:

"Facilities engaged in preparing food for consumption by the public…shall obtain a permit to discharge…known as a Food Establishment Wastewater Discharge [Permit].

"…all permittees shall be required to install an approved type grease pretreatment device in the waste lines leading from the food preparation area, or from sinks, drains, appliances and other fixtures or equipment used in food preparation or cleanup where grease may be introduced into the sewerage system. Such grease pretreatment devices shall be installed to remove grease from wastewater and shall be maintained in efficient operating conditions by periodic removal of the accumulated grease."

Major provisions of the FOG Control Ordinance and its Rules and Regulations regarding the requirements for installing and maintaining GRDs are summarized below.

7.5.1 Grease Interceptor Requirements

The Gravity Grease Interceptor (GGI) and Hydromechanical Grease Interceptor (HGI) are plumbing devices that are installed in a wastewater drainage system to intercept and prohibit FOG from entering the sewer system. An HGI is a smaller GRD, ranging from a minimum size of 7 gpm / 14 pounds to 500 gpm / 1,000 pounds. FSEs must also gain approval for placement of HGIs from the County of San Diego Department of Environmental Health (DEH). Typically, the DEH may allow the HGI to be installed inside an FSE as long as it is not in the food prep or scullery areas.

GRE installed in the City must be approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or Plumbing and Drain Institute (PDI) or must meet ASME A112.14.6 specifications. Installation of grease removal equipment must conform to the California Plumbing Code (CPC), which is enforced by the City Development Services Department Mechanical Inspectors.

7.5.2 Variance to Allow Alternative Grease Removal Devices

FEWD does follow the requirements of the California Plumbing Code, which allows Alternative Grease Removal Devices. All FSE plan checks to open a new FSE or remodel existing FSEs receive requirements to install grease removal equipment with the exception of some juice bars or other FSEs which have indicated there is no other food preparation using any amount of FOG. When an FSE plan checks with FEWD, the proposed installation of a GGI or HGI is approved or corrected depending on the grease waste line loading per the California Plumbing Code's sizing criteria.

7.5.3 Operation and Maintenance of Grease Interceptors

The City's Food Establishment Wastewater Ordinance requires that GRE (Grease Interceptors) "be maintained in efficient operating conditions by periodic removal of the accumulated grease and solid food waste." The cleaning interval varies with the amount of food preparation/clean-up activities and with the facility's housekeeping procedures. This interval must be determined by each facility but will be mandated by the City when maintenance is found to be unsatisfactory. Table 7-1 below documents acceptable grease and oil levels for grease interceptors of various sizes.

Two maintenance methods are approved by the City:

1. **Manual Removal of Grease:** This consists of removing the accumulated grease and oil and removing solids that have settled at the bottom. None of the removed material can be disposed of in the sewer or storm drain system. Collected material can be put in a barrel specifically designated to hold grease interceptor waste (not in the same barrel for used frying oil). Grease Interceptor waste can be disposed of in the trash (not recommended). If applicable, FSEs must ensure that the grease recycler or waste hauler accepts grease interceptor waste. Moreover, per the California Code of Regulations [CCR 27, 20200(d)(3)]: (3) liquids or semi-solid waste (i.e., waste containing less than 50 percent solids by weight) shall not be discharged to Class III landfills.
2. **Pumping:** FSEs may hire a pumping service to empty a GRE. If FSEs have a grease interceptor, they must pump all grease, oil, and food matter from each chamber and sample box, including solids or sludge at the bottom of each chamber, specifically at the bottom of all standpipes. FEWD requires a complete pumping out at each cleaning.

Bacterial products may help reduce cleaning frequency. However, high temperature, high or low pH levels, sanitizers, and other cleaning products render them ineffective. Bacterial products may also cause the accumulated grease to "fluff up" or take up more space in an FSE's GRE than if left alone. This is not a substitute for methods 1 or 2.

Enzyme products are never allowed, as they keep grease and oil suspended in water, causing them to pass through the grease trap or interceptor. They may also contribute to the corrosion of an FSE's GRE.

In all cases, facility operators are solely responsible for proper GRE maintenance.

Summary

GRE collects grease that would otherwise enter the sewer lines and cause blockages and sewer spills. Methods 1 and 2 above are the best ways to disposing of this grease. Bacteria may reduce the frequency of, but will not eliminate the need for, manual cleaning or pumping.

A record of the dates, methods, and identities of persons/companies cleaning GRE must be kept at the facility and be available for review at any time. During facility inspections, all GRE will be required to be opened and examined for proper maintenance.

Table 7-1. FEWD Maximum Grease and Oil Levels for Grease Interceptors

Hydromechanical Grease Interceptors (HGI) (Ashland, Jonspec, Josam, Mifab, Rockford, Smith Wade, Watts, Zurn)	Maximum Depth of Grease Allowed
7gpm/14lbs	½”
10gpm/20lbs	1”
15gpm/30lbs	1 ½”
20gpm/40lbs	2”
25gpm/50lbs	2 ½”
35gpm/70lbs (includes Retroceptor)	3”
50gpm/100lbs (includes Retroceptor)	3 ½”
75gpm/150lbs	4”
100gpm/200lbs	5”
150gpm/300lbs	6”
Low Profile (any size except below)	2”
Ashland APGI-150	5.5”
Canplas 20gpm & 25gpm	2”
Canplas 35gpm & 50gpm	3”
Canplas XL75	17”
Canplas XL100	25”
Schier PATG2025 or **GB-2**	7”
Schier PATG2635 (35gpm)	10”
Schier PATG 20-LO	5”
Schier PATG-35-LO	4 ½”
Schier PATG-50-LO	4”
Schier PATG3050 or **GB-3**	13”
Schier PATG3224 (60 gpm)	14”
Schier PATG3475 (75 gpm)	17”
Schier GB-15	4”

Hydromechanical Grease Interceptors (HGI) (Ashland, Jonspec, Josam, Mifab, Rockford, Smith Wade, Watts, Zurn)	Maximum Depth of Grease Allowed
Schier GB-20	6”
Schier GB-25	4”
Schier GB-35 or GB-1	5”
Schier GB-50	8”
Trapzilla TZ-160 (35 gpm)	10”
Trapzilla TZ-400 (75 gpm)	7”
Trapzilla TZ-600 (75 gpm)	13”

HGI – MIFAB Lil Max Models	
MI-G-1-PL (7 gpm)	6”
MI-G-2-PL (10 gpm)	5”
MI-G-3-PL (15 gpm)	5”
MI-G-4-PL (20 gpm)	5”
MI-G-5-PL (25 gpm)	6”
MI-G-6-PL (35 gpm)	4”
MI-G-7-PL (50 gpm)	5”
MI-G-L 25-PL (25 gpm)	4”
HGI – MIFAB Big Max Models	
XL-MI-G-PL 750 (75 gpm)	16”
XL-MI-G-PL 1150 (100 gpm)	15”

Gravity Grease Interceptors (GGIs)	Outlet Maximum
Highland 1000 gal	12”
Highland 1500-4000 gal	16”
Proceptor 750	13”
Proceptor 1000	20”
Proceptor 1300	26”
Proceptor 1500	13”
Proceptor 2000	20”
Schier GB75 (750 gal substitute)	15”
Schier GB250 (1000 gal substitute)	17”
Green Turtle GMC750 UPC	29”
All Concrete (Jensen, Procast)	6”

7.5.4 Concrete Grease Interceptors (Jensen, Pro-Cast)

Concrete grease interceptors, regardless of their size, are required to be pumped when the second chamber has a grease and/or oil layer of 6 inches. At no time should there be visible grease or oil in the sample box.

The City does not allow liquefiers to prevent impacts to wastewater treatment and Pure Water program treatment facilities.

7.5.5 Best Management Practices

When FEWD started its FOG Control Program in late 1989, all existing FSEs were required to install GRE with exceptions for FSEs with minimal or no food prep. They were required to follow what FEWD called “Specific Permit Conditions.” These Specific Permit Conditions were BMPs in that most of them were instructions to wipe everything prior to

washing. For FSEs that were required to install GRE, FEWD used Specific Permit Conditions to help limit the number of retrofit grease traps needed. For example: “Ensure that wastewater from kitchen area wash down is discharged to a fixture connected to grease removal equipment” (the mop sink did not need to be connected); and “Ensure that the first rinse from tilt skillet and/or soup kettle is discharged to a fixture connected to grease removal equipment” (the tilt skillet or soup kettle drains did not need to be connected). When FEWD found the prep sink(s) being used to defrost chicken, the facility received a Specific Permit Condition to “Confine use of the prep sink(s) to vegetable and fruit preparation only.” Specific Permit Conditions are printed on the front of each FSE’s Wastewater Discharge Permit and are specific to each facility.

During all site visits, FEWD inspectors look for violations of the FSE’s Specific Permit Conditions. For example, if a cold deli has added cooking equipment, has added any item to their menu that would require or generate fat oil, or if grease is found in a prep sink or cook line sink, a requirement is issued to install grease removal equipment. Often, FSEs request a second chance, which is provided to them via a “Change in Procedure Form” stating that they will remove the cooking equipment, confine use of the prep sinks or cook line sinks, etc., and the requirement is canceled. Upon second violation, the requirement is re-issued and is irrevocable.

7.6 Inspection and Enforcement Program

The City of San Diego’s Municipal Code Chapter VI, Article 4, Section 64, Division 7, “Food Establishment Wastewater” was enacted in July 1988 to control waste FOG discharges from FSEs. A stipulation under this amendment requires those FSEs which generate waste FOG during food preparation processes to obtain a FEWD Permit.

The City’s Municipal Code gives the FEWD Permit Program the legal authority to visit and inspect FSEs and monitor compliance with discharge permits. As part of routine inspection activities, inspectors from FEWD determine permit requirements and verify compliance. Additionally, information and training materials, such as maintenance logs and multi-language handouts with information about maintenance or sizing of grease interceptors, are provided to help FSEs stay in compliance.

Staffing for the FEWD Section is as follows:

- 1 Wastewater Pretreatment Inspector III – FEWD Program Manager
- 1 Principal Engineering Aide – FEWD Program Coordinator
- 3 Principal Engineering Aides – FEWD Supervisors
- 8 Senior Engineering Aides – FEWD Inspectors

7.7 Maintenance Program to Address FOG Issues

There is close coordination between source control and the collection system O&M staff to investigate FOG issues and determine appropriate source control and maintenance corrective actions to address issues. The City is also proactive in cleaning sewer areas with a history of FOG issues. Procedures related to the cleaning maintenance are described in the Operation and Maintenance Program (Section 4 of this SSMP) and its related Reference documentation.

7.8 Implementation of Source Control Measures

FEWD investigates potential source(s) of FOG waste to verify compliance with applicable sections of the Municipal Code. FSEs are required to have a Wastewater Discharge Permit, comply with source control measures for all sources of grease, implement BMPs and/or Specific Permit Conditions, and install grease removal equipment as applicable, and are subject to site inspection at a minimal interval of every 2 years to verify continuous compliance. The City uses an escalating inspection frequency of facilities based on findings, including a first inspection scheduled within 3 months of installation or violations, followed by a second inspection scheduled within 3 months; if no issues are identified, then inspection frequency is extended to 2 years. Implementation of FEWD software is used to support FOG investigations and other FOG program activities including reporting and production tracking. The City has dedicated staff to quality control the data entered into the FEWD software. Residential outreach is also performed after grease-caused sewer spills.

In the event that an FSE fails to comply with the requirements of the Municipal Code, FEWD takes immediate enforcement action by applying one or more appropriate enforcement action(s). The enforcement actions available to the City FEWD Permit Program are outlined as follows:

- **Level 1 Notice of Violation (NOV)** – A notice by certified mail which identifies the permit condition(s) violated and the circumstances surrounding the violation(s), and provides the FSE with an opportunity to correct the non-compliance within 30 days. The City collects an administrative fee of $150 for Level 1 NOVs.
- **Level 2 NOV** – A notice by certified mail which identifies the permit condition(s) violated (usually failure to reach compliance from a Level 1 NOV due date). Level 2 NOVs require FSEs to attend a Preliminary Hearing with the FEWD Program Manager or designee, usually within 30 days, to discuss their barriers to compliance and establish a new due date for compliance (no more than 90 days). Level 2 NOVs are also issued for the same violation if the violation reoccurs within a year. The City collects an administrative fee of $400 for Level 2 NOVs.
- **Level 3 NOV** – A notice by certified mail which identifies the permit condition(s) violated (usually failure to reach compliance from a Level 2 NOV due date). Level 3 NOVs require FSEs attend a Show Cause Hearing with an FEWD Program Manager or designee, usually within 30 days, to discuss their barriers to compliance and to establish a new due date for compliance (no more than 90 days). The City collects an administrative fee of $400 for Level 3 NOVs.
- **Permit Revocation** – The FEWD Program Manager revokes the FSE's Wastewater Discharge Permit for protracted non-compliance with their Wastewater Discharge Permit.
- The City may pursue civil penalties, as well as injunctive relief.

REFERENCES FOR FURTHER INFORMATION:

- 2016 California Plumbing Code

8 System Evaluation, Capacity Assurance, and Capital Improvements Plan

The City effectively manages collection system condition and capacity through system evaluation and delivery of capital improvements. The City's capacity assurance program has resulted in very few sewer spills caused by system condition or capacity deficiencies. The effectiveness of these programs is due to the well-defined process the City uses to include procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Sewer design criteria and capacity assessment;
- Prioritization of corrective actions; and
- A CIP.

PUD's EPM Division is responsible for flow monitoring, capacity assessment, and identification and prioritization of capacity improvements.

8.1 System Evaluation and Condition Assessment

8.1.1 Best Practices and New Technology

The City explores new technologies and best practices through industry contacts, conferences, or vendors. Gravity pipelines identified for condition assessment are assessed by CCTV, manned inspections, or other suitable inspection technologies and methods. In contrast, the condition assessment of force mains is more complex. Although these inspections tend to be more complicated, several different inspection methods are available. Among them are laser, sonar, ultrasonic profiling, ground penetrating radar, leak detection, and CCTV. The specific method of inspection selected for each pipeline depends on several factors, such as pipeline material, diameter, accessibility to the pipeline, and flow conditions.

8.1.2 Amount of System Condition Assessment

The City has inspected approximately 2,180 miles of wastewater mains since 2001—nearly 70 percent of the total system. Through this work, the City completed inspection of almost all identified high-risk pipes, including pipes:

- Made of vitrified clay that was installed more than 40 years ago
- That have high maintenance frequencies, which can accelerate deterioration of the pipes over time
- Located near water bodies

After the initial push to complete almost 1,600 miles of inspection in the program's first 3 years (2001 to 2004), the City continued to inspect approximately 40 miles of wastewater main each year from 2005 to 2024. The City has increased this amount to approximately 75 miles of wastewater mains each year to provide additional benefits to the environment and City ratepayers.

8.1.3 Inspection and Condition Assessment Prioritization

Gravity Sewer and Maintenance Hole Inspection

The City utilizes CCTV inspection and other data to make an initial recommendation for remediation, including maintenance, repair, and rehabilitation needs of the sewer pipelines. Condition Assessment Reports are developed after analysis by City staff and include an updated remediation decision.

Large Diameter Trunk Sewers, Interceptors, Force Mains, and Outfalls

The City continues to prioritize condition assessments for large-diameter trunk sewers, interceptors, force mains, and outfalls located within the City's service area. The main objectives of the condition assessments are to:

1. Identify large-diameter pipelines (including trunk sewers, interceptors, and outfalls) and force mains that are due for first-time assessment or reassessment and those with special concerns (asset age and past history of spills)
2. Develop an implementation schedule for pipelines which have been identified for condition assessment and adjust as needed based on ongoing assessments and changing priorities
3. Develop a budget for the assessment program and for future sewer rehabilitation CIPs and adjust based on ongoing evaluations and reprioritizations

Facilities identified for assessment are as follows:

- Trunk sewers
    - Large-diameter (42 inches and larger) sewer pipelines
    - History of no inspection or inspected more than 5 years ago
    - Proximity to waterways and ROW
    - History of spills
- Force Mains:
    - Metro and Muni Pump Station Force Mains
    - Point Loma Digested Sludge Pipeline (note: this is not a collection system force main)
- Ocean Outfalls
    - Point Loma Ocean Outfall (note: this is not a collection system sewer)
    - South Bay Ocean Outfall (note: this is not a collection system sewer)

The City prioritized pipelines with high risk for assessment sooner than lower-risk pipelines. The large-diameter trunk sewers identified for condition assessment were prioritized according to diverse risk criteria for likelihood and consequence of failure, such as installation year (pipe age), pipe location (sewers in proximity to waterways or other environmentally sensitive areas), inspection history, and trunk sewer capacity.

The results of these inspections are evaluated, and infrastructure identified for remediation is included in the business case evaluation (BCE) and CIP planning process. See Sections 8.3 and 8.4 for additional information on the BCE and CIP planning process.

Sewer Pump Station and Force Main Inspection

The City coordinates pump station condition assessments and pump performance testing periodically, considering the equipment age and feedback from pump station maintenance staff. The City manages the process by utilizing internal staff and consultant support to perform the assessments and associated tests.

Condition assessments have been performed on all pump stations. In addition to the predictive maintenance analysis described in Section 4.2, condition assessments on the four large pump stations are typically performed through individual condition assessment analysis of entire pump stations or components of pump stations. These condition assessments are initiated based on operator input, failure analysis, pump station performance, and other factors and are typically executed by the EPM division.

Inspection and assessment of pump stations are planned based on current priorities and conditions, though the schedule may be adjusted as priorities and conditions change. A report is prepared for each year, which includes recommendations for needed equipment upgrades and facility replacement projects. The City completed one inspection cycle in 2024; the second cycle is currently being planned.

The following factors are used to prioritize Muni pump station assessments; however, these factors may change over time based on new information and changing conditions.

- Previous assessments: Pump stations with assessments completed in recent years.
- CIP: Pump stations currently being or scheduled to be upgraded under a current CIP are removed from the list.
- Abandonment: Pump stations scheduled for abandonment in the next year were deleted from the schedule.
- Location of the pump station: Pump stations located adjacent to environmentally sensitive areas, such as beaches, wetlands, or canyons, will be given higher priority for inclusion.

Each pump station is evaluated for the following items:

- Pump performance: Parameters of design operating point, measured operating point, and motor power usage.
- Station capacity: Measured and design station capacity are compared to existing and projected future peak wet weather flow.
- Compliance: Station compliance, with key requirements of the Sewer Design Guide, is assessed. Requirements such as emergency storage capacity, dual force main, standby power requirement, and ventilation requirements are assessed.
- Condition: General station structural and equipment conditions and operational problems are assessed.

Based on the evaluation's findings, improvements and corrective actions are recommended for each pump station evaluated and incorporated into a BCE and the CIP or repaired by City staff. See Section 8.4 for additional information on the BCE and CIP planning process.

The City has equipped 49 Muni Pump Stations with dual force mains and is in the process of adding a dual force main to Pump Station 77A. These force mains are also predominantly PVC, which is a higher-performing material. The only Metro pump station that currently has a dual force main is Pump Station No. 2. The addition of dual force mains to existing single force main systems is ongoing and dependent on the timing of CIP projects for the specific pump station and upstream pump station, evaluation of the physical and system constraints with the pump station vicinity, and other considerations.

WWC inspects Muni force main air release valves quarterly and replaces them during inspection with clean and properly operating valves. The replaced air release valves are cleaned and rebuilt if needed. As described in Section 4.2.2, in November 2022, the City initiated a program to perform air relief valve inspection and maintenance. The City identified and placed a total of 30 sewer pump stations that are within 1,000 feet of a surface water body on a high-priority assessment and repair list. Out of these, 4 pump stations had air relief valves, for a total of 12 valves. This new inspection and maintenance program first targeted the 12 high-priority air relief valves and then moved on to the rest of the City's 37 air relief valves. This program assessed, prioritized, and repaired air relief valves and all associated piping to prevent future spills. The City completed this program in November 2023. Pump station operation and efficiency are also reviewed to assess force main performance. Additional force main inspection is performed on an as-needed basis.

8.1.4 Inspection Methods

Gravity pipelines identified for condition assessment are predominantly assessed by CCTV, manned inspections, or other suitable inspection technologies and methods. In contrast, the condition assessment of force mains is more complex. Although these inspections tend to be more complicated, several different inspection methods are available, including laser, sonar, ultrasonic profiling, ground penetrating radar, leak detection, and CCTV. The specific method of inspection selected for each pipeline depends on several factors such as pipeline material, diameter, accessibility to the pipeline, and flow conditions.

8.1.5 Condition Assessment

Condition assessment and operational challenges are a major contribution to the CIP. A primary form of condition assessment is CCTV and routine inspections, which identify asset deficiencies through a multi-phase process. Inspections are triggered based on manufacturer recommendations, industry standards, or operational needs. Inspections are conducted in-house or contracted out to a service provider or an engineering consultant team. PUD engineers will evaluate the findings to develop recommendations that may lead to CIP projects.

8.1.6 Inspection and Assessment Recordkeeping

The City maintains detailed recordkeeping of all system evaluations and condition assessments. Recordkeeping includes filing assessment reports and storing appropriate data. The City currently stores CCTV data in its CCTV database and all CCTV videos on a server. An internal quality assurance and quality control review team reviews all CCTV data and videos provided by contractors. The PUD assesses and analyzes inspection data to determine recommended condition remediation actions.

8.1.7 Assessing Assets Vulnerable to Climate Change

In January 2024, the City submitted a revised Climate Change Action Plan (CCAP) in compliance with the Special Studies Requirements of California Regional Water Quality Control Board – San Diego Region Order No. R9-2017-0007 (as amended by Order No. R9-2022-078) (NPDES CA0107409). The City has initiated numerous climate change-related planning efforts which are the basis for the information presented in the CCAP.

Additionally, the PUD is currently completing an Integrated Master Plan (IMP) that will evaluate all Metro System facilities with respect to facility-specific climate change analysis required to be incorporated into future Metro System facilities and operational planning of the Metro System. This IMP effort started in early 2023 and is due to be completed by January 2027. Through these efforts, the City is addressing the effects of climate change through several targeted steps related to rising sea levels, wildfires, and volatile rain periods. The City's proactive planning combines vulnerability assessments, targeted infrastructure improvements, and emergency preparedness to address these climate challenges effectively.

Rising Sea Levels

Two assessments were conducted to evaluate the vulnerability of municipal assets, including wastewater infrastructure, to rising sea levels, coastal flooding, and erosion. Additional studies are underway for higher-risk facilities to refine site-specific impacts and identify mitigation strategies. Ongoing monitoring data is being collected to assess the rate, scale, and immediate threat of erosion near the PLWTP, supporting the development of long-term stabilization strategies or alternative actions not previously identified.

Wildfires

Emergency response plans include wildfire protocols informed by past events, such as the 2003 Cedar Fire. Infrastructure resilience efforts emphasize wildfire risk reduction through design guidelines requiring drought-resistant vegetation and compliance with the California Fire Code for new developments and upgrades. Brush management policies ensure defensible space around facilities during wildfires. Additionally, the PUD’s IMP will address the increased risk of wildfires and recommend further adaptation strategies.

Volatile Rain Periods

The City participates in FEMA’s National Flood Insurance Program (NFIP) by exceeding its minimum floodplain management standards. If the PUD’s IMP identifies flood-prone areas within the system, facilities may be protected, waterproofed, or temporarily isolated

until long-term solutions, such as relocation, can be implemented. Future site-specific studies will guide these efforts. In the short term, the PUD will establish standard operating procedures (SOPs) to enable O&M staff to quickly repair or replace damaged equipment. For the longer term, detailed project descriptions will outline each project's scope, justification, priority, schedule, cost, O&M impacts, and alternatives analysis.

To prepare for changing precipitation patterns, the City will further evaluate the increased rates of inflow and infiltration caused by climate change and developing wastewater planning policies to mitigate the effects of intensified storm events. Current wastewater facilities are designed to convey flows based on the 10-year returns and withstand 100-year flood events, and operational and capital strategies are being developed to address precipitation-driven flooding. Additionally, the PUD collaborates with regional climate and weather forecasting groups to enhance responses and knowledge of extreme wet weather events.

Constructed Spill Locations

In three locations, the City has constructed facilities to increase resiliency of pump station operation by protecting the pump station equipment in the case of a pump station failure. Identified spill locations for large pump stations include the San Diego River, National City at 7th Street, and Sweetwater. WWC visits these locations on a semi-annual basis.

8.2 Capacity Assessment and Design Criteria

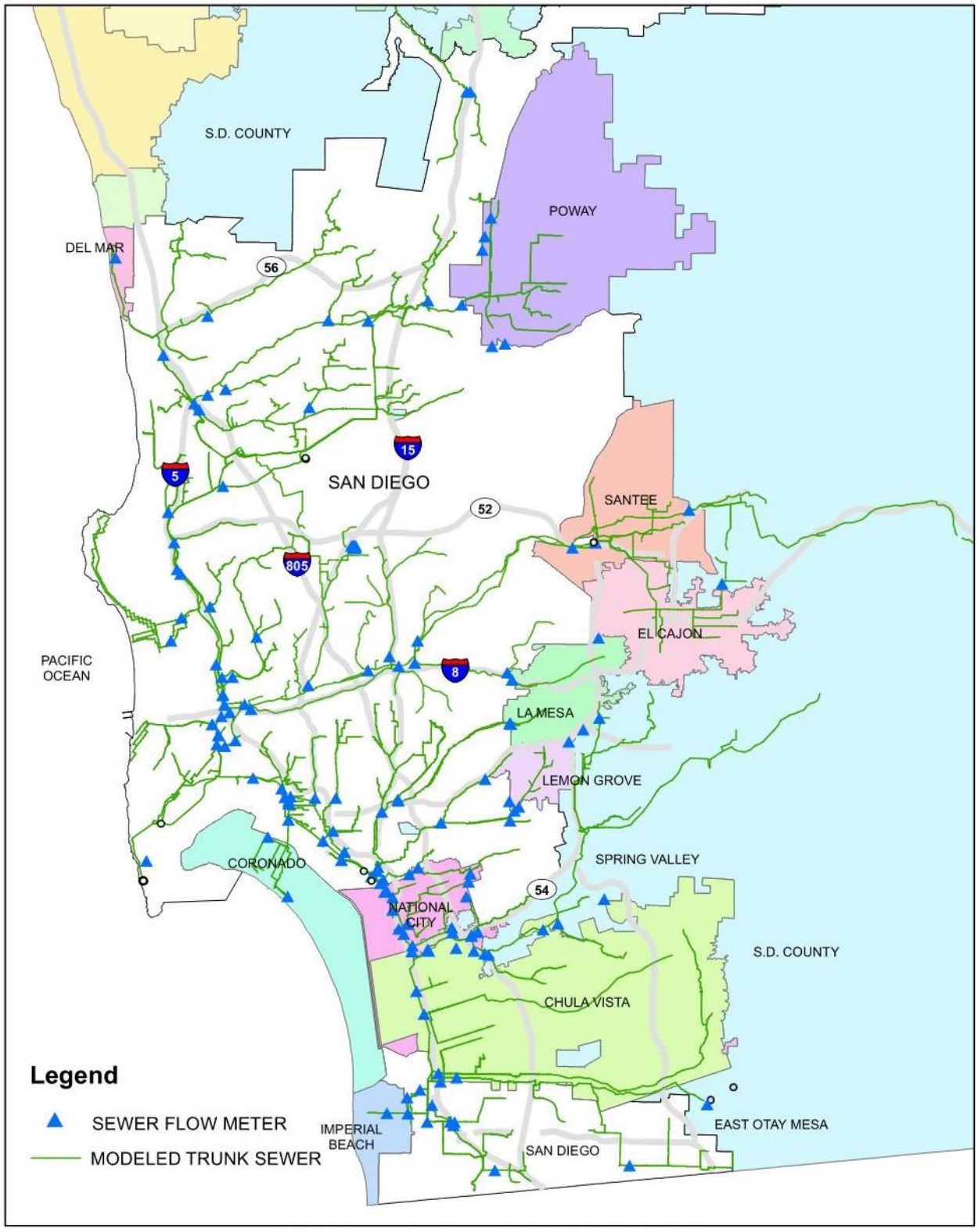
8.2.1 Trunk Sewer Capacity Assessment Program

Beginning in late 1996, the PUD's EPM Division developed a trunk sewer modeling program to efficiently analyze the hydraulic capacity of the City's Municipal Trunk Sewer System. The hydraulic model is used to analyze the capacity of existing trunk sewers under current and future conditions, and to proactively develop solutions to any potential future problems before they manifest themselves as wastewater spills.

The City's trunk sewer model includes over 6,800 maintenance holes and a like number of pipe segments on 123 trunk sewers. The model includes trunk sewers 15 inches in diameter or larger, plus many key smaller pipes. The City's wastewater service area consists of approximately 2,400 separate tributary areas, with an average size of less than 70 acres each. Existing and projected population and employment within each of the tributary areas are based on demographic data provided by the regional planning agency, the San Diego Association of Governments.

As shown on Figure 8-1, the City's Public Utilities System also services areas outside the City. The PUD's sewer model includes the PAs' trunk sewers and their tributary areas to allow flow projections from the PAs to be made on the same consistent basis as flow projections from areas within the City, and to route flows accurately. In addition, the flows from the PAs' trunks that connect to the City's Muni trunk sewers are fully accounted for in the capacity analysis of the City trunk sewers.

Figure 8-1. Trunk Sewer System Model



The hydraulic model includes a database of the characteristics of the trunk sewers and their tributary areas, calibrated unit flow parameters, software to maintain these data, hydraulic algorithms to compute flows and water depths, and output routines to tabulate and graphically present the results.

Modeling results, which include the flows, depths, and velocities throughout the entire trunk system, are used in the capacity assessment program. Modeling results are also used to identify hydraulic problems (e.g., general lack of capacity, short bottleneck reach that backs flow upstream, etc.). The model also indicates if there is a significant risk of surcharging and spills, and if that risk will increase due to future growth. For trunk sewers where modeling in the capacity assessment process has identified current or potential future capacity deficiencies, detailed modeling studies have been initiated in which the model of that specific trunk sewer is refined, the nature and extent of infiltration/inflow is assessed, and alternatives for providing the needed capacity are formulated. Generally, the modeling study is followed by a planning study and/or pre-design study in which alternatives are refined and evaluated, considering such factors as the condition of the existing trunk sewer, ROW availability, capital costs, construction, and long-term environmental impacts.

In its capacity assessment program, the City includes both dry weather and wet weather flow simulations for present and future (10-year) scenarios. The City prioritizes the trunk sewers as critical, semi-critical, or non-critical, according to the assessment combining both flow monitoring and modeling.

The monitoring criticality of a trunk sewer is based on the maximum depth of flow observed during the period in which the flow data is utilized for the assessment. In general, a 15-minute monitoring interval is used. The observed maximum depth (d) is expressed as a percentage of the pipe diameter (D), and each trunk is classified using the following rules:

For pipes less than 18 inches in diameter:	$50\% \leq d/D$	Critical
	$40\% \leq d/D < 50\%$	Semi-Critical
	$d/D < 40\%$	Non-Critical
For pipes greater than or equal to 18 inches:	$75\% \leq d/D$	Critical
	$50\% \leq d/D < 75\%$	Semi- Critical
	Critical $d/D < 50\%$	Non-Critical

The rules for dry weather d/D are set at less than full pipe to allow for the possibility of higher flows during unmonitored peak wet weather periods, to allow for possible lower capacity due to localized hydraulic inefficiencies, and to provide lead time to better assess the problem and develop solutions. The semi-critical rating category was designated to provide the early warning of possible future capacity problems. The more conservative rules applied to pipes less than 18 inches in diameter reflect the greater

potential for factors such as deposits, roots, grease, sags, and poor joints to reduce pipe capacity in smaller pipes.

The strength of the flow monitoring and criticality rating system is that it flags potential problems based on actual field conditions rather than theoretical flow and capacity calculations; its limitation is that it provides only a snapshot in time at one or two locations on each trunk sewer. This limitation is addressed when trunk sewers are further analyzed with a hydraulic model. Hydraulic modeling provides additional spatial definition (e.g., flow versus capacity in all pipe segments rather than just at monitored locations), estimates future flows as well as existing flows, and allows solutions such as diversions and relief sewers to be tested.

For wet weather model simulations, criticality is based on both the d/D and the hydraulic grade line (HGL) depth below rim of the maintenance hole. HGL depth below rim is defined as the distance between the maximum depth of flow and the ground surface. In general, a low HGL value indicates a high risk of sewage spill. Each trunk is classified using the following rules:

For all sizes of pipes:	100% < d/D and HGL depth below rim < 2’	Critical
	100% < d/D and HGL depth below rim > 2’	Semi-Critical
	100% ≥ d/D	Non-Critical

The rules for wet weather d/D are set at full pipe, since wet weather flows have been accounted for. The wet weather model is simulated based on the standard of a 10-year return wet weather flow.

The City has performed these practices consistently since the beginning of its capacity assessment and assurance program. The City prepares a Municipal Trunk Sewer Capacity Assessment Report, which updates the capacity assessment information by considering new flow trends, changes in the sewer system, and other modifications.

8.2.2 Small Mains Capacity Assessment Program

The City’s small mains, which are pipes 12 inches in diameter or smaller, generally service smaller and fully developed areas; these small mains generally contain excess capacity. The City requires sewers to be a minimum of 8 inches in diameter, mainly for maintenance purposes. Nevertheless, the City has long had procedures in place to assess the capacity of small mains on a selective basis. Two situations which typically trigger assessments are: (1) new development proposals (e.g., sewer planning studies, which are generally performed by consulting engineers for developers) and (2) replacement of concrete mains or other mains determined to be in poor condition or requiring excessive maintenance (e.g., group jobs).

Since 2001, initial capacity assessments of small mains have also been performed in conjunction with the City’s sewer inspection and condition assessment program. Capacity assessments are required to determine the most effective recommendation for each inspected sewer, primarily to determine if rehabilitation by lining the pipes is a

feasible alternative for replacement of pipes in poor condition. Lining is considered feasible if the existing pipe has adequate capacity and velocity. If the capacity or velocity of the existing pipe is not adequate, replacement with a larger or steeper pipe is required. In this case, the pipes will most likely be grouped with other pipes and sometimes water CIP projects in the same area into a “group job.” During the design of group jobs, City staff further assesses capacity and determines appropriate sizes and slopes for the new replacement pipes.

In summary, the initial capacity assessments are part of a screening process to identify pipes suitable for rehabilitation by lining the pipes. This screening process is an important step because rehabilitation projects can be implemented much more quickly and inexpensively than replacement projects, contributing sooner to the City’s goal of reducing sanitary sewer spills.

The small main model uses the same dynamic modeling software and similar approach as the trunk sewer model. Hydraulic computations are performed using the InfoWorks software, as documented in the section of Trunk Sewer Capacity Assessment mentioned above. The key outputs consist of the peak flow, depth, and velocity in each pipe. This data is exported into a spreadsheet for final post-processing and considered during the condition assessment process to determine the feasibility of rehabilitation by lining.

Approximately 90 percent of the small mains have been modeled to date. Additional mains are being modeled on an ongoing basis, corresponding to mains included in various phases of the City’s inspection and condition assessment program. Because all mains in a tributary area must be modeled in one simulation, the number of modeled pipes exceeds that of assessed pipes.

The great majority of small mains have adequate capacity. The pipes considered to have inadequate capacity (i.e., over 50 percent full for a projected flow under the build-out condition) are designated for replacement during the small main assessment process.

The PUD sewer modeling team will continue using the dynamic model to analyze the hydraulic capacity of the sewer system. The PUD will ensure that system capacity is sufficient by continuing the current trunk sewer and small main assessment programs, including collecting flow monitoring data in both dry and wet weather and performing hydraulic modeling analysis for the City’s sewer system.

8.2.3 Rainfall Dependent Infiltration and Inflow Studies

To prevent sanitary sewer spills related to wet weather, the PUD conducts Rainfall Dependent Infiltration and Inflow (RDI/I) studies to identify areas with a tendency of high RDI/I. The PUD performs two types of RDI/I studies:

1. A system-wide RDI/I study that analyzes data collected from the permanent flow monitors, when RDI/I is deemed evident in a rainy season
2. A study that focuses on locating RDI/I sources for previously identified high RDI/I sewer basins by installing ISCO flow monitors on a temporary basis.

Other RDI/I studies, such as smoke testing, are also applied to further narrow down the source of RDI/I when needed. The results of these RDI/I studies are used to assist in the wet weather capacity assessment of the sewerage system and for the RDI/I remedial actions.

Wet Weather Flow Characterization Report

The objective of the Wet Weather Flow Characterization Report (RDI/I Report) is to identify potential sources of RDI/I for the entire Metro Service Area from a macro perspective. This study utilizes data from the City's existing permanent monitors and a computer program, called Sewer Hydrograph Analysis and Peak Evaluation (SHAPE), to determine the RDI/I component of wet weather flow in the wastewater collection system. An advantage of the SHAPE program is being able to separate the groundwater infiltration component from the RDI/I component automatically.

There are two parts in this report. Part I analyzes the RDI/I from the PAs and compares it to each other and to the City. This part also includes the comparison of RDI/I from the three major geographic sewer basins: North Metro, Mission Valley, and South Metro. Part II analyzes the RDI/I from various sewer basins within the City limits.

The latest characterization report is analyzing a storm in April of 2020. The report is scheduled for completion in calendar year 2025. When RDI/I is deemed evident in any given rainy season, the PUD may perform these system-wide studies to monitor the status of RDI/I by analyzing the data collected from the permanent flow monitors. Any City sewer basins with exceptionally high RDI/I identified in this program will be subject to further actions, as described below.

The objective of this study is to identify the potential sources of infiltration and inflow in sewer basins, where high RDI/I were evidenced. The PUD Temporary Flow Monitoring Program was initiated in the summer of 2005 and has continued since. This program is unique in that it employs in-house staff and utilizes City-owned monitors and equipment to achieve the flexibility of tracking down the RDI/I.

Upon identifying the high RDI/I basins, action items are initiated in an attempt to determine the causes of high RDI/I and to minimize potential RDI/I and thus reduce wet weather-related sewer spills. The action items may include the installation of temporary flow monitors in the high RDI/I basins before the next rainy season, flow separation analysis, smoke tests, investigation of potential sewer-storm cross-connections, inspection of maintenance holes, televising certain sewer and storm drain segments, negotiation with upstream discharge agencies, and replacing maintenance hole covers in the remote and low-lying areas.

This Temporary Flow Monitoring Program will be implemented from the results of the April 2020 report. Once the PUD has completed the report, a similar study will be completed for 2023, and then 2024.

Other Infiltration and Inflow Study – Smoke Testing Study

The objective of conducting this kind of study is to pinpoint the exact causes of the RDI/I—particularly for the component of inflows when the high RDI/I basin is narrowed down through the flow separation techniques to a manageable size. Smoke testing is intended to detect potential points of inflow due to direct connections to the sewer, such as storm sewer cross-connections and point source leaks in drainage paths or ponding areas, roof leaders, cellars, yard or area drains, fountain drains, abandoned building sewers, and faulty service connections. The City will continue performing smoke testing

or other effective investigations on an as-needed basis when significant RDI/I is identified in a relatively small basin.

8.2.4 Flow Monitoring Program

As of this date, PUD maintains 162 (153 permanent and 9 rotational) flow monitors in its sewer system to quantify the flows within the City limits and from 15 PAs. These monitors are installed and utilized for multiple purposes including strength-based billing, facility planning, sewer modeling, criticality evaluation, infiltration and inflow (I/I) analysis, and spill detection. The multipurpose utilization of the flow monitors makes the flow monitoring program cost-effective. The monitoring system was initiated in the late 1980s and has been considerably enhanced by adding additional monitors periodically since the program began.

Seventy-seven permanent monitors are located on 67 of the City's 123 trunk sewers (15-inch-diameter or larger) and are utilized in the capacity assessment program. Some trunk sewers are monitored by more than one flow monitor. The 56 remaining unmonitored trunk sewers, mostly smaller in size with less flow, have been periodically monitored with 9 temporary monitors on a rotational basis.

The City's sewer capacity assessment and assurance program and sewer design process depends heavily on quality monitoring data, and the City regularly updates a list of critical trunk sewers through the ongoing flow monitoring program.

8.2.5 Sewer System Vulnerability to Erosive Forces in Canyon and Streams

Effective January 22, 2002, the City adopted Policy No. 400-13, *Planning for Management of Sewer Facilities Located in Canyons and other Environmentally Sensitive Lands*. This policy establishes guidelines for safe and effective access, maintenance, and repair of sewer infrastructure located in canyons and other environmentally sensitive lands, while minimizing impacts to sensitive resources. ECP completes assessments of pipelines located in canyons and streams to determine slope stability and identifies CIP projects that will relocate pipelines where cost is feasible.

In addition, WWC performs trail maintenance in canyons and streams where pipelines are located and will identify areas that have eroded, or pipelines are exposed. Work requests are submitted to ECP and Environmental Monitoring and Technical Services and go through permitting to include erosion control protection such as adding soil and riprap.

8.2.6 Sewer Design Guide

As stated in Section 5 of this SSMP, the City has developed a Sewer Design Guide for compliance by both in-house engineers and consultant engineers. This guide summarizes and outlines relevant City policies and applicable codes, as well as engineering and operational practices and procedures that have been developed to establish a cost-effective, reliable, and safe wastewater collection system. The Sewer Design Guide is available online at: https://www.sandiego.gov/sites/default/files/legacy/mwwd/pdf/sewerdesign.pdf.

The latest guideline updates in 2015 took into consideration designing sewer facilities based on a 10-year return wet weather flow and redirecting sewer flow from the canyons and environmentally sensitive areas.

The Sewer Design Guide focuses on the design of sewer systems, including small pump stations; for major facilities, such as large pump stations, the design criteria are provided in the Clean Water Program (CWP) Guidelines (Volume I through Volume X). The CWP Guidelines are written primarily for facilities related to wastewater treatment and reclamation plants, including large influent pump stations. The CWP Guidelines are available online at: https://www.sandiego.gov/public-utilities/permits-construction/clean-water-program-guide.

The Sewer Design Guide and the CWP Guidelines are updated on an as-needed basis when new design/construction techniques, new regulatory requirements, and/or new materials dictate such an update. A Guideline Committee, consisting of seasoned engineers appointed from the PUD and Development Services Department, is formed to undertake the necessary updates.

REFERENCES FOR FURTHER INFORMATION:

- Clean Water Program Guidelines

8.3 Prioritization of Corrective Action Planning

The City has developed effective risk-based approaches and methodologies to perform condition assessment of wastewater collection system infrastructure and prioritized remediation measures to address risk through monitoring, repairs, and capital improvement planning. Prioritization considers the severity of the consequence of potential spills.

8.3.1 Replacement and Rehabilitation

The City has an effective process for planning rehabilitation and replacement. As a part of this planning process, structural deficiencies are identified and necessary improvements are developed in coordination with hydraulic requirements and implemented systematically. The rehabilitation and replacement planning implementation entails a variety of short- and long-term activities that ensure the sustainability of the sanitary sewer system infrastructure. Repairs are identified by the City's CCTV program and prioritized. If City staff can perform the repair, work orders are created and executed by City crews. Additionally, CCTV data is uploaded to a database where it is incorporated into the Asset Management Planning (AMP) system.

The ECP uses AMP to prioritize and scope small mains projects. AMP allows visibility across O&M of assets. It identifies opportunities to bundle projects across asset types and helps us work in alignment across departments using the same information in the same tool. It provides visibility to the lifecycle of our assets for long-range capital asset planning, risk management, and condition-based prioritization and planning over the lifecycle of City assets.

Condition assessment results are coordinated with the capacity assurance master plans, and a priority list of improvements is identified annually. Condition assessment results and remediation recommendations typically distinguish between repairs, rehabilitation, and rebuilds versus replacement capital improvement projects. Small-diameter gravity sewer mains and other significant capital improvement work for interceptor and trunk sewers, force mains, and pump stations are executed through the ECP. The typical process for execution of these projects is to develop a Business Case Evaluation (BCE). BCEs are prepared by PUD staff for large-diameter pipes (trunk sewers, interceptors), pump stations, and wastewater treatment plants.

8.4 Capital Improvement Plan

The first step needed to establish a short- and long-term CIP to address identified hydraulic deficiencies is to perform capacity assessment for the sewer system, as detailed in Section 8.2 above. Critical, semi-critical, and non-critical trunks are reviewed during capacity analysis. As a conclusion of this review, critical and semi-critical trunk sewers that may experience capacity constraint under a 10-year return peak wet weather flow in the next 10 years are identified and recommended for the detailed modeling study.

The second step is to prepare a detailed modeling study for those hydraulically deficient trunk sewers including field verification. In general, only one trunk sewer is assessed in the detailed modeling study, which includes a further validated and refined model for that particular trunk sewer. The study consists of modeling peak wet weather flows, developing preliminary alternatives to solve the capacity problem (e.g., replacement or relief sewers, flow diversions to other trunk sewers, etc.), and determining the sizes of required new sewers. These findings are incorporated into a subsequent planning report, which further evaluates the alternatives based on costs and other factors and recommends a project for subsequent design and construction. Condition assessments may also result in recommended alternatives, depending on the infrastructure type and complexity.

The recommended alternatives will then be further assessed in the third step, development of a BCE. The BCE is a thorough examination of a facility requirement at its infancy to determine which alternative, if any, is the most cost-effective solution to address the requirement. It validates the need for a solution in terms of customer value. A “Do Nothing” alternative is often added to the BCE to evaluate the risk of doing nothing. If the risk is considered too high compared to the costs (in terms of present value) and benefits of a project over its life-cycle, then the project is validated and presented to the PUD’s Management Team for approval.

Once the BCE is approved by the Management Team, a CIP project is established, and the following steps are followed:

1. Obtain BCE approval.
2. Add project to Sewer Priority List and rank using Council Policy 800-14. CIP are established based on rank.
3. Confirm with finance team that funding is available.

4. Present CIP for approval to a committee (called the CIPRAC [Capital Improvements Program Review and Advisory]) that oversees all CIP. After approval, the project is created.
5. Projects can be added to the budget at the beginning of the fiscal year or mid-year.

Project schedules are established and prioritized based on current and future capacity needs, condition assessment, and potential risks of spill. Project budgets and schedules are routinely reviewed by the responsible Program Management staff, Project Manager, and Project Management Team.

The City's 10-Year Wastewater CIP, reviewed and updated annually, lists capital improvement projects scheduled for implementation during the next 10 years. The project controls group supports development and tracking of the project schedule using Primavera software; all schedules are located on a SharePoint site for viewing. Changes to project schedule and scope are tracked through project charter amendments. The prioritization of these capital improvement projects is reevaluated every year and determined based on the following factors: condition assessment of the infrastructure, future capacity requirements associated with growth, and regulatory requirements.

The City's CIP budget is available at: https://www.sandiego.gov/finance/annual, Volume III Capital Budget.

A list of the CIPs for the City is available online at: https://www.sandiego.gov/cip/projectinfo.

The City website includes a GIS-based interactive map that can be used by the public to identify project locations and construction timeframes. The City uses this mapping software to automatically generate potential project conflict notices (for issues such as a project being identified during a repaving moratorium, for example).

8.4.1 Funding

The City accounts for the operation of its wastewater utility system through an enterprise fund known as the Sewer Revenue Fund, which is managed by PUD. The Sewer Revenue Fund is a self-supporting enterprise fund, meaning the cost of annual wastewater O&M expenses, capital projects, and debt service is met through cash inflows from wastewater rates, capacity fees, miscellaneous revenues, and the proceeds from external debt financing.

Each year, PUD publishes a financial outlook that includes the anticipated expenses, required resources, and planned funding sources for the Wastewater System. Every few years, the City performs a Cost of Service Study to determine the specific utility rates required to fund the financial outlook's corresponding O&M, capital improvements, and other financial obligations. Additional information on the individual Rehabilitation and Replacement Projects is identified and described in the CIP.

Additional information on the CIP development process is available online at: https://www.sandiego.gov/cip/about/budget.

9 Monitoring, Measurement, and Program Modifications

9.1 Maintenance of Information to Prioritize SSMP Activities

The City uses the following databases to capture and maintain the relevant information utilized to establish and prioritize appropriate SSMP activities:

- GIS
- Computerized maintenance management systems including SAP, FEWD software Salesforce, and Compass GIS
- Reports and studies

9.2 Monitoring of SSMP Implementation and Effectiveness

The City 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 preventive maintenance program
- Identify and illustrate sewer spill trends, including frequency, volume, and location

The City's CMMS and sewer spill database contains information used to determine the effectiveness and success of the preventive maintenance activities and allows for historical review of work order history to adjust maintenance and repair priorities. The City performs a failure cause analysis of individual sewer spill events and, based on this review, identifies corrective actions to prevent future sewer spill events.

9.2.1 Performance Monitoring and Program Changes

The City evaluates the performance of its wastewater collection system using the performance measures identified in Table 9-1 and updates SSMP programs, processes, and systems as needed. Sewer spill metrics are used to evaluate performance. The City transitioned to SAP software for tracking many performance metrics and continuously evaluates additional performance metrics maintained by the City.

Table 9-1. Monitoring Summary Table

Program Activities		
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
	Total number of maintenance holes	GIS
Inspection Activities	Miles of system CCTV-ed per year	SAP
	Miles of system cleaned per year	SAP
	Number of FOG control inspections per year	FEWD
Sewer Spill Data		
Type	***Performance Measure***	***Source***
Measures Based on Sewer Spill Number	Number of sewer spills by cause	CIWQS and SAP
	Number of sewer spills per 100 miles of sewer per year	CIWQS and SAP
	Map of sewer spills locations per year	CIWQS and SAP
Measures Based on Sewer Spill Volume	Total volume of sewer spills per year	CIWQS and SAP
	Total sewer spill volume recovered and percentage of overall total sewer spill volume	CIWQS and SAP
	Total volume of sewer spills released (total minus recovered)	CIWQS and SAP

9.3 Assessment of Preventive Maintenance Program

The main indicator of success in the preventive maintenance program is sewer spill performance. Other indicators include production and productivity indicators measuring whether the City is accomplishing the planned maintenance programs. The City's sewer spill database is used with the metrics identified in Table 9-1 to determine the effectiveness and success of the preventive maintenance activities and allows for historical review of work order history to adjust maintenance and repair priorities.

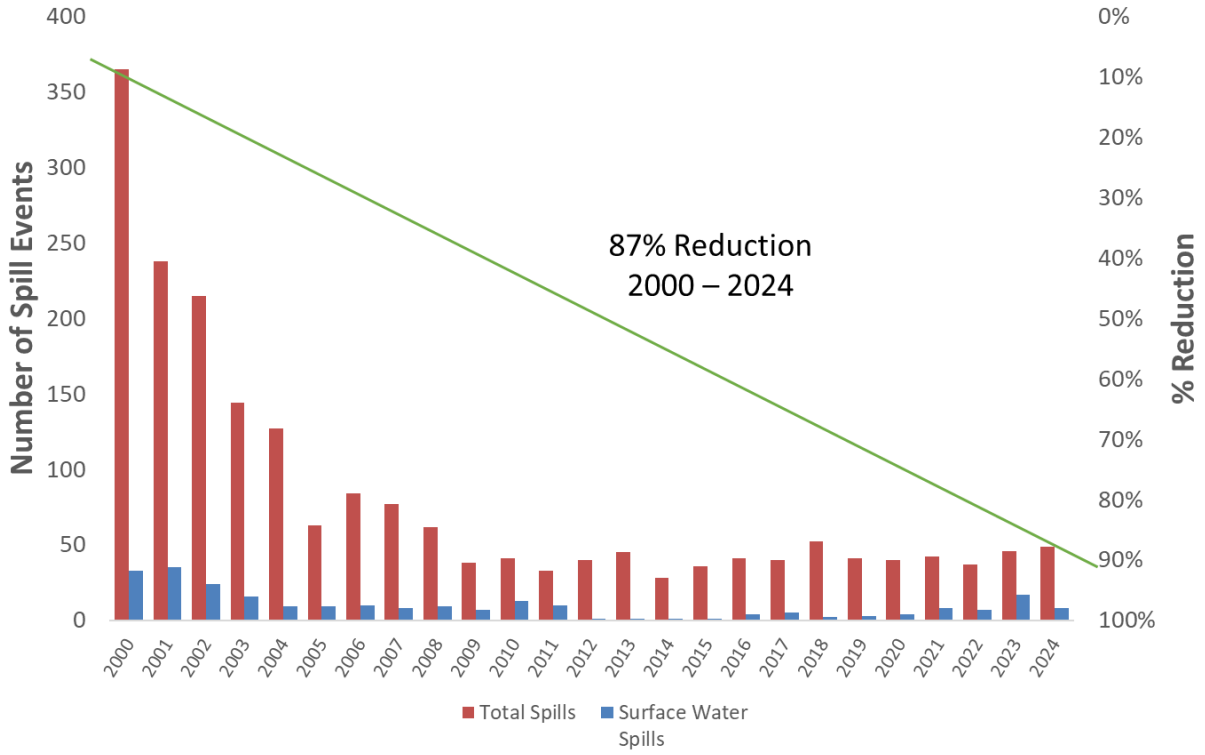
The City's preventive maintenance program has resulted in a significant decline in preventive maintenance-related sewer spills since 1997 and has maintained a sewer spill rate of less than 1.6 sewer spills per 100 miles of sewer pipelines per year since 2009.

9.4 Identification and Illustration of Spill Trends

The City is continually tracking and communicating the performance of various sewer spill metrics identified in Table 9-1, such as sewer spill count, sewer spill cause, sewer

spill volume, sewer spill location, and sewer spills reaching surface waters. The SERP, described in Section 6 and included as Attachment 5, includes example sewer spill reports and maps the City tracks. Sewer spill performance is posted on the walls in highly visible areas of both operations yards. Sewer spill performance is also reported to the City's Independent Rates Oversight Committee (IROC) on a quarterly basis. Figure 9-1 is an example of some of the analyses the City performs routinely to identify spill trends and, in this case, shows the City's overall spill reduction rate of 87 percent from 2000 to 2024.

Figure 9-1. Analysis of Spill Performance



9.5 Approach to Program Modifications and Plan Updates

Program elements are updated as appropriate based on monitoring or performance evaluations. The main drivers of updates to SSMP program elements are program issues or opportunities identified through the following performance evaluation processes:

- Program issues identified as a result of sewer spill root cause analysis
- Program issues or opportunities identified through the course of the year and planned into the annual budgeting process
- Program issues or opportunities identified during the SSMP program audit

Program updates based on monitoring system performance include the development of an accelerated inspection and maintenance program for maintenance holes to proactively mitigate sewer spills based on a review of sewer spill causes and maintenance hole data. The City is piloting the use of new force main air release valve

technology that is less likely to fail and cause sewer spills based on review of sewer spill causes and maintenance data.

As described in Section 4.2.1, the City has implemented a sewer maintenance optimization risk model to assess the relative risk of each sewer pipe segment based on numerous factors. The risk model quantifies relative risk on a scale of zero (lowest risk) to 100 (highest risk), adjusts cleaning frequencies for each pipe segment accordingly, and then groups them by maintenance zones.

The City is installing composite maintenance hole frames and covers to reduce inflow and infiltration. Additionally, the City plans to expand the amount of flow level sensors throughout the system based on established placement criteria.

10 SSMP Program Audits

The City uses the SSMP audit process to identify actions for improving how it manages, operates, and maintains the collection system. This process identifies the tasks and actions required to meet SSMP goals and defines and prioritizes them.

10.1 Schedule of Program Audits and Updates

The City monitors the performance of the collection system on an ongoing basis through monthly performance reviews performed at the operating unit level, and annually during division-level business planning and goal setting and the annual business plan review. It also performs a formal audit of its SSMP every 3 years in accordance with General Order requirements. Every 6 years, the City formally updates and recertifies the SSMP. Table 10-1 shows the anticipated schedule for SSMP audits and updates for the next 6 years.

Table 10-1. SSMP Audit and Update Schedule

Year	Audit
2025	Six-year SSMP update planned in early 2025, complete by May 2, 2025.
2027	Three-year self-audit planned in early 2027, complete by November 2, 2027.
2030	Three-year self-audit planned in early 2030, complete by November 2, 2030.
2031	Six-year SSMP update planned in early 2031, complete by May 2, 2031.

10.2 SSMP Program Audits

The City updated the approach to performing SSMP Program Audits in November 2017. Prior to 2017, the City performed SSMP Program Audits in conjunction with the annual reporting required for EPA Consent Decree compliance. The last Consent Decree annual report was submitted in February 2014. Between 2014 and early 2017, the City did not conduct an SSMP Program Audit. The City now performs SSMP Program Audits using a cross-functional internal audit team, and SSMP Program Audits will be performed every 3 years instead of annually.

The SSMP Program Audit evaluates the effectiveness of the SSMP Program implementation and determines whether the SSMP meets the current requirements of the General Order, whether the SSMP reflects the City's current practices, and whether the City is following the SSMP. The audit report is used to identify program deficiencies and the associated corrective actions recommended to increase the effectiveness of the SSMP program implementation. The audit is conducted by a team consisting of trained City staff; at the City's discretion, a consultant may be retained to perform all or part of the audit process in cooperation with City staff. The results of the audit are included in the SSMP Audit Report. The most recent audit was conducted in September 2024 and finalized in November 2024.

The LRO designates a General Order Subject Matter Expert (SME) responsible for managing the SSMP Program Audit. The General Order SME, currently an associate civil engineer in WWC, is responsible for identifying and notifying all staff that will form the Audit Team. The General Order SME either leads the Audit Team, designates an Audit Lead, or is responsible for acquiring third party support to lead or support the audit. The Audit Team reviews the findings of previous audits, conducts interviews and reviews data to audit the current program, and develops an audit report to document the effectiveness of the current SSMP program implementation, any identified deficiencies and associated corrective actions, and other findings and opportunities for improvement.

10.3 SSMP Audit Report

The findings from the SSMP audit are documented in an audit report, which includes the following elements:

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

Once the audit report is complete, a QC review of the audit report is performed, with a focus on consistency and completeness. The final audit report is reviewed by the City's LRO before final acceptance.

10.4 Audit Implementation and Tracking of Results

Once the SSMP Program Audit is complete, the City will review the audit findings and assign a City staff member (Task Owner) responsible for reviewing each of the deficiencies or findings from the audit, performing additional inquiry if necessary, and determining an updated course of action if there is any disagreement with the recommended corrective action. The Task Owner will also provide the General Order SME with a timetable for implementing the corrective action and any updates to the SSMP.

11 Communication Program

The City employs a variety of means for communicating with the public and contract agencies on the development, implementation, and update of the SSMP. The following sections describe the City's procedures for:

- Communicating with the public for spills and discharges resulting in closures of public areas, or that enter a source of drinking water
- Communicating with the public on the development, implementation, and update of its SSMP, including opportunities for public input to plan implementation and updates
- Owners/operators of systems that connect into the Enrollee's system, including tributary systems, for system operation, maintenance, and capital improvement-related activities

11.1 Procedures to Communicate with Public for Spills and Discharges

The City's procedures for spill emergency response are included in Attachment 5. These procedures provide instructions for communicating with the public when spills result in closure of public areas or enter a source of drinking water. These procedures include the following.

Communication with Regulatory and Health Agency Notifications (SERP Sanitary Sewer Spill and Backup Response Workbook: B-1 Regulatory Reporting Guide)

The City will notify the California Office of Emergency Services and obtain a notification control number within 2 hours of becoming aware of any Category 1 Sewer Spill greater than or equal to 1,000 gallons discharge to surface water or spilled in a location where it probably will be discharged to surface water.

The City will notify the San Diego County Department of Environmental Health (DEH) if there is a discharge of sewage from the public sanitary sewer collection system of the City, which enters a surface water body of water such as the Pacific Ocean, bay, river, lake, stream, creek, or domestic water supply where there is a potential for human contact as defined by the County DEH.

Communication with Public on Beach and Other Public Area Closures

Warning signs shall be posted in the vicinity of any water body that is suspected of being contaminated by sewage as determined by the County DEH. This will be done as soon as practicable following the initial response to the sewer spill. Signs should be posted on either side of the point of entry where sewage entered the body of water and the nearest public access point to that body of water. A minimum of 7 signs, placed 50 feet apart, will be posted. Contamination signs shall be double-sided so they are plainly visible.

If City lifeguards are present, they shall be notified immediately to assist in warning bathers. If there are no on-duty lifeguards, the employees or crew shall attempt to gain the attention of the bathers to make them aware of the spill.

The Duty Supervisor shall direct field crews to place additional warning signs when requested by the DEH. Field crews posting warning signs will notify the Station 38 operator when the warning signs have been posted.

Sewer Pump Station Patrol Units shall inspect posted warning signs twice daily from April through October, and once daily from November through March. Any missing warning signs shall be replaced. Warning signs shall not be removed except at the direction of DEH.

The following provisions shall apply to posting and removing warning signs around Mission Bay:

- The DEH will notify City lifeguards of sewage closures or openings of Mission Bay
- City lifeguards will notify:
    - The WWC Division to post, inspect, and remove warning signs due to sewage-related closures of Mission Bay
    - Mission Bay lessees and other interested parties

11.2 Procedures for General Communication with the Public Regarding the SSMP

The City is continually communicating with the public regarding the development, implementation, and performance of its SSMP through the means of communication included in Table 11-1 below.

In addition to the means of communication presented in Table 11-1, the City also participates in numerous public outreach activities to communicate the importance of FOG source control, as described in Section 7.

11.3 Procedures to Communicate with Satellite Public Sewer Systems

The PUD communicates on a monthly basis with its satellite collection system agencies through the Metropolitan Wastewater Joint Powers Authority Technical Advisory Committee (Metro TAC) meetings. Metro TAC meetings are open to the public and cover issues impacting the Metro System, which conveys sewage flow discharged by municipalities and special districts into the City's regional wastewater facilities. The City has a standing item on the Metro TAC agenda to provide a Metro Wastewater Update to communicate and discuss any regional issues impacting SSMP Program effectiveness and performance.

Table 11-1. Means of Communication with the Public on the Development, Implementation, and Performance of the SSMP

Means for Public Communication	Description
Sewer Spill Reduction Program Web Page	The PUD maintains current information on the City's website (https://www.sandiego.gov/public-utilities/sewer-spill-reduction/sewer-spill-statistics) and regularly submits billing insert information with the City's water/sewer billing processes. The PUD also provides contact information to the public for reporting any issues regarding sewer system management (https://www.sandiego.gov/public-utilities/sewer-spill-reduction).
Independent Rate Oversight Committee	The PUD communicates ongoing development and implementation of SSMP processes through the City's Independent Rate Oversight Committee (IROC). The PUD provides regular quarterly updates on the performance of its SSMP through informational presentations to IROC and/or its sub-committees.
Communications Department	The City's Communications Department works on PUD's behalf to routinely communicate department information to both its external stakeholders and internal audiences within the City organization.
City Council and Council Committee Meetings	The PUD regularly communicates with the public on the development, implementation, and performance of the SSMP through its participation in regular City Council and Council Committee meetings, regular and ad hoc City of San Diego citizens committees, and regular individual citizen communications. The PUD presents the SSMP for City Council approval in a public meeting and provides the document for public review and comment prior to the meeting.

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Attachment 1. SWRCB Order WQ 2022-0103-DWQ

STATE WATER RESOURCES CONTROL BOARD
1001 I Street, Sacramento, California 95814
ORDER WQ 2022-0103-DWQ

STATEWIDE WASTE DISCHARGE REQUIREMENTS

GENERAL ORDER FOR SANITARY SEWER SYSTEMS

This Order was adopted by the State Water Resources Control Board on December 6, 2022.
This Order shall become effective **180 days after the Adoption Date of this General Order,** on June 5, 2023. The Enrollee shall comply with the requirements of this Order upon the Effective Date of this General Order.

This General Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, protect the Enrollee from liability under federal, state, or local laws, nor create a vested right for the Enrollee to continue the discharge of waste.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on December 6, 2022.

AYE:	Chair E. Joaquin Esquivel Vice Chair Dorene D'Adamo Board Member Sean Maguire Board Member Laurel Firestone Board Member Nichole Morgan
NAY:	None
ABSENT:	None
ABSTAIN:	None

Courtney Tyler for
Jeanine Townsend
Clerk to the Board

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Table of Attachments

1. INTRODUCTION

This General Order regulates sanitary sewer systems designed to convey sewage. For the purpose of this Order, a sanitary sewer system includes, but is not limited to, pipes, valves, pump stations, manholes, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks. A sanitary sewer system includes:

- 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.

Sewage 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. Sewage contains high levels of suspended solids, non-digested organic waste, pathogenic bacteria, viruses, toxic pollutants, nutrients, oxygen-demanding organic compounds, oils, grease, pharmaceuticals, and other harmful pollutants.

For the purpose of this General Order, 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. Sewage and its associated wastewater spilled from a sanitary sewer system may threaten public health, beneficial uses of waters of the State, and the environment.

This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of this General Order are enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). Through this General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States;
- Comply with specifications, and notification, monitoring, reporting and recordkeeping requirements in this General Order that implement the federal Clean Water Act, the California Water Code (Water Code), water quality control plans (including Regional Water Board Basin Plans) and policies;
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills;
- Eliminate discharges of sewage to waters of the State through effective implementation of a Sewer System Management Plan;
- Monitor, track, and analyze spills for ongoing system-specific performance improvements; and
- Report noncompliance with this General Order per reporting requirements.

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 (1) mile or less in length where the State Water Board or a Regional Water 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 Board or a Regional Water Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

For the purpose of this Order, a sanitary sewer system includes only systems owned and/or operated by the Enrollee.

2. REGULATORY COVERAGE AND APPLICATION REQUIREMENTS

2.1. Requirements for Continuation of Existing Regulatory Coverage

To continue regulatory coverage from previous Order 2006-0003-DWQ under this General Order, **within the 60-days-prior-to the Effective Date of this General Order**, the Legally Responsible Official of an existing Enrollee shall electronically certify the Continuation of Existing Regulatory Coverage form in the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database. The Legally Responsible Official will receive an automated CIWQS-issued Notice of Applicability email, confirming continuation of regulatory coverage under this General Order. All regulatory coverage under previous Order 2006-0003-DWQ will cease on the Effective Date of this Order.

An Enrollee continuing existing regulatory coverage is not required to submit a new application package or pay an application fee for enrollment under this General Order. The annual fee due date for continued regulatory coverage from previous Order 2006-0003-DWQ to this General Order remains unchanged.

A previous Enrollee of Order 2006-0003-DWQ that fails to certify the Continuation of Existing Regulatory Coverage form in the online CIWQS database by the Effective Date of this Order is considered a New Applicant, and will not have regulatory coverage for its sanitary sewer system(s) until:

- A new application package for system(s) enrollment is submitted per section 2.2 (Requirements for New Regulatory Coverage) below; and
- The new application package is approved per section 2.2.2 (Approval of Application Package (For New Applicants Only)).

2.2. Requirements for New Regulatory Coverage

No later than 60 days prior to commencing and/or assuming operation and maintenance responsibilities of a sanitary sewer system, a duly authorized representative that

maintains legal authority over the public or private sanitary sewer system is required to enroll under this General Order by submitting a complete application package as specified below and as provided in Attachment B (Application for Enrollment Form) of this General Order.

Unless required by a Regional Water Board, a public agency that owns a combined sewer system subject to the Combined Sewer Overflow Control Policy (33 U.S. Code § 1342(q)), is not required to enroll, under this Order, the portions of its sanitary sewer system(s) that collects combined sanitary wastewater and stormwater.

2.2.1. Application Package Requirements

The Application for Enrollment package for new applicants must include the following items:

- **Application for Enrollment Form**. The form in Attachment B of this General Order must be completed, signed, and certified by a Legally Responsible Official, in accordance with section 5.1 (Designation of a Legally Responsible Official) of this General Order. If an electronic Application for Enrollment form is available at the time of application, a new applicant shall submit its application form electronically; and
- **Application Fee**. A fee payable to the "State Water Resources Control Board" in accordance with the Fee Schedule in the California Code of Regulations, Title 23, section 2200, or subsequent fee regulations updates.

  The application fee for this General Order is based on the sanitary sewer system's threat to water quality and complexity designations of category 2C or 3C, which is assigned based on the population served by the system. The current Fee Schedule for sanitary sewer systems is listed under subdivision (a)(2) at the following website: Fee Schedule (https://www.waterboards.ca.gov/resources/fees/water_quality/).

2.2.2. Approval of Application Package (For New Applicants Only)

The Deputy Director of the State Water Board, Division of Water Quality (Deputy Director) will consider approval of each complete Application for Enrollment package. The Deputy Director will issue a Notice of Applicability letter which serves as approved regulatory coverage for the new Enrollee.

If the submitted application package is not complete in accordance with section 2.2.1 (Application Package Requirements) of this General Order, the Deputy Director will send a response letter to the applicant outlining the application deficiencies. The applicant will have 60 days from the date of the response letter to correct the application deficiencies and submit the identified items necessary to complete the application package to the State Water Board.

2.2.3. Electronic Reporting Account for New Enrollee

Within 30 days after the date of the Approval of Complete Application Package for System Enrollment, a duly authorized representative for the Enrollee shall obtain a CIWQS Sanitary Sewer System Database user account by clicking the "User Registration" button and following the directions on the CIWQS Login Page

(https://ciwqs.waterboards.ca.gov). If additional assistance is needed to establish an online CIWQS user account, contact State Water Board staff by email at CIWQS@waterboards.ca.gov. The online user account will provide the Enrollee secure access to the online CIWQS database for electronic reporting.

2.3. Regulatory Coverage Transfer

Regulatory coverage under this General Order is not transferable to any person or party except after an existing Enrollee submits a written request for a regulatory coverage transfer to the Deputy Director, at least 60 days in advance of any proposed system ownership transfer. The written request must include a written agreement between the existing Enrollee and the new Enrollee containing:

- Acknowledgement that the transfer of ownership is solely of an existing system with an existing waste discharge identification (WDID) number;
- The specific ownership transfer date in which the responsibility and regulatory coverage transfer between the existing Enrollee and the new Enrollee becomes effective; and
- Acknowledgement that the existing Enrollee is liable for violations occurring up to the ownership transfer date and that the new Enrollee is liable for violations occurring on and after the ownership transfer date.

The Deputy Director will consider approval of the written request. If approved, the Deputy Director will issue a Notice of Applicability letter which serves as an approved transfer of regulatory coverage to the new Enrollee.

3. FINDINGS

3.1. Legal Authorities

3.1.1. Federal and State Regulatory Authority

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States (33 U.S.C. 1251). The Water Code authorizes the State Water Board to implement the Clean Water Act in the State and to protect the quality of all waters of the State (Water Code sections 13000 and 13160).

3.1.2. Discharge of Sewage

A discharge of untreated or partially treated sewage is a discharge of waste as defined in Water Code section 13050(d) that could affect the quality of waters of the State and is subject to regulation by waste discharge requirements issued pursuant to Water Code section 13263 and Chapter 9, Division 3, Title 23 of the California Code of Regulations. A discharge of sewage may pollute and alter the quality of the waters of the State to a degree that unreasonably affects the beneficial uses of the receiving water body or facilities that serve those beneficial uses (Water Code section 13050(l)(1)).

3.1.3 Water Boards Authority to Require Technical Reports, Monitoring, and Reporting

Water Code sections 13267 and 13383 authorize the Regional Water Boards and the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Water Code section 13267(b), authorizes the Regional Water Boards to "require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region… or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires…In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports." Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

The technical and monitoring reports required by this General Order and Attachment E (Notification, Monitoring, Reporting and Recordkeeping Requirements) are necessary to evaluate and ensure compliance with this General Order. The effort to develop required technical reports will vary depending on the system size and complexity and the needs of the specific technical report. The burden and cost of these reports are reasonable and consistent with the interest of the state in protecting water quality, which is the primary purpose of requiring the reports.

Water Code section 13383(a) authorizes the Water Boards to "establish monitoring, inspection, entry, reporting, and recordkeeping requirements… for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge." Section 13383(b) continues, "the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required."

Reporting of spills from privately owned sewer laterals and systems pursuant to section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) of this General Order is authorized by Water Code section 13225(c) and encouraged by the State Water Board, wherein a local agency may investigate and report on any technical factors involved in water quality control provided the burden including costs of such reports bears a reasonable relationship to the need for the report and the benefits to be obtained therefrom. The burden of reporting private spills under section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) is minimal and is outweighed by the benefit of providing Regional Water Boards an opportunity to respond to these spills

when an Enrollee, which in many cases has a contractual relationship with the owner of the private system, has knowledge of the spills.

3.1.4. Water Board Authority to Prescribe General Waste Discharge Requirements

Water Code section 13263(i) provides that the State Water Board may prescribe general waste discharge requirements for a category of discharges if the State Water Board finds or determines that:

- The discharges are produced by the same or similar operations;
- The discharges involve the same or similar types of waste;
- The discharges require the same or similar treatment standards; and
- The discharges are more appropriately regulated under general waste discharge requirements than individual waste discharge requirements.

Since 2006, the State Water Board has been regulating over 1,100 publicly owned sanitary sewer systems (See section 3.1.5 (Previous Statewide General Waste Discharge Requirements) of this General Order). California also has a large unknown number of unregulated privately owned sanitary sewer systems. All waste conveyed in publicly owned and privately owned sanitary sewer systems (as defined in this General Order) is comprised of untreated or partially treated domestic waste and/or industrial waste. Generally, sanitary sewer systems are designed and operated to convey waste by gravity or under pressure; system-specific design elements and system-specific operations do not change the common nature of the waste, the common threat to public health, or the common impacts on water quality. Spills of waste from a sanitary sewer system prior to reaching the ultimate downstream treatment facility are unauthorized and enforceable by the State Water Board and/or a Regional Water Board. Therefore, spills from sanitary sewer systems are more appropriately regulated under general waste discharge requirements.

As specified in Water Code sections 13263(a) and 13241, the implementation of requirements set forth in this Order is for the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each Regional Water Board and take into account the environmental characteristics of sewer service areas and hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality, costs associated with compliance with these requirements, the need for developing housing within California, and the need to protect sources of drinking water and other water supplies.

3.1.5. Previous Statewide General Waste Discharge Requirements

On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ serving as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260) for inadvertent discharges to waters of the State. Order 2006-0003-DWQ prohibited discharges of untreated or partially treated sewage. Order 2006-0003-DWQ also required system-specific management, operation, and maintenance of publicly owned sewer systems greater than one mile in length.

To decrease the impacts on human health and the environment caused by sewage spills, the previous Order required enrollees to develop a rehabilitation and replacement plan that identifies system deficiencies and prioritizes short-term and long-term rehabilitation actions. The previous Order also required enrollees to:

1. Maintain information that can be used to establish and prioritize appropriate Sewer System Management Plan activities; and
2. Implement a proactive approach to reduce spills.

The previous Order required Sewer System Management Plan elements for "the proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management."

On July 30, 2013, the State Water Board amended General Order 2006-0003-DWQ with Order WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Many enrollees of Order 2006-0003-DWQ have already implemented proactive measures to reduce sewage spills. Other enrollees, however, still need technical assistance and funding to improve sanitary sewer system operation and maintenance for the reduction of sewage spills.

3.1.6. Existing Memorandum of Agreement with California Water Environment Association

The California Water Environment Association is a nonprofit organization dedicated to providing water industry certifications, training, and networking opportunities. The Association's Technical Certification Program provides accredited sanitary sewer system operator certification for collection system operators and maintenance workers.

On February 10, 2016, the State Water Board entered into a collaborative agreement with the Association titled *Memorandum of Agreement Between the California State Water Resources Control Board and the California Water Environment Association - Training Regarding Requirements Set Forth in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The Memorandum sets forth collaborative training necessary for regulated sanitary sewer system personnel to operate and maintain a well operating system and ensure full compliance with statewide sewer system regulations.

On March 15, 2018, the State Water Board and the California Water Environment Association amended the existing Memorandum of Agreement to include collaborative outreach and expand training needs associated with further updates to Water Board regulations for sanitary sewer systems. The State Water Board encourages further Agreement updates as necessary to support improved sewer system operations and the professionalism of collection system operators.

3.2. General

3.2.1. Waters of the State

Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

3.2.2. Sanitary Sewer System Spill Threats to Public Health and Beneficial Uses

Sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Sewage spills may cause a public nuisance, particularly when sewage is discharged to areas with high public exposure such as streets and surface waters used for drinking, irrigation, fishing, recreation, or other public consumption or contact uses.

More specifically, sanitary sewer spills may:

- Adversely affect aquatic life and/or threaten water quality when reaching receiving waters;
- Inadvertently release trash, including plastics;
- Impair the recreational use and aesthetic enjoyment of surface waters by polluting surface water or groundwater;
- Threaten public health through direct public exposure to bacteria, viruses, intestinal parasites, and other microorganisms that can cause serious illness such as gastroenteritis, hepatitis, cryptosporidiosis, and giardiasis;
- Negatively impact ecological receptors and biota within surface waters; and
- Cause nuisance including odors, closure of beaches and recreational areas, and property damage.

Sanitary sewer system spills may pollute receiving waters and threaten beneficial uses of surface water and groundwater. Potentially threatened beneficial uses include, but are not limited to the following (with associated acronym representations as included in statewide water quality control plans and Regional Water Boards' Basin Plans):

- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2)
- Cold Freshwater Habitat (COLD)
- Warm Freshwater Habitat (WARM)
- Native American Culture (CUL)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Wetland Habitat (WET)
- Agricultural Supply (AGR)
- Estuarine Habitat (EST)

- Commercial and Sport Fishing (COMM)
- Subsistence Fishing (SUB)
- Tribal Tradition and Culture (CUL)
- Tribal Subsistence Fishing (T-SUB)
- Aquaculture (AQUA)
- Marine Habitat (MAR)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Navigation (NAV)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Water Quality Enhancement (WQE)
- Fresh Water Replenishment (FRSH)
- Groundwater Recharge (GWR)
- Inland Saline Water Habitat (SAL)

3.2.3. Proactive Sanitary Sewer System Management to Eliminate Spill Causes

Finding 3 of the previous Order, 2006-0003-DWQ, states: “Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO [sanitary sewer overflow]. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.”

Many spills are preventable through proactive attention on sanitary sewer system management using the best practices and technologies available to address major causes of spills, including but not limited to:

- Blockages from sources including but not limited to:
  - Fats, oils and grease;
  - Tree roots;
  - Rags, wipes and other paper, cloth and plastic products; and
  - Sediment and debris.
- Sewer system damage and exceedance of sewer system hydraulic capacity from identified system-specific environmental, and climate-change impacts, including but not limited to:

- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence.

- Infrastructure deficiencies and failures, including but not limited to:
  - Pump station mechanical failures;
  - System age;
  - Construction material failures;
  - Manhole cover failures;
  - Structural failures; and
  - Lack of proper operation and maintenance.
- Insufficient system capacity (temporary or sustained), due to factors including but not limited to:
  - Excessive and/or increased storm or groundwater inflow/infiltration;
  - Insufficient capacity due to population increase and/or new connections from industrial, commercial and other system users; and
  - Stormwater capture projects utilizing a sanitary sewer system to convey stormwater to treatment facilities for reuse.
- Community impacts, including but not limited to:
  - Power outages;
  - Vandalism; and
  - Contractor-caused or other third party-caused damages.

3.2.4. Underground Sanitary Sewer System Leakage

Portions of some sanitary sewer systems may leak, causing underground exfiltration (exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.

Underground exfiltrated sewage may threaten beneficial uses if discharged to waters of the State. Exfiltrated sewage that discharges to groundwater may impact beneficial uses of groundwater and pollute groundwater supply. Additionally, if in close proximity, exfiltrated sewage may enter into a compromised underground drainage conveyance system that discharges into a water of the United States, or into groundwater that is hydrologically connected to (feeds into) a water of the United States, thus potentially causing: (1) a Clean Water Act violation, (2) threat and impact to beneficial uses, and/or (3) surface water pollution.

3.2.5. Proactive Sanitary Sewer System Management to Reduce Inflow and Infiltration

Excessive inflow (stormwater entering) and infiltration (groundwater seepage entering) to sanitary sewer systems is preventable through proactive sewer system management using the best practices and technologies available. The efficiency of the downstream wastewater treatment processes is dependent on the performance of the sanitary sewer system. When the structural integrity of a sanitary sewer system deteriorates, high volumes of inflow and infiltration can enter the sewer system. High levels of inflow and infiltration increase the hydraulic load on the downstream treatment plant, which can reduce treatment efficiency, lead to bypassing a portion of the treatment process, cause illegal discharge of partially treated effluent, or in extreme situations make biological treatment facilities inoperable (e.g., wash out the biological organisms that treat the waste).

3.3. Water Quality Control Plans, Policies and Resolutions

The nine Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. The State Water Board has adopted statewide water quality control plans, policies and resolutions establishing statewide water quality objectives, implementation programs and initiatives.

3.3.1. State Water Board Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution 68-16, titled Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

The continued prohibition of sewage discharges from sanitary sewer systems into waters of the State aligns with Resolution 68-16. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.

3.3.2. State Water Board Sources of Drinking Water Policy

On May 19,1988, the State Water Board adopted Resolution 88-63 (amended on February 1, 2006), titled Sources of Drinking Water, establishing state policy that all waters of the State, with certain exceptions, are suitable or potentially suitable for municipal or domestic supply.

3.3.3. State Water Board Cost of Compliance Resolution

On September 24, 2013, the State Water Board adopted Resolution 2013-0029, titled Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of

Compliance While Maintaining Water Quality Protection. Through this resolution, the State Water Board committed to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance with regulatory orders while maintaining water quality protection and improving regulatory program outcomes.

3.3.4. State Water Board Human Right to Water Resolution

On February 16, 2016, the State Water Board adopted Resolution 2016-0010, titled Adopting the Human Right to Water as a Core Value and Directing its Implementation in Water Board Programs and Activities, addressing the human right to water as a core value and directing Water Board programs to implement requirements to support safe drinking water for all Californians.

On November 16, 2021, the State Water Board adopted Resolution 2021-0050 titled Condemning Racism, Xenophobia, Bigotry, and Racial Injustice, and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-racism. Among other actions, through Resolution 2021-0050, the State Water Board, in summary as corresponding to this General Order, reaffirms its commitment to its Human Right to Water resolution, upholding that every human being in California deserves safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes. Resolution 2021-0050 provides the State Water Board commitment to:

- Protect public health and beneficial uses of waterbodies in all communities, including communities disproportionately burdened by wastes discharge of waste to land and surface water;
- Restore impaired surface waterbodies and degraded aquifers; and
- Promote multi-benefit water quality projects.

Through Resolution 2021-0050, the State Water Board also commits to expanding implementation of its Climate Change Resolution to address the disproportionate effects of extreme hydrologic conditions and sea-level rise on Black, Indigenous, and people of color communities, prioritizing:

- The right to safe, clean, affordable, and accessible drinking water and sanitation;
- Sustainable management and protection of local groundwater resources;
- Healthy watersheds; and
- Access to surface waterbodies that support subsistence fishing.

On June 7, 2022, the State Water Board adopted a Resolution, titled Authorizing the Executive Director or Designee to Enter into One or More Multi-Year Contracts Up to a Combined Sum of $4,000,000 for a Statewide Wastewater Needs Assessment, supporting the equitable access to sanitation for all Californians and implementation of Resolutions 2016-0010 and 2021-0050.

This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer systems. Data reported per the requirements of this Order will be used with data from other Water Boards' programs, to further develop criteria and create a statewide risk

framework to prioritize critical funding and infrastructure investments for California's most vulnerable populations, including disadvantaged or severely disadvantaged communities with inadequate or failing sanitation systems and threatened access to healthy drinking water supplies.

3.3.5. State Water Board Open Data Resolution

On July 10, 2018, the State Water Board adopted Resolution 2018-0032, titled Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, directing regulatory programs to assure all monitoring and reporting requirements support the State Water Boards' Open Data Initiative.

3.3.6. State Water Board Response to Climate Change

On March 7, 2017, the State Water Board adopted Resolution 2017-0012, titled Comprehensive Response to Climate Change, requiring a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

3.4. California Environmental Quality Act

The adoption of this Order is an action to reissue general waste discharge requirements that is exempt from the California Environmental Quality Act (Public Resources Code section 21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment (Cal. Code Regs., Title 14, section 15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., Title 14, section 15301, to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in sections 15301 and 15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders

The State Water Board, Division of Financial Assistance administers the implementation of the State Water Board financial assistance programs, per Board-adopted funding policies. Among other funding areas, the Division administers loan and grant funding for the planning and construction of wastewater and water recycling facilities per funding program-specific policies and guidelines. Applicants may apply for Clean Water State Revolving Fund low-interest loan, Small Community Wastewater grant funding assistance, and other funding available at the time of application, for some of the costs associated with complying with this General Order.

Funding applicants may obtain further information regarding current funding opportunities, and Division of Financial Assistance staff contact information at the following website: Financial Assistance Funding - Grants and Loans | California State Water Resources Control Board.
(https://www.waterboards.ca.gov/water_issues/programs/grants_loans/)

Section 13477.6 of the Water Code authorizes the Small Community Grant Fund. The Small Community Grant Fund allows the State Water Board to provide grant funding assistance to small, disadvantaged communities and small severely disadvantaged communities that may not otherwise be able to afford a loan or similar financing for projects to comply with requirements of this General Order. The State Water Board also considers loan forgiveness on a disadvantaged community-specific basis.

For disadvantaged communities' wastewater needs, the State Water Board places priority on the funding of projects that address:

- Public health;
- Violations of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits;
- Providing sewer system service to existing septic tank owners; and
- High priority public health and water quality concerns identified by a Regional Water Board.

3.6. Notification to Interested Parties

On January 31, 2022, the State Water Board notified interested parties and persons of its intent to reissue Sanitary Sewer Systems General Order 2006-0003-DWQ by issuing a draft General Order for a 60-day public comment period. State Water Board staff conducted extensive stakeholder outreach and encouraged public participation in the adoption process for this General Order. On March 15, 2022, the State Water Board held a public meeting to hear and consider oral public comments. The State Water Board considered all public comments prior to adopting this General Order.

THEREFORE, IT IS HEREBY ORDERED, that pursuant to Water Code sections 13263, 13267, and 13383 this General Order supersedes Order 2006-0003-DWQ, Order WQ 2013-0058-EXEC, and any amendments made to these Orders thereafter, except for enforcement purposes and to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Enrollee shall comply with the requirements in this Order.

4. PROHIBITIONS

4.1 Discharge of Sewage from a Sanitary Sewer System

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

4.2. Discharge of Sewage to Waters of the State

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

4.3. Discharge of Sewage Creating a Nuisance

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

5. SPECIFICATIONS

5.1. Designation of a Legally Responsible Official

The Enrollee shall designate a Legally Responsible Official that has authority to ensure the enrolled sanitary sewer system(s) complies with this Order, and is authorized to serve as a duly authorized representative. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system, and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The Legally Responsible Official must have or have direct authority over individuals that:

- Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training and experience.

For example, a sewer system superintendent or manager, an operations manager, a public utilities manager or director, or a district engineer may be designated as a Legally Responsible Official.

The Legally Responsible Official shall complete the electronic CIWQS "User Registration" form (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp). A Legally Responsible Official that represents multiple enrolled systems shall complete the electronic CIWQS "User Registration" form for each system.

The Enrollee shall submit any change to its Legally Responsible Official, and/or change in contact information, to the State Water Board within 30 calendar days of the change by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.2. Sewer System Management Plan Development and Implementation

To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the

prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies.

For an existing Enrollee under Order 2006-0003-DWQ that has certified its Continuation of Existing Regulatory Coverage, per section 2.1 (Requirements for Continuation of Existing Regulatory Coverage) of this General Order:

Within six (6) months of the Adoption Date of this General Order:

- The Legally Responsible Official shall upload the Enrollee's existing Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

For a new Enrollee:

Within twelve (12) months of the Application for Enrollment approval date:

- The governing entity of the new Enrollee shall approve its Sewer System Management Plan; and
- The Legally Responsible Official shall certify and upload its Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

5.3. Certification of Sewer System Management Plan and Plan Updates

The Legally Responsible Official shall certify and upload its Sewer System Management Plan and all subsequent updates to the online CIWQS Sanitary Sewer System Database.

5.4. 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.

A new Enrollee of this General Order (that did not have a sanitary sewer system enrolled in the previous State Water Board Order 2006-0003-DWQ) shall conduct its first internal Sewer System Management Plan audit for the time period between the date of submittal of its certified Sewer System Management Plan and the third subsequent December 31st date. The audit report must be submitted into the online CIWQS Sanitary Sewer System Database **by July 1 of the following calendar year**.

See the following tables for clarification:

Initial Audit Period and Audit Due Date for New Enrollees

	Audit Period	Audit Due Date
New Enrollee	Certified Sewer System Management Plan Submittal Date through the third subsequent December 31st date	July 1st date after audit period
Example	*Certified Sewer System Management Plan Submittal Date of August 2, 2025* *Audit Period of August 2, 2025 through December 31, 2027*	*July 1, 2028*

Initial Audit Period for Transition from 2-Year Audit Required in Previous Order 2006-0003-DWQ to 3-Year Audit Required in this General Order

	Audit Period	Audit Due Date
An Enrollee previously regulated by Order 2006-003-DWQ	A 3-year period starting from the end of last required 2-year Audit Period	Within six months after end of 3-year Audit Period
Example	*Last required Audit Period start date of August 2, 2021;* *Audit Period of August 2, 2021 through August 1, 2024*	*February 1, 2025*

Three-Year Ongoing Audit Period

	Audit Period	Audit Due Date
Each Enrollee	A 3-year period starting from the end of last required Audit Period	Within six months after end of 3-year Audit Period

5.5. Six-Year Sewer System Management Plan Update

At a minimum, the Enrollee shall update its Sewer System Management Plan every six (6) years after the date of its last Plan Update due date. (For an Enrollee previously regulated by Order 2006-0003-DWQ, the six-year period shall commence on the due date identified in section 3.11 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this Order. The Updated Sewer System Management Plan must include:

- Elements required in Attachment D (Sewer System Management Plan – Required Elements) of this Order;
- Summary of revisions included in the Plan update based on internal audit findings; and
- Other sewer system management-related changes.

The Enrollee's governing entity shall approve the updated Plan. The Legally Responsible Official shall upload and certify the approved updated Plan in the online CIWQS Sanitary Sewer System Database in accordance with section 3.11 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order. During the time period in between Plan updates, the Enrollee shall continuously document changes to its Sewer System Management Plan in a change log attached to the Plan.

5.6. System Resilience

The Enrollee shall include and implement system-specific procedures in its Sewer System Management Plan to proactively prioritize: (1) operation and maintenance, (2) condition assessments, and (3) repair and rehabilitation, to address ongoing system resilience, as specified in Attachment D (Sewer System Management Plan – Required Elements) of this General Order.

5.7. Allocation of Resources

The Enrollee shall:

- Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and
- Allocate the necessary resources to its sewer system management program for:
  - Compliance with this General Order,
  - Full implementation of its updated Sewer System Management Plan,
  - System operation, maintenance, and repair, and
  - Spill responses.

5.8. Designation of Data Submitters

The Legally Responsible Official may designate one or more individuals as a Data Submitter for reporting of spill data. The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online CIWQS database (https://ciwqs.waterboards.ca.gov) prior to the individuals establishing a CIWQS user account (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) and entering spill data into the online CIWQS Sanitary Sewer System Database.

The Legally Responsible Official shall submit any change to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.9. Reporting Certification

The Legally Responsible Official shall electronically certify, on the Enrollee's behalf, all applications, reports, the Sewer System Management Plan(s) and corresponding updates, and other information submitted electronically into the online CIWQS Sanitary Sewer System Database, as follows:

"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."

Hardcopy submittals to the State Water Board must be accompanied by the above certification statement.

5.10. System Capacity

The Enrollee shall maintain the system capacity necessary to convey: (1) base flows during dry weather conditions, and (2) wet weather peak flows consistent with designated local historic storms. Design storms must take into account system-specific stormwater contributions via inflow and infiltration, and location-specific depth of groundwater and storm frequencies. The Enrollee shall implement capital improvements to provide adequate hydraulic capacity to:

- Meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance element of its Sewer System Management Plan; and
- Prevent system capacity-related spills, and adverse impacts to the treatment efficiency of downstream wastewater treatment facilities.

5.11. System Performance Analysis

The Enrollee shall include a running 10-year system performance analysis in its Annual Report. The analysis must include two CIWQS-generated graphs presenting the following information:

Graph 1 – Total Spill Volume per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total spill volume, per Spill Category, for each calendar year.

Graph 2 – Total Number of Spills per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total number of spills, per Spill Category, for each calendar year.

The current calendar year is the calendar year covered in the Annual Report.

The Enrollee shall generate the graphs in CIWQS, using the existing data in the online CIWQS Sanitary Sewer System Database at the following graph generation link: (https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_operation_report).

5.12. Spill Emergency Response Plan and Remedial Actions

For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

Within six (6) months of the Adoption Date of this General Order, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

For New Enrollees:

Within six (6) months of the Application for Enrollment approval date, the Enrollee shall develop and implement a Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements

The Enrollee shall comply with notification, monitoring, reporting, and recordkeeping requirements in Attachment E1 of this General Order.

5.13.1. Spill Categories

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

- **Category 1 Spill**

  A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

  - A surface water, including a surface water body that contains no flow or volume of water; or
  - A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

    Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

  A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

  A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

  A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

5.13.2. Annual Report

The Enrollee shall submit an Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

For new Enrollees: Within 30 days of obtaining a CIWQS account, a new Enrollee shall submit its initial Annual Report, as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

5.14. Electronic Sanitary Sewer System Service Area Boundary Map

For continuing enrollees, starting on July 1, 2025, and no later than December 31, 2025:

For new enrollees – no earlier than July 1, 2025, or within 12 months of the Application for Enrollment approval date, whichever date is later:

The Legally Responsible Official shall submit, to the State Water Board, geospatial data detailing the locations of the Enrollee's sanitary sewer system service area boundary, per the required content and specifications in section 3.8 (Electronic Sanitary Sewer System Service Area Boundary Map) of Attachment E1 of this General Order, for each system identified by a WDID number.

An Enrollee of a disadvantaged community that may need assistance developing an electronic map to comply with this requirement, may contact State Water Board staff for assistance at SanitarySewer@waterboards.ca.gov.

5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems

Within 24 hours of becoming aware of a spill (as described below) from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to report the following observations to the online CIWQS Sanitary Sewer System Database at the following link: https://ciwqs.waterboards.ca.gov:

- A spill equal or greater than 1,000 gallons that discharges (or has a potential to discharge) to a water of the State, or a drainage conveyance system that discharges to waters of the State; **or**
- Any volume of sewage that discharges (or has a potential to discharge) to surface waters.

In the CIWQS module, the Enrollee is encouraged to identify:

- Time of observation;
- Description of general spill location (for example, street name and cross street names);
- Estimated volume of spill;
- If known, general description of spill destination (for example, flowing into drainage channel, flowing directly into a creek, etc.); and
- If known, name of private system owner/operator.

The CIWQS database will make the name and contact information of the entity voluntarily reporting a private spill, accessible to State and Regional Water Board staff only. The CIWQS database will only make information regarding the actual spill, accessible to the public.

5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge to waters of the State:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

5.17. Unintended Failure to Report

If an Enrollee becomes aware that they unintentionally failed to submit relevant facts in any report required in this General Order, the Enrollee shall promptly notify Regional Water Board and State Water Board staff. Regional Water Board contact information is included in Attachment F of this Order. State Water Board staff shall be contacted by email at SanitarySewer@waterboards.ca.gov for assistance in formally amending the corresponding report(s) in the online CIWQS Sanitary Sewer System Database.

5.18. Duty to Report to Water Boards

In accordance with Water Code section 13267 and/or section 13383, upon request by the State Water Board Executive Director (or designee) or a Regional Water Board Executive Officer (or designee), the Enrollee shall provide the requested information which the State or Regional Water Board deems necessary to determine compliance with this General Order.

5.19. Operation and Maintenance

To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.

6. PROVISIONS

6.1. Enforcement Provisions

The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy.

6.1.1. Enforceability of Clean Water Act and Water Code Violations

Noncompliance with requirements of this General Order or discharging sewage without enrolling in this General Order constitutes a violation of the Water Code and a potential

violation of the Clean Water Act and is grounds for an enforcement action by the State Water Board or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the Enrollee to administrative civil liabilities of up to $10,000 a day per violation pursuant to Water Code section 13385; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this General Order or the Clean Water Act may subject the Enrollee to administrative civil liabilities up to $10,000 a day per violation and additional liability up to $10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to $5,000 a day per violation pursuant to Water Code section 13350 or up to $20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

6.1.2. Monetary Penalties

The Water Code provides the State and Regional Water Boards the authority to pursue formal enforcement actions, including imposing administrative liability and civil monetary penalties, for non-compliance with the requirements of this General Order and violations of the Clean Water Act.

6.1.3. Falsifying or Failure to Report

The Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order, or falsifying any information provided in the technical or monitoring reports is subject to administrative liability and civil monetary penalties. Any person who knowingly fails or refuses to furnish technical or monitoring program reports or falsifies any information provided in reports required by this General Order is subject to criminal penalties.

6.1.4. Severability of General Order

The provisions of this General Order are severable; if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

6.1.5. Indirect Discharges

In the event that a spill enters into a drainage conveyance system, the Enrollee shall take all feasible steps to prevent discharge of sewage into waters of the State by blocking or redirecting the flow in the drainage conveyance system, removing the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body.

6.1.6. Water Boards' Considerations for Discretionary Enforcement

Consistent with the State Water Board Enforcement Policy, when considering Water Code section 13327 factors, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to contain, control, clean up, and mitigate spills. In assessing the factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's compliance with this General Order with a focus on compliance with reporting requirements;
- The Enrollee's provision of adequate funding to implement the requirements of this General Order;
- The Enrollee's compliance with providing a complete and updated Sewer System Management Plan;
- The Enrollee's compliance with implementing its Sewer System Management Plan;
- The overall effectiveness of the Enrollee's Sewer System Management Plan with respect to:
    - System management, operation, and maintenance,
    - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent spills (e.g. adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow, etc.),
    - Preventive maintenance (including cleaning, root grinding, and fats, oils, and grease control) and source control measures,
    - Implementation of backup equipment,
    - Inflow and infiltration prevention and control,
    - Appropriate sanitary sewer system capacity to prevent spills, and
    - The Enrollee's responsiveness to stop and mitigate the impact of the discharge;
- The Enrollee's compliance with identifying the cause of the spill;
- The Enrollee's use of available information and observations to accurately estimate the spill volume and identify the affected or potentially affected receiving waters;
- The Enrollee's thoroughness of cleaning up sewage in drainage conveyance systems after the spill(s);
- The Enrollee's use of water quality and biological monitoring and assessment to determine the short-term and long-term impacts to beneficial uses and the environment;
- The Enrollee's follow up actions to improve system performance;
- The Enrollee's implementation of feasible alternatives to prevent spills, such as:
    - Use of temporary storage or waste retention,
    - Reduction of system inflow and infiltration,
    - Collection and hauling of waste to a treatment facility,
    - Prevention of and/ or containment of spills due to a design storm event identified in the Enrollee's Sewer System Management Plan,

- Implementation of available equipment, technologies, strategies, and recommended industry practices for maintaining and managing sewer systems to prevent spills, and contain and eliminate discharges to waters of the State; and

- The spill duration and factors beyond the reasonable control of the Enrollee causing the event.

6.1.7. Enforcement Discretion Based on Reporting Compliance

Consistent with the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to comply with spill reporting requirements when determining compliance with Water Code section 13267 and section 13383. When assessing Water Code section 13227 factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's diligence to comply with all reporting requirements in this General Order;
- The use of best available information for the Enrollee's reporting of spill start date and start time in which the release of sewage from the sanitary sewer system initiated;
- The Enrollee's reporting of spill end date, and end time to be the date and time in which the release of sewage from the sanitary sewer system was stopped;
- The Enrollee's diligence to accurately estimate and report spill volumes;
- The Enrollee's subsequent verification and/or updates to initial Draft Spill Reports in accordance with this General Order; and
- The Enrollee's timely certification of required spill reports.

Consistent with Water Code section 13267 and section 13383, the State Water Board or a Regional Water Board may require an Enrollee to report the results of a condition assessment of a specified portion of the Enrollee's sanitary sewer system.

6.2. Other Regional Water Board Orders

It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with federal and state regulations. This Order will not be interpreted or applied:

- In a manner inconsistent with the federal Clean Water Act;
- To authorize a spill or discharge that is illegal under either the Clean Water Act, the Water Code, and/or an applicable Basin Plan prohibition or water quality standard;
- To prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System (NPDES) permit or individual waste discharge requirements superseding an Enrollee's regulatory coverage under this General Order for a sanitary sewer system authorized under the Clean Water Act or Water Code;

- To supersede any more specific or more stringent waste discharge requirements or enforcement orders issued by a Regional Water Board; or
- To supersede any more specific or more stringent state or federal requirements in existing regulation, an administrative/judicial order, or Consent Decree.

6.3. Sewer System Management Plan Availability

The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

6.4. Entry and Inspection

6.4.1. Entry and Availability of Information

The Enrollee shall allow State and Regional Water Board staff, upon presentation of credentials and other documents as may be required by law, to:

- Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this General Order;
- Have access to and reproduce any records required to be maintained by this General Order;
- Inspect any facility and/or equipment (including monitoring and control equipment), practices, or operations required in this General Order; and
- Sample or monitor substances or parameters for assuring compliance with this General Order, or as otherwise authorized by the Water Code.

6.4.2. Pre-Inspection Questionnaire

The Enrollee shall provide pre-inspection information to State and Regional Water Board staff through the completion of a Pre-Inspection Questionnaire provided by Water Board staff.

ATTACHMENT A - 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.

California Integrated Water Quality System (CIWQS)

CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

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.

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.

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.

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.

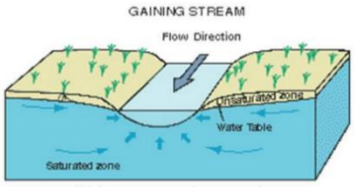
Governing Entity

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.

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.

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.

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.

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.

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 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.

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.

Training

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

Wash Down Water

Wash down water is water used to clean a spill area.

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.

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.

ATTACHMENT B – APPLICATION FOR ENROLLMENT

1. Enrollment Status: (Mark only one item)

☐ New Enrollee

☐ New Enrollee with previous regulatory coverage under Order 2006-0003-DWQ
(that failed to certify continuation of coverage in CIWQS per Order 2022-XXXX-DWQ)
Existing WDID Number: _____

2. Applicant Information:

Legally Responsible Official Submitting Application

First and Last Name: _____

Title: _____

Phone: _____

Email: _____

System Owner/Operator Name: _____

Mailing Address:_____

City, State, Zip:_____

County:_____

Sanitary Sewer System Name: _____

Regional Water Quality Control Board(s): _____

Signature and Date: _____

3. Applicant Type (Check one):

☐ City ☐ County ☐ State ☐ Federal ☐ Special District

☐ Government Combination ☐ Private ☐ Other Non-governmental Entity

4. Wastewater Treatment Plant Receiving Sanitary Sewer System Waste:

Wastewater Treatment Plant Permittee:_____

WDID No.: _____

5. Billing Information

Billing Address: _____

City, State, Zip: _____

Billing Contact Person and Title: _____

Phone and Email Address: _____

6. Application Fee:

The application fee, as required by Water Code section 13260, is based on the daily population served by the sanitary sewer system. See updated Fee Schedule. (https://www.waterboards.ca.gov/resources/fees/water_quality/)

Check one of the following and enter fee amount:

☐ Population Served < 50,000 – Total Fee submitted: $ _____

☐ Population Served ≥ 50,000 – Total Fee submitted: $ _____

Make the fee payment payable to the State Water Resources Control Board and mail the complete application package to:

State Water Resources Control Board, Accounting Office
P. O. Box 1888
Sacramento, CA 95812-1888

Attention: Statewide Sanitary Sewer System Program

7. Application Submittal Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge and belief, the information in the submitted application package is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Print Name: _____

Title: _____

Signature: _____Date: _____

ATTACHMENT C - NOTICE OF TERMINATION

1. Enrollee Information

Enrollee Name: _____

WDID No:_____

Legally Responsible Official Requesting Termination of Coverage: _____

First and Last Name: _____

Title: _____

Phone: _____

Email: _____

Mailing Address: _____

City, State, Zip: _____

County: _____

Sanitary Sewer System Name(s) or Unique Identifier(s): _____

Regional Water Quality Control Board(s): _____

Signature and Date:_____

2. Basis of Termination

Explanation of termination, including subsequent regulatory coverage and subsequent owner/operator of enrolled sanitary sewer system, as applicable:

_____

_____

_____

_____

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_____

3. Regulatory Coverage Termination Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge: 1) the sanitary sewer system I officially represent is not required to be regulated under the Statewide Waste Discharge Requirements for Sanitary Sewer Systems Order 2022-XXXX-DWQ, and 2) the information submitted in this Notice of Termination is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I understand that the submittal of this Notice of Termination does not release sanitary sewer system agencies from liability for any violations of the Clean Water Act.

Print Name: _____

Title: _____

Signature: _____Date: _____

For State Water Board Use Only

☐ Approved for Termination ☐ Denied and Returned to Enrollee

Deputy Director of Water Quality Signature: _____

Date: _____Notice of Termination Effective Date: _____

ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

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ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

A Sewer System Management Plan (Plan) is a living planning document that documents ongoing local sewer system management program activities, procedures, and decision-making – at the scale necessary to address the size and complexity of the subject sanitary sewer system(s). This Plan may incorporate other programs and other plans by reference, to address short-term and long-term system resilience through:

- Proactive planning and decision-making;
- Local government ordinances;
- Updated operations and maintenance activities and procedures;
- Implementation of capital improvements;
- Sufficient local budget to support staff resources, contractors, equipment, and training; and
- Updated training of staff and contractors.

The Enrollee's development, update, and implementation of a Sewer System Management Plan addressing the requirements of this Attachment is an enforceable component of this General Order. As specified in Provision 6.1 (Enforcement Provisions) of this General Order, consistent with the Water Code and the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts in implementing an effective Sewer System Management Plan to prevent, contain, control, and mitigate spills when considering Water Code section 13327 factors to determine necessary enforcement of this General Order.

This Attachment includes the following required elements that the Enrollee shall address in its Plan and subsequent updates. The Enrollee shall identify any requirement in this Attachment that is not applicable to the Enrollee's sewer system and shall explain in its Plan why the requirement is not applicable.

1. SEWER SYSTEM MANAGEMENT PLAN GOAL AND INTRODUCTION

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

The Plan must include a narrative Introduction section that discusses the following items:

1.1. Regulatory Context

The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates.

1.2. Sewer System Management Plan Update Schedule

The Plan Introduction section must include a schedule for the Enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

1.3. Sewer System Asset Overview

The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies);
- Service area boundary;
- Population and community served;
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;
- Structures diverting stormwater to the sewer system;
- Data management systems;
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;
- Estimated number or percent of residential, commercial, and industrial service connections; and
- Unique service boundary conditions and challenge(s).

Additionally, the Plan Introduction section must provide reference to the Enrollee's up-to-date map of its sanitary sewer system, as required in section 4.1 (Updated Map of Sanitary Sewer System) of this Attachment.

2. ORGANIZATION

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:

- The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- 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 example, county

health officer, county environmental health agency, and State Office of Emergency Services.)

3. LEGAL AUTHORITY

The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses 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.

4. OPERATION AND MAINTENANCE PROGRAM

The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

4.1. Updated Map of Sanitary Sewer System

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

4.2. Preventive Operation and Maintenance Activities

A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors.

The scheduling system must include:

- Inspection and maintenance activities;

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

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

4.3. Training

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

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

4.4. Equipment Inventory

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

5. DESIGN AND PERFORMANCE PROVISIONS

The Plan must include the following items as appropriate and applicable to the Enrollee's system:

5.1. Updated Design Criteria and Construction Standards and Specifications

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

5.2. Procedures and Standards

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

6. SPILL EMERGENCY RESPONSE PLAN

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

7. SEWER PIPE BLOCKAGE CONTROL PROGRAM

The Sewer System Management Plan must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;
- 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;
- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

8. SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

The Plan must include procedures and activities for:

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

8.1 System Evaluation and Condition Assessment

The Plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;

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

8.2. Capacity Assessment and Design Criteria

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

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

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;

- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

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.

8.4. Capital Improvement Plan

The capital improvement plan must include the following items:

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

9. MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;
- Monitoring the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

10. INTERNAL AUDITS

The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order.

11. COMMUNICATION PROGRAM

The Plan must include procedures for the Enrollee to communicate with:

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

ATTACHMENT E1 – NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

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ATTACHMENT E1– NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

The Notification Requirements (section 1), Spill-specific Monitoring Requirements (section 2), Reporting Requirements (section 3) and Recordkeeping Requirements (section 4) in this Attachment are pursuant to Water Code section 13267 and section 13383, and are an enforceable component of this General Order. For the purpose of this General Order, the term:

- Notification means the notifying of appropriate parties of a spill event or other activity.
- Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.
- Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.
- Recordkeeping means the maintaining of information and data in an official records storage system.

Failure to comply with the notification, monitoring, reporting and recordkeeping requirements in this General Order may subject the Enrollee to civil liabilities of up to $10,000 a day per violation pursuant to Water Code section 13385; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Resources Control Board (State Water Board) to collect sanitary sewer spill information for each spill event and make this information available to the public. Sanitary sewer spill information for each spill event includes but is not limited to: Enrollee contact information for each spill event, spill cause, estimated spill volume and factors used for estimation, location, date, time, duration, amount discharged to waters of the State, response and corrective action(s) taken.

1. NOTIFICATION REQUIREMENTS

1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Enrollee shall notify the California Office of Emergency Services and obtain a California Office of Emergency Services Control Number as soon as possible **but no later than two (2) hours** after:

- The Enrollee has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

1.2. Spill Notification Information

The Enrollee shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

1.3. Notification of Spill Report Updates

Following the initial notification to the California Office of Emergency Services and until such time that the Enrollee certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Enrollee shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

2. SPILL-SPECIFIC MONITORING REQUIREMENTS

2.1 Spill Location and Spread

The Enrollee shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
  - The system location where spill originated.

    For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
  - Drainage conveyance system entry locations,
  - The location(s) of discharge into surface waters, as applicable,
  - Extent of spill spread, and
  - The location(s) of clean up.

2.2 Spill Volume Estimation

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

2.3. Receiving Water Monitoring

2.3.1. Receiving Water Visual Observations

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),

- Discoloration of receiving water, and
- Impact to the receiving water.

2.3.2. Receiving Water – Water Quality Sampling and Analysis

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than **18 hours** after the Enrollee's knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment, if sewage discharges to a surface water via a drainage conveyance system; and/or
  - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment;

    If the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of this Attachment:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - *E-coli*
  - Enterococcus

  Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

2.3.3. Water Quality Analysis Specifications

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

2.3.4. Receiving Water Sampling Locations

The Enrollee shall collect receiving water samples at the following locations.

Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Receiving Surface Water Sampling (RSW)[1]

Sampling Location	Sampling Location Description
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.

Sampling Location	Sampling Location Description
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

[1] The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

2.4. Safety and Access Exceptions

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

3. REPORTING REQUIREMENTS

All reporting required in this General Order must be submitted electronically to the online CIWQS Sanitary Sewer System Database (https://ciwqs.waterboards.ca.gov), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of this General Order.

The Enrollee shall report any information that is protected by the Homeland Security Act, by email to SanitarySewer@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

3.1. Reporting Requirements for Individual Category 1 Spill Reporting

3.1.1. Draft Spill Report for Category 1 Spills

Within three (3) business days of the Enrollee's knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;

5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;
    - If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry location(s);
    - Estimated spill volume fully recovered from the drainage conveyance system;
    - Estimated spill volume remaining within the drainage conveyance system;
11. Description and photographs of all discharge point(s) into the surface water;
12. Estimated spill volume that discharged to surface waters; and
13. Estimated total spill volume recovered.

3.1.2. Certified Spill Report for Category 1 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.1.1 (Draft Spill Report for Category 1 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
    - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
    - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;

4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
    - Observed impacts on aquatic life,
    - Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
    - Responsible entity for closing/restricting use of water body, and
    - Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

3.1.3. Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
    - Complete and detailed explanation of how and when the spill was discovered;

- Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
- Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
- Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
- Detailed description of the spill cause(s);
- Description of the pipe material, and estimated age of the pipe material, at the failure location;
- Description of the impact of the spill;
- Copy of original field crew records used to document the spill; and
- Historical maintenance records for the failure location.

2. Enrollee's response to the spill:
   - Chronological narrative description of all actions taken by the Enrollee to terminate the spill;
   - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
   - Final corrective action(s) completed and a schedule for planned corrective actions, including:
     - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
     - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
     - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
   - Description of all water quality sampling activities conducted;
   - List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring) of this Attachment;
   - Laboratory results, including laboratory reports;
   - Detailed location map illustrating all water quality sampling points; and
   - Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

3.1.4. Amended Certified Spill Reports for Individual Category 1 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.2. Reporting Requirements for Individual Category 2 Spill Reporting

3.2.1. Draft Spill Report for Category 2 Spills

Within three (3) business days of the Enrollee's knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;

   If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry location(s);
    - Estimated spill volume fully recovered from the drainage conveyance system;
    - Estimated spill volume remaining within the drainage conveyance system;

- Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and

11. Estimated total spill volume recovered.

3.2.2. Certified Spill Report for Category 2 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online CIWQS Sanitary Sewer System Database (https://ciwqs.waterboards.ca.gov). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.2.1 (Draft Spill Report for Category 2 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
   - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
   - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and

14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

3.2.3. Amended Certified Spill Reports for Individual Category 2 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.3. Monthly Certified Spill Reporting for Category 3 Spills

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30th). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated:
    - If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry locations(s);
    - Estimated spill volume fully recovered from the drainage conveyance system; and

- Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.

10. Estimated total spill volume recovered;
11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
12. Spill end date and time;
13. Description of how the spill volume estimations were calculated, including, at minimum:
    - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
    - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
15. System failure location (for example, main, pump station, etc.);
16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
17. Description of the impact of the spill;
18. Whether or not the spill was associated with a storm event;
19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
      - Adjusted schedule/method of preventive maintenance,
      - Planned rehabilitation or replacement of sanitary sewer asset,
      - Inspected, repaired asset(s), or replaced defective asset(s),
      - Capital improvements,
      - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
      - Description of spill response activities,

- Spill response completion date, and
- Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;

21. Detailed narrative of investigation and investigation findings of cause of spill.

3.4. Monthly Certified Spill Reporting for Category 4 Spills

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

3.5. Amended Certified Spill Reports for Category 3 Spills

Within 90 calendar days of the certified Spill Report due date, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After 90 calendar days, the Legally Responsible Official shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of this Attachment;

  The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.

- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

3.7. Monthly Certification of "No-Spills" or "Category 4 Spills" and/or "Non-Category 1 Lateral Spills"

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after

the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of this Attachment) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Enrollee has no further spills of any category, in the subsequent calendar month, the Enrollee shall certify “no-spills” for the subsequent calendar month.

If the Enrollee has no spills from its systems during a calendar month, but the Enrollee voluntarily reported a spill from a private lateral or a private system, the Enrollee shall certify “no-spills” for that calendar month.

If the Enrollees has spills from its owned and/or operated laterals during a calendar month, the Enrollee shall not certify “no spills” for that calendar month.

3.8. Electronic Sanitary Sewer System Service Area Boundary Map

The Legally Responsible Official shall submit, to the State Water Board, an up-to-date electronic spatial map of its sewer system service area boundaries. The map must be in accordance with section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order and the specification provided on the statewide Sanitary Sewer Systems program website. The map must include the location of wastewater treatment facility(ies) that treats the sewer system waste, if in the same sewer service boundary.

By the Effective Date of this General Order, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.

3.9. Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ)

A new Enrollee shall complete and submit its first certified Annual Report into the online CIWQS Sanitary Sewer System Database, **within 30 days of obtaining a CIWQS account**; Subsequent Annual Reports are due by April 1 of each year.

All enrollees shall update their previous year’s Annual Report, **by April 1 of each year after the Effective Date of this General Order,** for each calendar year (January 1 through December 31)**.**

The Annual Report must be entered directly into the online CIWQS Sanitary Sewer System Database. The Enrollee’s Legally Responsible Official shall certify the Annual Report as instructed in CIWQS;

The Annual Report must address, and update as applicable, the following items:

- Population served;

- Updated sewer system service area boundary map, if service area boundary has changed from original map submitted per section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order;
- Number of system operation and maintenance staff:
  - Entry level (less than two years of experience),
  - Journey level (greater than two years of experience),
  - Supervisory level, and
  - Managerial level;
- Number of operation and maintenance staff certified as a certified collection system operator by the California Water Environmental Association (CWEA), with:
  - Corresponding number of certified collection system operator grade levels (Grade I, II, III, IV, and V);
- System information:
  - Miles of system gravity and force mains,
  - Number of upper and lower service laterals connected to system,
  - Estimated number of upper and lower laterals owned and/or operated by the Enrollee,
  - Portion of laterals that is Enrollee's responsibility,
  - Average age the major components of system infrastructure,
  - Number and age of pump stations, and
  - Estimated total miles of the system pipeline not accessible for maintenance;
- Name and location of the treatment plant(s) receiving sanitary sewer system's waste;
- Name of satellite sewer system tributaries;
- Number of system's gravity sewer above or underground crossings of water bodies throughout system;
- Number of force main (pressurized pipe) above or underground crossings of water bodies throughout system;
- Number of siphons used to convey waste throughout the sewer system;
- Miles of sewer system cleaned;
- Miles of sewer system video inspected, or comparable (i.e., video closed-circuit television or alternative inspection methods);
- System Performance Evaluation as specified in section 5.11 (System Performance Analysis) of this General Order;
- Major spill causes (for example, root intrusion, grease deposition);

- System infrastructure failure points (for example, main, pump station, lateral, etc.);
- Ongoing spill investigations; and
- Actions taken to address system deficiencies.

3.10. Sewer System Management Plan Audit Reporting Requirements

The Enrollee shall submit its Sewer System Management Plan Audit and other pertinent audit information, in accordance with section 5.4 (Sewer System Management Plan Audits) of this General Order, to the online CIWQS Sanitary Sewer System Database **by six (6) months after the end of the 3-year audit period**.

If a Sewer System Management Plan Audit is not conducted as required: the Enrollee shall:

- Update the online CIWQS Sanitary Sewer System Database and select the justification for not conducting the Audit; and
- Notify its corresponding Regional Water Board (see Attachment F (Regional Water Quality Control Board Contact Information)) of the justification for the lapsed requirements.

The Enrollee's reporting of a justification for not conducting a timely Audit does not justify non-compliance with this General Order. The Enrollee shall:

- Submit the late Audit as required in this General Order; and
- Comply with subsequent Audit requirements and due dates corresponding with the original audit cycle.

3.11. Sewer System Management Plan Reporting Requirements

For an Existing Enrollee previously regulated by Order 2006-0003-DWQ: **Within every six (6) years after the required due date of its last Plan Update**, the Legally Responsible Official shall upload and certify a local governing entity-approved Sewer System Management Plan Update to the online CIWQS Sanitary Sewer System Database. If the electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its updated Sewer System Management Plan posted on its own website.

Order 2006-0003-DWQ required each enrollee to develop its initial Sewer System Management Plan per the following schedule, with required Plan updates at a frequency of 5-years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2009

Between 100,000 and 10,000: August 2, 2009

Between 10,000 and 2,500: May 2, 2010

Less than 2,500: August 2, 2010

This Order carries forth the previously-required Plan Update schedule per Order 2006-0003-DWQ. Per the six-year Plan Update frequency required in this Order, the Enrollee shall upload and certify its first Plan Update, to the online CIWQS Sanitary Sewer System Database by the following due dates, with subsequent Plan Updates at the frequency of six years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2025

Between 100,000 and 10,000: August 2, 2025

Between 10,000 and 2,500: May 2, 2026

Less than 2,500: August 2, 2026

For a New Enrollee: **Within twelve (12) months of its Application for Enrollment Approval date**, the Legally Responsible Official of a new Enrollee shall upload and certify a local governing entity-approved Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database. If electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its Sewer System Management Plan posted on its own website. The due date for subsequent 6-year Plan updates, is six (6) years from the submittal due date of the new Enrollee's first Sewer System Management Plan.

4. RECORDKEEPING REQUIREMENTS

The Enrollee shall maintain records to document compliance with the provisions of this General Order, and previous General Order 2006-0003-DWQ as applicable, for each sanitary sewer system owned, including any required records generated by an Enrollee's contractor(s).

4.1. Recordkeeping Time Period

The Enrollee shall maintain records of documents required in this Attachment, including records collected for compliance with this General Order, and records collected in accordance with previous General Order 2006-0003-DWQ, for five (5) years.

4.2. Availability of Documents

The Enrollee shall make the records required in this General Order readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request.

4.3. Spill Reports

The Enrollee shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Enrollee responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
    - Date, time, and method of notification,

- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant's contact information, if available, and
- Final resolution of the complaint;

- Records documenting the steps and/or remedial action(s) undertaken by the Enrollee, using all available information, to comply with this General Order, and previous General Order 2006-0003-DWQ as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Records, in accordance with the Monitoring Requirements in this Attachment.

4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills

An Enrollee must maintain the following records for each individual Category 4 spill and for each individual non-Category 1 Enrollee-owned and/or operated lateral spill, and report in accordance to section 3.6 (Annual Certified Spill Reporting of Category 4 and/or Lateral Spills) of this Attachment.

Recordkeeping of Individual Category 4 Spill Information:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
   - Description of drainage conveyance system location,
   - Estimated spill volume fully recovered within the drainage conveyance system, and
   - Estimated spill volume remaining within the drainage conveyance system;
5. Estimated total spill volume exiting the sanitary sewer system;
6. Spill date and start time;
7. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
8. System failure location (for example, main, pump station, etc.);
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of how the volume estimation was calculated, including, at minimum:

- The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
- The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;

11. Description of implemented system modifications and operating/maintenance modifications.

Recordkeeping of Individual Lateral Spill Information:

1. Date and time the Enrollee was notified of, or self-discovered, the spill;
2. Location of individual spill;
3. Estimated individual spill volume;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
5. Description of how the volume estimations were calculated.

Total Annual Spill Information:

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
   - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
   - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

4.5. Sewer System Telemetry Records

The Enrollee shall maintain the following sewer system telemetry records if used to document compliance with this General Order, and previous General Order 2006-0003-DWQ as applicable, including spill volume estimates:

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

4.6. Sewer System Management Plan Implementation Records

The Enrollee shall maintain records documenting the Enrollee's implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

4.7. Audit Records

The Enrollee shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

4.8. Equipment Records

The Enrollee shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

4.9. Work Orders

The Enrollee shall maintain record of work orders for operations and maintenance projects.

ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

Table E2-1

Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	• Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within **18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; • Submit Technical Report **within 45 calendar days** after the spill end date for a Category 1 spill in which **50,000 gallons or greater** discharged to surface waters; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.1 of Attachment E1)

Table E2-2
Spill Category 2: **Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters**

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.2 of Attachment E1)

Table E2-3
Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	(Section 3.3 and 3.5 of Attachment E1)

Table E2-4
Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1)

Table E2-5
Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number. Not applicable to a spill of less than 1,000 gallons.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct visual monitoring.	(Section 2 of Attachment E1)
Reporting	• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.	(Sections 3.6, 3.7 and 4.4 of Attachment E1)

ATTACHMENT F – REGIONAL WATER QUALITY CONTROL BOARD CONTACT INFORMATION

This Attachment provides a map, list of counties, and contact information to assist the Enrollee in identifying the corresponding Regional Water Quality Control Board office, for all Regional Water Board notification requirements in this General Order.

Region 1 -- North Coast Regional Water Quality Control Board:
Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity counties.

RB1SpillReporting@waterboards.ca.gov or (707) 576-2220

Region 2 -- San Francisco Bay Regional Water Quality Control Board:
Alameda, Contra Costa, San Francisco, Santa Clara (Northern most part of Morgan Hill), San Mateo, Marin, Sonoma, Napa, Solano counties.

RB2SpillReports@waterboards.ca.gov or (510) 622-2369

Region 3 -- Central Coast Regional Water Quality Control Board:
Santa Clara (most of Morgan Hill), San Mateo (Southern portion), Santa Cruz, San Benito, Monterey, Kern (small portions), San Luis Obispo, Santa Barbara, Ventura (Northern portion) counties.

CentralCoast@waterboards.ca.gov or (805) 549-3147

Region 4 -- Los Angeles Regional Water Quality Control Board:
Los Angeles, Ventura counties (small portions of Kern and Santa Barbara counties).

rb4-ssswdr@waterboards.ca.gov or (213) 576-6600

Region 5 -- Central Valley Regional Water Quality Control Board:

Rancho Cordova (Sacramento) Office: Colusa, Lake, Sutter, Yuba, Sierra, Nevada, Placer, Yolo, Napa, (North East), Solano (West), Sacramento, El Dorado, Amador, Calaveras, San Joaquin, Contra Costa (East), Stanislaus, Tuolumne counties.

RB5sSpillReporting@waterboards.ca.gov or (916) 464-3291

Fresno Office: Fresno, Kern, Kings, Madera, Mariposa, Merced, and Tulare counties, and small portions of San Benito and San Luis Obispo counties.

RB5fSpillReporting@waterboards.ca.gov or (559) 445-5116

Redding Office: Butte, Glen, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Tehama counties.

RB5rSpillReporting@waterboards.ca.gov or (530) 224-4845

Region 6 -- Lahontan Regional Water Quality Control Board:

Lake Tahoe Office: Alpine, Modoc (East), Lassen (East side and Eagle Lake), Sierra, Nevada, Placer, El Dorado counties.

RB6sSpillReporting@waterboards.ca.gov or (530) 542-5400

Victorville Office: Mono, Inyo, Kern (East), San Bernardino, Los Angeles (North East corner) counties.

RB6vSpillReporting@waterboards.ca.gov or (760) 241-6583

Region 7 -- Colorado River Basin Regional Water Quality Control Board:

Imperial county and portions of San Bernardino, Riverside, San Diego counties.

RB7SpillReporting@waterboards.ca.gov or (760) 346-7491

Region 8 -- Santa Ana Regional Water Quality Control Board:

Orange, Riverside, San Bernardino counties.

RB8SpillReporting@waterboards.ca.gov or (951) 782-4130

Region 9 -- San Diego Regional Water Quality Control Board:

San Diego county and portions of Orange and Riverside counties.

RB9Spill_Report@waterboards.ca.gov or (619) 516-1990

End of Order 2022-0103-DWQ

Attachment 2. Change Log

No.	Date of Change	SSMP Section	SSMP Subsection	Change	Approved By (Name of Element Order)
1	5/8/2025	1	1.4.1	Changed Michael Rosenberg to Margaret Llagas as LRO.	Kent Vian
2	5/8/2025	2	2.2/Table 2-1	Changed Michael Rosenberg to Margaret Llagas as LRO.	Kent Vian
3	5/8/2025	4	4.1.1	Changed Michael Rosenberg to Margaret Llagas as LRO.	Kent Vian
4	5/8/2025	SERP	Group 1 Notification	Changed Michael Rosenberg to Margaret Llagas as LRO.	Kent Vian
5	5/8/2025	SERP	Table (Positions Responsible for SSMP Program Development & Implementation	Changed Michael Rosenberg to Margaret Llagas as LRO.	Kent Vian
6	5/8/2025	SERP	8.3	Added procedures for clean up of MS4 / Storm Drain System	Kent Vian
7	5/9/2025	SERP	Group 1 Notification	Changed Arian Collins to Jennifer McBride & Ramon Galindo	Kent Vian

Attachment 3. Certification

The City of San Diego

Staff Report

DATE ISSUED:	March 13, 2025	
TO:	City Council	
FROM:	Public Utilities Department	
SUBJECT:	Approval of the City of San Diego's Updated Sewer System Management Plan (SSMP)	
Primary Contact:	Margaret Llagas, Deputy Director, Wastewater Collection Division	Phone: (858) 654-4494
Secondary Contact:	Kent Vian, Assistant Deputy Director, Wastewater Collection Division	Phone: (858) 654-4251
Council District(s):	All	

OVERVIEW:

This action seeks City Council approval of the City of San Diego's Updated Sewer System Management Plan (SSMP) and authorizes the Mayor or designee to upload and certify the approved updated SSMP in the state's online database.

The State Water Resource Control Board's Statewide Sanitary Sewer Systems General Order No. 2022-0103-DWQ (General Order), requires the City to maintain an SSMP with the goal of providing a plan and schedule to: (1) properly manage, operate, and maintain all parts of the City's sanitary sewer system, (2) reduce and prevent sanitary sewer spills, and (3) contain and mitigate spills that do occur. The General Order requires the City to update its SSMP every six years, present the SSMP to the City Council for approval, and upload and certify the approved updated plan. The General Order also requires the City continuously document changes to the SSMP in a change log during the time in between SSMP updates.

PROPOSED ACTIONS:

City Council approves the City of San Diego's updated SSMP and authorizes the Mayor or designee to upload and certify the approved updated SSMP in the state's online database.

DISCUSSION OF ITEM:

To provide a consistent, statewide regulatory approach to address sanitary sewer spills, the State Water Resources Control Board (State Water Board) adopted the General Order on December 6, 2022. This General Order regulates sanitary sewer systems designed to convey sewage and requires

public agencies that own or operate sanitary sewer systems to develop, implement, and periodically update the SSMP. This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Board Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of the General Order are enforceable by the State Water Board and Regional Water Quality Control Board (Regional Water Board). Through this General Order, the State Water Board requires the City to update and approve its SSMP every six years, and upload and certify the updated SSMP in the state's online database. The previous SSMP approval by the City Council was in March 2019 via Resolution No. R-312281. The SSMP documents the City's programs to properly operate and maintain our sanitary sewer system.

Updates in the City's SSMP address regulatory changes and modifications to the Public Utilities Department's operations.

New regulatory requirements included in the City's updated SSMP address climate change impacts on a wastewater system-specific level; reduce costs of compliance through more efficient sewer spill reporting and extended planning periods; clarify General Order enforceability by requiring full electronic reporting into a state portal; address root intrusion impacts due to water conservation or other factors; modify the SSMP update and audit schedule and document the ability to collaborate with storm sewer agencies for emergency spill responses and ensure access to storm sewer systems is available during spills.

Due to operational improvements by the Public Utilities Department, the City's updated SSMP includes more observation and sampling sites, updated traffic control protocol, Department Operation Center roles and responsibilities, a modified and streamlined spill event notification list, and clarification of existing Water Code regulations and compliance expectations to address spills to waters of the State.

To comply with the General Order, the City's governing entity, the City Council, must approve the updated SSMP. The Public Utilities Department (PUD) is required to certify that the updated SSMP is in compliance with the General Order and upload it to the state's online database. Once the SSMP is certified, PUD will also post the document on the PUD website and conduct internal audits every three years to evaluate its effectiveness and maintain compliance with SSMP requirements. During the time period in between SSMP updates, the City continuously documents changes to the SSMP in a change log attached to the SSMP.

City of San Diego Strategic Plan:
Priority Areas & Outcomes
Priority Area: Protect & Enrich Every Neighborhood
San Diego is an extraordinary place to live, and every resident of San Diego should have access to a safe and secure environment, along with a variety of core amenities that improve quality of life. San Diegans in all communities are connected to neighborhood assets that anchor community life, foster interaction, and promote well-being.

Priority Area: Champion Sustainability
The City of San Diego provides a built environment that best sustains our natural environment and public health. San Diegans benefit from diligent, innovative waste management.

Priority Area: Foster Regional Prosperity

San Diegans benefit from a passionate, engaged City workforce that provides the highest level of customer service and represents the San Diego community.

Fiscal Considerations:
N/A. The Resources described in the Sewer System Management Plan represent current practices supported by the City's existing and projected future budget, as described in the proposed wastewater cost of service study.

Charter Section 225 Disclosure of Business Interests:
N/A

Environmental Impact:
This activity is not a "project" as defined in CEQA Guidelines Section 15378 because it involves the execution of an agreement that, on its own accord, will not result in a direct or reasonably foreseeable indirect physical change in the environment. As such, this activity is not subject to CEQA pursuant to CEQA Guidelines Section 15060(c)(3). This determination is predicated on Section 15004 of the guidelines, which provides direction to lead agencies on the appropriate timing for environmental review. The project(s) for which this agreement is intended will require the preparation of an environmental document in accordance with the State CEQA Guidelines.

Climate Action Plan Implementation:
This action supports the City's CAP Strategy 5: Resilient Infrastructure and Healthy Ecosystems. The authorization to approve the City of San Diego's Sewer System Management Plan (SSMP), which will serve as the City's recertification of the SSMP, provides a plan and schedule to properly manage, operate, and maintain all parts of the City's sanitary sewer system, reduce and prevent spills, and contain and mitigate spills that do occur. The SSMP informs the reliable operation of this infrastructure and is important to ensuring regulatory compliance of the wastewater system, protecting downstream and coastal waters, and allowing for the continued operation and delivery of first-class services of our wastewater systems to the City of San Diego's commercial and residential customers.

Equal Opportunity Contracting Information (if applicable):
N/A

Previous Council and/or Committee Actions:
The 2019 SSMP recertification item was reviewed and approved by the City Council on March 19, 2019. The 2025 SSMP update will be heard at the Environment Committee prior to Council.

Planning Commission Action:
N/A

Key Stakeholders and Community Outreach Efforts:
None

Lisa Celaya	Kris McFadden
Public Utilities Department Executive Assistant Director	Deputy Chief Operating Officer

#334 4-15-25

(R-2025-475)

RESOLUTION NUMBER R- 316165

DATE OF FINAL PASSAGE APR 22 2025

A RESOLUTION OF THE COUNCIL OF THE CITY OF SAN DIEGO APPROVING THE CITY OF SAN DIEGO'S UPDATED SEWER SYSTEM MANAGEMENT PLAN (SSMP), AND AUTHORIZING THE MAYOR TO CERTIFY AND UPLOAD THE APPROVED SSMP IN THE STATE WATER RESOURCES CONTROL BOARD'S ONLINE DATABASE.

RECITALS

The Council of the City of San Diego (Council) adopts this Resolution based on the following:

A. The State Water Resources Control Board (State Water Board) regulates sanitary sewer systems. Under State Water Board General Order 2022-0103-DWQ (General Order) (Dec. 6, 2022), the City is required to maintain a Sewer System Management Plan (SSMP) which must be updated every six years. By Resolution R-312281 (Mar. 25, 2019), Council approved the current SSMP.

B. The SSMP outlines how the City operates and maintains its sanitary sewer system. The updated SSMP, included in the materials accompanying this Resolution, includes new regulatory requirements addressing climate change impacts on a wastewater system-specific level, reduces costs of compliance through more efficient sewer spill reporting and extended planning periods, clarifies General Order enforceability by requiring full electronic reporting into a state portal, addresses root intrusion impacts due to water conservation or other factors, modifies the update and audit schedule, documents the ability to collaborate with storm sewer agencies for emergency spill responses and ensures access to storm sewer systems during spills. The updated SSMP also includes more observation and sampling sites, updated traffic control protocol, Department Operation Center roles and responsibilities, a modified and streamlined spill event

notification list, and clarification of existing Water Code regulations and compliance expectations to address spills.

C. Under the General Order, the updated SSMP must be approved by Council, certified by the Mayor or designee that it is in compliance with the General Order, and uploaded to the State Water Board's online database. Changes to the SSMP following this process must be documented in a change log.

D. The Office of the City Attorney prepared this Resolution based on the information provided by City staff (including information provided by affected third parties and verified by City staff), with the understanding that this information is complete and accurate.

ACTION ITEMS

Be it resolved by the Council of the City of San Diego:

The Council approves the Sewer System Management Plan (SSMP). The Mayor or designee is authorized to certify and upload the SSMP to the State Water Board's website. Once certified, the SSMP will be placed will be placed on file in the Office of the City Clerk as Document No. RR-316165.

APPROVED: HEATHER FERBERT, City Attorney

By _____
Bonny Hsu
Deputy City Attorney

BH:cw
3/27/25
Or. Dept: Public Utilities Department
CC No.: N/A
Doc. No.: 4007525

I certify that the Council of the City of San Diego adopted this Resolution at a meeting held on APR 15 2025.

DIANA J.S. FUENTES
City Clerk

By Connie Patterson
Deputy City Clerk

Approved: 4/21/25
(date)

TODD GLORIA, Mayor

Vetoed: _____
(date)

_____
TODD GLORIA, Mayor

Passed by the Council of The City of San Diego on APR 15 2025, by the following vote:

Councilmembers	Yeas	Nays	Not Present	Recused
Joe LaCava	☒	☐	☐	☐
Jennifer Campbell	☒	☐	☐	☐
Stephen Whitburn	☒	☐	☐	☐
Henry Foster, III	☒	☐	☐	☐
Marni von Wilpert	☒	☐	☐	☐
Kent Lee	☒	☐	☐	☐
Raul A. Campillo	☒	☐	☐	☐
Vivian Moreno	☒	☐	☐	☐
Sean Elo-Rivera	☒	☐	☐	☐

Date of final passage APR 22 2025.

(Please note: When a resolution is approved by the Mayor, the date of final passage is the date the approved resolution was returned to the Office of the City Clerk.)

AUTHENTICATED BY:

TODD GLORIA
Mayor of The City of San Diego, California.

(Seal)

DIANA J.S. FUENTES
City Clerk of The City of San Diego, California.

By Linda Irwin, Deputy

Office of the City Clerk, San Diego, California

Resolution Number R- 316165

THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: March 13, 2025

TO: Honorable Council President Joe LaCava

FROM: Margaret Llagas, Deputy Director, Public Utilities Department, Wastewater Collection Division, via Deputy Chief Operating Officer Kris McFadden

SUBJECT: Direct Docketing Request for the Approval of the City of San Diego's Updated Sewer System Management Plan

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This memorandum shall serve as the formal request to direct docket the Approval of the City of San Diego's Updated Sewer System Management Plan at City Council on April 14/15, 2025. The State Water Resources Control Board issued the new Statewide General Waste Discharge Requirements for Sanitary Sewer Systems on December 6, 2022. Through this General Order, the State Water Board regulates sanitary sewer systems and requires the City to update and approve its Sewer System Management Plan (SSMP), upload it and certify it in the state's online database. To comply with this General Order, the SSMP must be approved by the City Council and uploaded to the State Water Board website by May 2, 2025. To meet this deadline and be in regulatory compliance, Public Utilities needs to present the SSMP to the City Council on April 14/15, 2025.

The Chair of the Environment Committee and the Office of the Independent Budget Analyst (IBA) have been contacted and concur with this request for direct docketing.

This is a regulatory requirement. There is no cost associated with this action. The Resources described in the Sewer System Management Plan represent current practices supported by the City's existing and projected future budget, as described in the proposed wastewater cost of service study.

Thank you for your assistance with docketing this matter.

cc: Paola Avila, Chief of Staff, Office of the Mayor
Charles Modica, Independent Budget Analyst
Matt Yagyagan, Director of Policy, Office of the Mayor
Kohta Zaiser, Council Affairs Advisor, Office of the Mayor
Luz Anaya Luna, Director of Legislative Affairs, Office of the Council President
Nicole Darling, Director, Communications Department
Meghan Cannis, Docket Liaison, Docket Office

Attachment 4. SSMP Contact Information

City of San Diego
Sewer System Management Plan Contact Information

Positions Responsible for SSMP Program Development and Implementation –

Please see Appendix A WWC Event Notification List attachment for current list with names and contact information.

General Order Reference	SSMP Element/Measure	Responsible Positions	Contact Name	Contact Phone Number
D.1	Sewer System Management Plan Goal And Introduction	Legally Responsible Official	Margaret Llagas Kent Vian	
D.1.1	Regulatory Context	Legally Responsible Official	Margaret Llagas Kent Vian	
D.1.2	Sewer System Management Plan Update	Legally Responsible Official	Margaret Llagas Kent Vian	
D.1.3	Sewer System Asset Overview	Legally Responsible Official	Margaret Llagas Kent Vian	
D.2	Organization	Legally Responsible Official	Margaret Llagas Kent Vian	
D.3	Legal Authority	Legally Responsible Official	Margaret Llagas Kent Vian	
D.5, D.5.1, D.5.2	Design And Performance Provisions	Associate Civil Engineer – Engineering and Program Management – Technical Resources	Hersy Enriquez	
D.6	Spill Emergency Response Plan	WWC PWUS, Emergency Response	Jean Fernandes	
D.7	Sewer Pipe Blockage Control Program	WWC FEWD Program Manager	Neil Trainor	
D.8.4	System Evaluation, Capacity Assurance and Capital Improvements – Capital Improvement Plan	Senior Civil Engineer – Engineering & Program Management	Melissa Faber	
D.8.2	System Evaluation, Capacity Assurance and Capital Improvements –	Senior Civil Engineer – WW Planning / Sewer Modeling & CCTV Condition Assessment	Huy Nguyen	

	Capacity Assessment and Design Criteria			
D.8.3	System Evaluation, Capacity Assurance and Capital Improvements – Prioritization of Corrective Action	Senior Civil Engineer – Engineering & Program Management – WW Planning / Sewer Modeling & CCTV Condition Assessment	Huy Nguyen	
D.9	Monitoring, measurement and program modifications	Legally Responsible Official	Margaret Llagas Kent Vian	
D.10	Internal Audits	Legally Responsible Official	Margaret Llagas Kent Vian	
D.11	Communication Program	Legally Responsible Official	Margaret Llagas Kent Vian	

Responsible for SSMP Operations and Maintenance (O&M) Program Development and Implementation

WDR Reference	SSMP O&M Program Measure	Responsible Positions	Contact Name	Contact Phone Number
D.4.1	Updated Map of Sanitary Sewer System	Associate Civil Engineer – WWC Engineering Pipelines	Jeff VanEvery	
D.4.2	Preventative Operation and Maintenance Activities – Gravity Sewers	WWC GWUS – Cleaning	Terrell Powell	
D.4.2	Preventative Operation and Maintenance Activities – Planning and Scheduling for WWC	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planners)	Terrell Powell Kevin Evans Michele Wood	
D.4.2	Preventative Operation and Maintenance Activities – WWC Pump Stations and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	

City of San Diego
Sewer System Management Plan Contact Information

WDR Reference	SSMP O&M Program Measure	Responsible Positions	Contact Name	Contact Phone Number
D.4.2	Preventative Operation and Maintenance Activities – WWTD Pump Stations No. 1 and No. 2 and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	
D.4.2	Preventative Operation and Maintenance Activities – Other WWTD Pump Stations and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	
D.8.1	System Evaluation and Condition Assessment – Planning and Scheduling for WWC System	Senior Civil Engineer – Engineering & Program Management Condition Assessment Senior Civil Engineer – Engineering & Program Management – WW Planning / CCTV Condition Assessment	Ray Ngo Huy Nguyen	
D.8.1	System Evaluation and Condition Assessment – Condition Assessment of Trunk Sewers, Interceptor Sewers, Gravity Sewer Mains, Manholes, WWTD and WWC Pump Stations and Force Mains	Senior Civil Engineer – Engineering & Program Management WW Planning / Sewer Modeling and CCTV Condition Assessment	Huy Nguyen	

City of San Diego
Sewer System Management Plan Contact Information

WDR Reference	SSMP O&M Program Measure	Responsible Positions	Contact Name	Contact Phone Number
D.8.1	System Evaluation and Condition Assessment – CIP and Schedule	Senior Civil Engineer – Engineering & Program Management WW Planning / Sewer Modeling and CCTV Condition Assessment	Huy Nguyen	
D.8.1	System Evaluation and Condition Assessment – City Crew Repairs and Rehabilitation	WWC GWUS, Construction	Sean Willis	
D.8.1	System Evaluation and Condition Assessment – City Crew CCTV Inspection	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planner)	Terrell Powell Cliff Saiz	
D.4.3	Training	WWC GWUS, Cleaning and Emergency Response	Terrell Powell	
D.4.4	Equipment Inventory – WWC Pump Stations and Force Mains	WWC GWUS – Sewer Pump Stations Operations WWC Principal Plant Technician Supervisor	Melody Shaw-Sydnor Ted Taylor	
D.4.4	Equipment Inventory – WWTD Pump Stations No. 1 and No. 2 and Force Mains	WWTD WW Chief Plant Operator	Tim Carroll	
D.4.4	Equipment Inventory – Other WWTD Pump Stations and Force Mains	WWTD WW Chief Plant Operator	Tim Carroll	
D.4.4	Equipment Inventory – Gravity Sewers	WWC GWUS, Cleaning and Emergency Response and WWC GWUS, Construction	Terrell Powell Sean Willis	

Attachment 5. SSMP Spill Emergency Response Plan

The City of SAN DIEGO

Spill Emergency Response Plan

City of San Diego
Public Utilities Department
Wastewater Collection Division

Revised May 9, 2025

Contents

Tables

Appendices

1 Purpose

The purpose of the City of San Diego's (City's) Spill Emergency Response Plan (SERP) is to support an orderly and effective response to sanitary sewer spills. The SERP provides guidelines for City personnel to follow in responding to, cleaning up, and reporting spills that may occur within the City's service area. This SERP satisfies the California State Water Resources Control Board (SWRCB) Statewide Waste Discharge Requirements (SWDR), which require wastewater collection agencies to have a SERP.

2 Policy

The City's employees are required to report all wastewater spills found and to take the appropriate action to secure the wastewater spill area, properly report to the appropriate regulatory agencies, relieve the cause of the spill, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The City's goal is to respond to sewer system spills as soon as possible following notification. The City will follow reporting procedures in regard to sewer spills as set forth by the San Diego Regional Water Quality Control Board (RWQCB) and the SWRCB.

3 Definitions as Used in This SERP

CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS): Refers to the State Water Resources Control Board online electronic reporting system that is used to report spills, certify completion of the SSMP, and provide information on the sanitary sewer system.

DUTY SUPERVISOR: The Duty Supervisor is the Emergency Response Section Senior Water Utility Supervisor on the day shift, the Night Shift Supervisor, the Weekend Shift Supervisor, or the Standby Supervisor.

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.

LEGALLY RESPONSIBLE OFFICIAL (LRO): Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

MAINLINE SEWER: Refers to City wastewater collection system piping that is not a private lateral connection to a user.

MAINTENANCE HOLE OR MANHOLE: Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

MAJOR SPILL: A spill of whatever size that, based on a reasonable assessment of the spill size, location, and potential impacts, is deemed to pose an imminent and substantial endangerment to public health or the environment.

NOTIFICATION OF A SEWER SPILL: Refers to the time at which the City becomes aware of a sewer spill event through observation or notification by the public or other source.

NUISANCE: California Water Code Section 13050, Subdivision (m) defines nuisance as anything that meets all of the following requirements:

a. 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

b. 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

c. Occurs during, or as a result of, the treatment or disposal of wastes

PREVENTATIVE MAINTENANCE: Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g., cleaning, CCTV, inspection).

PRIVATE LATERAL SEWAGE DISCHARGES: Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

PUD: This refers to the Public Utilities Department.

COMC: This section monitors the Pump Station Alarms and the permanent flow meters.

SANITARY SEWER SPILL: Any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. Sanitary sewer spills include:

a. Sewer spills or releases of untreated or partially treated wastewater that reach waters of the United States;

b. Sewer spills or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

c. Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

Sewer spills that include multiple appearance points resulting from a single cause will be considered one sewer spill for documenting and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not sanitary sewer spills.

SAP: This refers to the City's proprietary computerized maintenance management system.

Sewer Spill Categories

CATEGORY 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reaches surface water and/or reaches a drainage channel tributary to a surface water, or
- Reaches a Municipal Separate Storm Sewer System (MS4) and is not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated stormwater or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

CATEGORY 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire spill discharged to the storm drain system was fully recovered and disposed of properly.

CATEGORY 3: Discharge of untreated or partially treated wastewater equal to or greater than 50 gallons and less than 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire spill discharged to the storm drain system was fully recovered and disposed of properly.

CATEGORY 4:

- A spill of less than 50 gallons, from or caused by a sanitary sewer system, that does not discharge to a surface water, or
- A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system

SANITARY SEWER SYSTEM: Any publicly owned system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be sewer spills.

SENSITIVE AREA: This refers to areas where a spill could result in a fish kill or pose an imminent or substantial danger to human health (e.g., parks, aquatic habitats, etc.).

SEWER SERVICE LATERAL: Refers to the piping that conveys sewage from the building to the City's wastewater collection system.

STATION 38: The Public Works Dispatch Center is at the Chollas Yard, located at 2871 Caminito Chollas. Station 38 shall be staffed full-time (24 hours per day, every day of the year). The telephone number of the facility is: (619) 527-7660.

UNTREATED OR PARTIALLY TREATED WASTEWATER: Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

WATERS OF THE STATE: Waters of the State means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system, and that portion of the storm drain is cleaned.

WWC: Wastewater Collection Division.

4 State Regulatory Requirements for Element 6, Spill Emergency Response Plan

SWRCB Order No. 2022-0103-DWQ D.6 Requirement

The collection system agency shall develop and implement a spill emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- 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 SERP 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 (DCS);
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the DCS;
- Clean the spill area and DCS 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 to, 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
- Conduct an annual review and assessment of the effectiveness of the SERP, and update as needed.

5 Goals

The City's goals with respect to responding to sanitary sewer spills are:

- Work safely;
- Respond quickly to minimize the volume of the spill;
- Eliminate the cause of the spill;
- Prevent sewage system spills or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the spill;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain spills; and
- Revise response procedures resulting from the debrief and failure analysis of certain spills.

6 Spill Detection and Notification

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

The processes employed to notify the City of the occurrence of a sewer spill include observation by the public, receipt of an alarm, or observation by City staff during the normal course of their work.

6.1 Sewer Pump Station Alarms

Sewer pump station alarms shall be monitored by COMC Staff. Upon receipt of a pump station alarm event, the COMC Staff shall immediately notify pump station personnel via telephone; COMC staff shall notify appropriate field crews of gravity sewer main problems or issues. To prevent spill, wastewater from the wet well can either be pumped

into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system.

6.2 Trunk Sewer Flow Meters

The City operates and maintains a flow metering alarm system that can detect flow abnormalities over approximately 90 percent of the flow-weighted length of the City's 340 miles of trunk sewers, including all canyon trunk sewers. The system is capable of detecting and notifying City staff within 90 minutes of reductions in flow of 25 percent or more of the average dry weather flow during dry weather conditions.

The trunk sewer flow meters are monitored by a contract vendor, who is required to immediately notify the duty COMC operator of any potential trunk sewer spill to detect major deviations in sewage flow. The COMC operator shall immediately notify the Duty Supervisor by telephone of potential trunk sewer spills. The WWC staff (COMC) reviews daily hydrographs of flow meters to ensure that flow meters are maintained, serviced, and functioning properly.

6.3 Public Observation

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are on the City'swebsite: https://www.sandiego.gov/public-utilities/sewer-spill-reduction. The City's telephone number for reporting sewer problems is: (619) 515-3525.

All telephone calls from the general public, City employees and officials, plumbers, contractors, and other public and private agencies regarding suspected sewer spills are routed to Station 38 at: (619) 515-3525. The Station 38 operator shall obtain all relevant information regarding the sewer spill, including:

- Date and time that the call was received
- Specific location (address, street name, cross street, city)
- Characteristics and severity of the sewer spill
- Date and time the sewer spill was first noticed by the caller
- Caller's name and phone number
- Other relevant information

If a caller is uncertain of the nature of a reported leak (e.g., water, stormwater, street drainage, sewage, etc.), the Station 38 operator shall obtain additional information to ensure that the appropriate field crew is dispatched. PUD has developed a guide for Station 38 operators with information and images available to help identify spills and collect spill information. Additional follow-up questions should include:

- Color, consistency, odor, and other appearance characteristics
- Precise location relative to streets, alleys, or off-road areas
- Type of structure (e.g., manhole, gate valve cover, meter box)

The Station 38 operator shall enter sewer spill information into the City's computerized maintenance management system (SAP) to obtain a unique work order number for documentation of the complaint and subsequent response activities.

If the spill/backup is not in the City's service area, they will provide the customer with contact information for the responsible agency, and then notify that agency.

If the spill/backup is in the City's service area, the Station 38 Operator will notify the Duty Supervisor. If they are not available, they will notify the Principal Water Utility Supervisor or their designee. A wastewater crew will be dispatched and instructed to complete the Sanitary Sewer Spill/Backup Response Workbook.

For calls that are not sewer spills, the Station 38 Operator will enter the crew's findings and actions taken, if any, on the work order and close it out to be archived in the SAP.

Direct all media and public relations requests to the Public Information Officer at (619) 533-4555 or by email at communications@sandiego.gov.

6.4 City Staff Observation

City staff conduct periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate City staff who, in turn, respond to emergency situations. Work orders are issued to correct non-emergency conditions.

6.5 Contractor Observation

In the event that a contractor/plumber causes or witnesses a sanitary sewer spill, the following procedures are to be followed:

1. Immediately notify the City at (619) 515-3525.
2. Protect storm drains.
3. Protect the public.
4. Provide information to the City wastewater crew such as start time, appearance point, suspected cause, weather conditions, etc.

6.6 No Observation

If there are no witnesses or no call was received for a sewer spill, City staff will contact nearby residents or business owners in the vicinity of the spill in an attempt to obtain information that brackets a given start time for the spill. This information will be collected and placed with records for the specific spill.

7 Spill Response Procedures

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

7.1 Dispatch of Appropriate Crews to Site of Sewer Spill

1. Station 38 and/or COMC operators shall immediately notify the Duty Supervisor first by City mobile phone text messaging functionality and then by City mobile phone call regarding sewer spills.
2. Shift/Duty Supervisors shall respond to notifications by Station 38 and/or COMC operators with instructions regarding appropriate crews, materials, supplies, and equipment to be dispatched.
3. Station 38 and/or COMC operators shall immediately dispatch field crews by pager, mobile radio, or telephone.
4. Station 38 and/or COMC operators shall ensure that the entire message has been received and acknowledged by the field crews who were dispatched. No message is considered complete unless acknowledged by the field crew.
5. Station 38 and/or COMC operators shall refer all pertinent information to the next shift Duty Supervisor, including any details of the problems described by customers and unconfirmed reports of sewage spills.
6. Duty Supervisors shall monitor all dispatches due to sewer spills to ensure that an appropriate resolution has been achieved.

7.2 District Operations Center Emergency Response

The City has established procedures to effectively respond to large-scale emergencies, including spill events. The District Operations Center (DOC) serves as a central hub, enabling coordinated efforts among staff from various departments. Under the leadership of a DOC Director, key personnel from engineering, finance, GIS, information systems, logistics, modeling, operations, public information, and planning collaborate to achieve a swift and organized response. This structure facilitates communication and efficient resource management during critical incidents. City staff will refer to their DOC duties checklist in these events.

7.3 Sewer Spill/Backup Response Summary

The City will respond to sewer spills as soon as possible after being notified of a spill/backup or unauthorized discharge.

If it is <u>not</u> possible that the spill/backup is due to a failure in the City-owned/maintained sewer lines, the Wastewater Crew will perform the following:

- Follow the instructions in the Sanitary Sewer Spill/Backup Response Workbook
- If the customer is not home:
    - Complete the Door Hanger and leave it on the customer’s door

- If the customer is home:
    - Explain that the blockage is in the customer's lateral and the City does not have legal authority to maintain or perform work on privately owned laterals
    - Recommend that the customer hire a contractor/plumber to clear their line
    - Give the customer the Sewer Spill Reference Guide pamphlet

If it is possible that the spill/backup is due to a failure in the City-owned/maintained sewer lines, the Wastewater Crew will:

- Follow the instructions in the Sanitary Sewer Spill/Backup Workbook
- The Duty Supervisor will notify the Principal Water Utility Supervisor of the incident
- Relieve the blockage and clean the impacted areas
- Forward the completed Sanitary Sewer Spill Workbook to the Principal Water Utility Supervisor

The Duty Supervisor will perform the required regulatory reporting in accordance with the Sanitary Sewer Spill/Backup Workbook's Regulatory Reporting section.

If the sewer spill has impacted private property, the Wastewater Crew will:

- Follow the instructions in the Sanitary Sewer Spill/Backup Workbook
- Provide the customer with forms and information as indicated in the Sanitary SewerSpill/Backup Workbook
- Forward the completed Sanitary Sewer Spill/Backup Workbook to the Duty Supervisor, who will notify the Engineering Section designee and Dispatch of the incident

The Senior Claims Adjustor or designee will:

- Review incident reports, claim forms, and other incident information
- Communicate with the claimant as appropriate
- Adjust and administer the claim to closure

7.4 First Responder Priorities

The first responder's priorities are to:

- Follow safe work practices
- Respond promptly with the appropriate and necessary equipment
- Contain the spill wherever feasible
- Restore the flow as soon as practicable
- Minimize public access to and/or contact with the spilled sewage
- Promptly notify the Principal Water Utility Supervisor in the event of a major spill
- Return the spilled sewage to the sewer system

- Restore the area to its original condition (or as close as possible)

7.5 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when City personnel responding to a sewer system event are not familiar with potential safety hazards peculiar to sewer work. In such cases, it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job.

7.6 Traffic Control

Traffic control requirements vary by location; this will dictate the type of control and the speed necessary to protect personnel and the public. WWC utilizes both in-house and outside vendor services. It contacts the outside traffic control vendor (currently Hudson Safe-Lite) to set up traffic control:

- In heavy traffic areas, where the average daily traffic (ADT) could exceed 3,000 cars per day
- In Caltrans right-of-way
- Where speed limits exceed 25 mph
- For sewer spills near a freeway or major thoroughfare
- For WWC CIP in-house projects, since these projects last 1 to 2 months
- For Muni pumps section work projects, which are all over the City and have a long work duration
- For Metro pumps section work projects
- For most cases requiring traffic control due to liability, in case the public is injured

WWC conducts traffic control in-house:

- In residential streets (as long as there are not a lot of detours)
- For most construction and main cleaning jobs in alleys or in residential areas (WWC would utilize 4-man crews for traffic control, with 1 person as a flagger)
- For most sewer spills (WWC has access and conducts their own traffic control)
- For the night, weekend, and day shift main cleaning crews
- WWC CCTV crews use minimal traffic control, using in-house traffic control

7.7 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or sewer spills. The first responder will:

- Note arrival time at the site of the spill/backup
- Verify the existence of a public sewer system spill or backup
- Take photos of spilling manhole(s)/cleanout(s)
- Determine if the spill or blockage is from a public or private sewer
- Identify and assess the affected area and extent of spill
- Contact caller if time permits
- Document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
    - Small spills (i.e., spills that are easily contained): proceed with clearing the blockage
    - Moderate or large spill where containment is anticipated to be simple: proceed with the containment measures
    - Moderate or large spills where containment is anticipated to be difficult: proceed with clearing the blockage (however, whenever deemed necessary, call for additional assistance and implement containment measures)
- Take steps to contain the spill (for procedures, refer to the Sanitary Sewer Spill/Backup Response Workbook)

7.8 Initiate Spill Containment Measures

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the spilling sewage.
- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, wherever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dikes/dams or sandbags.
- Pump around the blockage/pipe failure.

For procedures, refer to the Sanitary Sewer Spill/Backup Response Workbook.

7.9 Restore Flow

- Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole.

- Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream.
- If the blockage cannot be cleared within a reasonable time from arrival, or the sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping.
- If other assistance is required, immediately contact the Principal Water Utility Supervisor.

For procedures, refer to the Sanitary Sewer Spill/Backup Response Workbook.

7.10 Equipment

This section provides a list of specialized equipment that is required to support this SERP.

- **Closed-Circuit Television (CCTV) Inspection Unit:** A CCTV Inspection Unit is required to determine the root cause of all spills from gravity sewers.
- **Camera:** A digital or disposable camera is required to record the conditions upon arrival, during clean-up, and upon departure.
- **Emergency Response Trucks:** A utility body pickup truck or open bed is required to store and transport the equipment needed to respond effectively to sewer emergencies. The equipment and tools will include containment and clean-up materials.
- **Portable Generators, Pumps, Piping, and Hoses:** Equipment used to bypass pumps or to divert or power equipment to mitigate a spill.
- **Combination Sewer Cleaning Trucks:** Combination high-velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following a spill event.
- **Air Plugs, Sandbags, and Plastic Mats**
- **Spill Sampling Kits**
- **Portable Lights**
- **Traffic Control Equipment**

Standard operating procedures for equipment that may be necessary in the event of a sanitary sewer spill or backup are available in the library in the MOC I Building and electronically.

7.11 Continued Response Efforts

The City shall, following the initial response and reporting required by the SWRCB Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDR), continue response efforts based on the risk posed by the spill at issue, taking into account:

1. The volume of the spill
2. The proximity of the spill to high-risk areas, which shall include sensitive populations (specifically public and private schools, parks, recreational areas, and surface waters, especially during the recreation season from May to September)
3. The timing and/or seasonality of the spill event (e,g., a spill to surface waters during low-flow, acid conditions of late summer)

The City further agrees to provide training to its response crews regarding the implementation of the risk assessment. The City shall augment the SSMP and SERP, as necessary, to document this practice.

8 Recovery and Clean-Up

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

The recovery and clean-up phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The spill recovery and clean-up procedures are described in the following subsections.

8.1 Estimate the Flow and Volume of Spilled Sewage

To estimate the flow rate, crew members will use the SSCSC Manhole Spill Gauge if the same style of manhole cover is observed spilling. There are a variety of approaches for estimating the volume of a sanitary sewer spill; crew members should use the method most appropriate to the sewer spill in question and reference the Sanitary Sewer Spill/Backup Response Workbook, which provides four methods:

- Eyeball Estimation Method
- Duration and Flow Rate Calculation Method
- Area/Volume Method
- Lower Lateral Estimation Method

Where safe and possible, the City shall take photographs of a sewer spill event before and during the recovery operation to help establish and justify spill volume. Such photographs will preserve such data as the date and time when City staff took them.

8.2 Recovery of Spilled Sewage

The crew will vacuum up and/or pump the spilled sewage, rinse water, and discharge it back into the sanitary sewer system.

8.3 Clean-Up and Disinfection

Clean-up and disinfection procedures will be implemented to reduce the potential for public health issues and adverse environmental impacts that are associated with a sewer spill event. The procedures described are for dry weather conditions and will be modified

as required for wet weather conditions. Where clean-up is beyond the capabilities of City staff, a clean-up contractor will be used.

Private Property

City crews are responsible for clean-up when the property damage is minor in nature and outside of private building dwellings, such as in front, side, and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the clean-up and restoration. If the sewer spill into the property is the definite cause of City system failure, the property owner can call out a water damage restoration contractor to complete the clean-up and restoration. In both cases, property owners may submit a claim form to the City Risk Management Office.

Hard Surface Areas

Crew members will:

- Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms
- Wash down the affected area with clean water and/or deozyme or a similar non-toxic biodegradable surface disinfectant until the water runs clear (the flushing volume will be approximately three times the estimated volume of the spill)
- Take reasonable steps to contain and vacuum up the wastewater
- Allow the area to dry
- Repeat the process if additional cleaning is required

Clean Up of MS4 / Storm Drain System

Crew members will:

- Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms
- Vactor / recovery of washed down water from storm drain
- Wash down the affected area with clean water and/or deozyme or a similar non-toxic biodegradable surface disinfectant until the water runs clear (the flushing volume will be approximately three times the estimated volume of the spill)
- Take reasonable steps to contain and vacuum up the wastewater
- Allow the area to dry
- Repeat the process if additional cleaning is required

Landscaped and Unimproved Natural Vegetation

Crew members will:

- Collect all signs of sewage solids and sewage-related material, either by protected hand or with rakes and brooms

- Wash down the affected area with clean water until the water runs clear (the flushing volume will be approximately three times the estimated volume of the spill)
- Either contain or vacuum up the wash water so that none is released
- Allow the area to dry
- Repeat the process if additional cleaning is required

Natural Waterways

The California Office of Emergency Services (CalOES) will notify the California Department of Fish and Wildlife for sewer spills greater than or equal to 1,000 gallons.

Wet Weather Modifications

Omit flushing and sampling during heavy storm events (e.g., a sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4 Public Notification

Warning signs shall be posted in the vicinity of any water body suspected of being contaminated by sewage, as determined by the County Department of Environmental Health and Quality (DEHQ). This will be done as soon as practicable following the initial response to the sewer spill. Signs should be posted on either side of the point of entry where sewage entered the body of water and the nearest public access point to that body of water. A minimum of 7 signs, placed 50 feet apart, will be posted. Contamination signs shall be double-sided so they are plainly visible.

If City lifeguards are present, they shall be notified immediately to assist in warning bathers. If there are no on-duty lifeguards, the employee or crew shall attempt to gain the bathers' attention to make them aware of the spill.

The Duty Supervisor shall direct field crews to place additional warning signs when requested by the DEHQ. Field crews posting warning signs will notify the Station 38 operator when they have been posted.

Sewer Pump Station Patrol Units shall inspect posted warning signs twice daily from April through October and once daily from November through March. Any missing warning signs shall be replaced. Warning signs shall not be removed except at the direction of the DEHQ.

The following provisions shall apply to posting and removing warning signs around Mission Bay:

- The DEHQ will notify City lifeguards of sewage closures or openings of Mission Bay
- City lifeguards will notify:
    - The WWC to post, inspect, and remove warning signs due to sewage-related closures of Mission Bay
    - Mission Bay lessees and other interested parties

9 Water Quality

(Ref. SWRCB Order No. 2022-0103-DWQ E1)

9.1 Water Quality Sampling and Testing

In the event that a sewer spill of any amount reaches surface waters or flowing drainage channel tributary to a larger body of water, PUD staff should report to Beach and Bay (B&B) Advisory Hotline Land and Water Quality Division at (619) 338-2073. After hours, they should contact HIRT (Hazardous Incident Response Team) at (858) 505-6657. B&B will investigate the spill, determine whether the spill has reached or impacted any water body/recreational waters, and decide if sampling is required.

Samples will be collected within 18 hours for spills greater than or equal to 50,000 gallons in accordance with the Statewide WDR Monitoring and Reporting Program requirements. When collecting water samples for examination, the Duty Supervisor should ensure that samples are collected as stipulated in Water Quality Sampling Procedure below. Lab sample procedures and the locations should be recorded on an area map depicting each location of sampling.

In addition, DEHQ may impose additional testing requirements and locations of sampling depending on the test results and the receiving water conditions. After collecting the samples as stated in the SOP, PUD staff should deliver the samples to the Environmental Monitoring and Technical Services Division (EMTS) Marine Microbiology Laboratory for bacterial analyses. The Marine Microbiology Laboratory is ELAP-certified (Certificate #2185) in three microbiology fields of testing (FoT) including wastewater, recreational water, and drinking water.

The spill response staff performs qualitative tests to screen for the presence of ammonia using ammonia test strips. The EMTS laboratories are ELAP-certified and have the capability to perform ammonia testing for numerical values on an as-needed basis. This sampling and testing should continue until the results from the lab indicate that they are back to baseline levels. Collaboration with DEHQ should continue until they determine that the sampling is no longer needed.

Closure Zone (Subject to Evaluation)

Closure zones are determined by DEHQ. As a general rule:

Less than 1,000 gallons	100 yards to ¼ mile each side of discharge
1,000 to 10,000 gallons	¼ mile to ½ mile each side of the discharge
10,000 to 100,000 gallons	¾ mile to 1 mile each side of the discharge
100,000 to 1 million gallons	2 to 3 miles each side of the discharge
1 to 2 million gallons	4 to 5 miles each side of the discharge
Over 2 million gallons	Minimum 5 miles each side of the discharge

Sampling Guidelines

Less than 1,000 gallons	3 or more samples within the closure zone
1,000 to 10,000 gallons	5 or more samples within the closure zone
10,000 to 100,000 gallons	7 or more samples within the closure zone
100,000 to 1 million gallons	9 or more samples within the closure zone
1 to 2 million gallons	11 or more samples within the closure zone
Over 2 million gallons	13 or more samples within the closure zone

During the rainy season, the City monitors multiple observation points at three designated strategic locations that are checked during significant rain events to assess the potential of a spill due to a surcharge and backup at Pump Stations No. 1 and No. 2. These locations are Famosa Slough, Pacific Highway, and Sweetwater River. If a spill does occur, City crews will record the time and volume of the release and conduct water quality sampling as at these locations (shown in Appendix F).

9.2 Water Quality Monitoring Plan

To comply with Attachment E1, Subsection 2.3 of the General Order, through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

1. Estimated spill travel time to the receiving water;
2. For spills entering a DCS, estimated spill travel time from the point of entry into the DCS to the point of discharge into the receiving water;
3. Estimated spill volume entering the receiving water; and
4. Photography of:
    i. Waterbody bank erosion,
    ii. Floating matter,
    iii. Water surface sheen (potentially from oil and grease),
    iv. Discoloration of receiving water, and
    v. Impact to the receiving water.

For sewer spills in which an estimated 50,000 gallons or more are discharged into a surface water, the City shall conduct the following water quality sampling no later than 18 hours after the City's knowledge of a potential discharge to a surface water (the City may perform water quality monitoring of surface waters on smaller spills):

1. For each day of the duration of the spill, collect one water sample at:
    i. The DCS-001 location (described in Table 9-1) if sewage discharges to a surface water via a DCS; and/or

ii. Each of the three receiving water sampling locations in Table 9-2.

If the receiving water has no flow during the duration of the spill, the City will report “No Sampling Due to No Flow” for its receiving water sampling locations.

Table 9-1. Sampling of Flow in Drainage Conveyance System Prior to Discharge

Sample Location	Sampling Location Description
DCS-001	A point in a DCS before the DCS flow discharges into a receiving water.

Table 9-2. Receiving Surface Water Sampling (RSW)

Sample Location	Sampling Location Description
RSW-001: Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
RWS-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

Required water quality analyses for ammonia and bacterial indicators are to be performed by an accredited or certified laboratory. Monitoring instruments and devices used to implement the Sewer Spill Water Quality Monitoring Program are required to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

Within 18 hours of the enrollee becoming aware of the spill, water quality sampling are required for, at a minimum, the following constituents:

1. Ammonia. The City spill response staff performs ammonia testing in the field using testing strips.
2. Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction, including one or more of the following: total and fecal coliform, enterococcus, and e-coli. The City performs total and fecal coliform and enterococcus. Additional monitoring may be performed per request by DEHQ.

Additionally, for Category 1 sewer spills of 50,000 gallons or more, a spill technical report is required and must be submitted within 45 calendar days from the spill end date. The Sewer Spill Technical Report requirements are described in Element 5 of the SERP.

9.3 Biological Assessment – Category 1 or 2 Spills

(Ref: cdo_r9-2023-0016 Finding 23)

After a suspected Category 1 or 2 Sewer Spill, the City will conduct a biological assessment in addition to any water quality sampling.

9.4 Sewer Spill Technical Report

The City will submit a Sewer Spill Technical Report to the CIWQS Online Sewer Spill Database within 45 calendar days of the spill end date for any in which 50,000 gallons or greater are discharged into a surface water. The Deputy Director of the Wastewater Collections Division or other Legally Responsible Official will supervise the preparation of and certify this report. The report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include, at a minimum, the following:

Causes and Circumstances of the Spill

- Complete and detailed explanation of how and when the spill was discovered
- Photographs illustrating the spill origin, the extent and reach of the spill, DCS entrance and exit, receiving water, and post-clean-up site conditions
- Diagram showing the spill failure point, appearance point(s), and final destination(s)
- Detailed description of the methodology employed and available data used to calculate the volume of the spill and, if applicable, the spill volume recovered
- Detailed description of the spill cause(s)
- Description of the pipe material, and estimated age of the pipe material, at the failure location
- Description of the impact of the spill
- Copies of original field crew records used to document the spill
- Historical maintenance records for the failure location

City's Response to Spill

- Chronological narrative description of all actions taken by the City to terminate the spill
- Explanation of how the SSMP Spill Emergency Response Plan was implemented to respond to and mitigate the spill
- Final corrective action(s) completed and a schedule for planned corrective actions, including:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences

- Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill

Water Quality Monitoring

- Description of all water quality sampling activities conducted
- List of pollutants and parameters monitored, sampled and analyzed; as required in Section 2.3 (Receiving Water Monitoring) of this attachment
- Laboratory results, including laboratory reports
- Detailed location map illustrating all water quality sampling points
- Other regulatory agencies receiving sample results (if applicable)
- Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water

10 Sewer Backup Into/Onto Private Property Claims Handling Policy

It is the policy of the City that a claims form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer spills/backups into/onto private property:

- City staff will offer a City claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the City-owned sewer lines or whenever a City customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the City was not at fault.
- It is the responsibility of the Wastewater Crew to gather information regarding the incident and notify the Duty Supervisor or their designee.
- It is the responsibility of the Senior Claims Adjustor or their designee to review all claims and to oversee the adjustment and administration of the claim to closure.

11 Notification, Reporting, Monitoring, and Recordkeeping Requirements

(Ref. SWRCB Order No. 2022-0103-DWQ E1)

In accordance with the Statewide Waste Discharge Requirements for Sanitary Sewer Systems , the City maintains records for each sanitary sewer spill. Records include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the spill, field crew response operations, and site conditions after field crew spill response operations have been

completed; the date, time, location, and direction of photographs taken will be documented

- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made
- Regulator required notifications are outlined in Section 11.1 below

The DEHQ will be notified by phone or email if there is a discharge of sewage from the City's public sanitary sewer collection system, which enters a surface water body of water such as the Pacific Ocean, bay, river, lake, stream, creek, or domestic water supply where there is a potential for human contact as defined by the County Department of Environmental Health. Includes Category 1 Sewer Spills as defined in Order No. WQ 2013-0058-EXEC and private spills greater than 1,000 gallons or private spills to surface waters. The following information will be included:

- Name of the reporting agency/ responsible party and their contact information so we can contact ifthere are any questions
- Spill information
- Date
- Time
- Address/Coordinates
- Substance
- Volume
- Cause of the spill
- Has the spill been stopped?
- Has the spill been mitigated?
- Surface water affected? if so, which water body?
- Any Recreational water affected? If so, indicate
- Has there been a Cal OES report filed?
- If the spill was neutralized, what substance was it neutralized with?

For reporting purposes, if one spill event of whatever category results in multiple appearance points in a sewer system, a single spill report is required in CIWQS that includes the GPS coordinates for the location of the spill appearance point closest to the failure point, blockage or location of the flow condition that cause the spill, and descriptions of the locations of all other discharge points associated with the single spill event.

11.1 Regulator Required Notifications

Element	Requirement	Method
Notification	Within 2 hours of becoming aware of any Category 1 Sewer Spill greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify CalOES and obtain a notification control number.	Call Cal OES at: (800) 852-7550
Notification	Within 2 hours of becoming aware of any Category 1 Sewer Spill discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify the Assistant Director, Deputy Director and Assistant Deputy Director of the WWC of PUD.	Call, text or email the Assistant Director, Deputy Director and Assistant Deputy Director of PUD WWC.
Notification	If there is a discharge of sewage from the public sanitary sewer collection system of the City of San Diego, which enters a surface water body of water such as the Pacific Ocean, bay, river, lake, stream, creek, or domestic water supply where there is a potential for human contact as defined by the County Department of Environmental Health. Includes Category 1 Sewer Spills as defined in Order No. WQ 2022-0103-DWQ and private spills greater than 1,000 gallons or private spills to surface waters.	Immediately contact San Diego County Department of Environmental Health during business hours 7 a.m. – 4 p.m. M–F: • Joseph Palmer: (858) 495-5752 • Farnaz Farhang: (619) 366-1590 Available until 5:30 pm M–F Beach & Bay Water Quality Hotline: (619) 338-2073 Email: Farnaz.Farhang@sdcounty.ca.gov AND Joseph.Palmer@sdcounty.ca.gov; lwqduty.deh@sdcounty.ca.gov; hirt.deh@sdcounty.ca.gov After hours emergency (HIRT):(858)505-6657

Element	Requirement	Method
Reporting	• Category 1 Sewer Spill: The City will submit draft report within three business days of becoming aware of the spill and certify within 15 calendar days of spill end date. • Category 2 Sewer Spill: The City will submit draft report within 3 business days of becoming aware of the spill and certify within 15 calendar days of the spill end date. • Category 3 Sewer Spill: The City will submit certified report within 30 calendar days of the end of month in which spill the occurred. • Category 4 Sewer Spill: The City will report and certify the estimated total spill volume and total number of Category 4 spills within 30 calendar days after the end of the month in which the spills occurred. • Private Lateral Sewage Discharge: The City will submit certified report within 30 calendar days of the end of month in which spill the occurred. • Sewer Spill Technical Report: The City will submit within 45 calendar days after the end date of any Category 1 Sewer Spill in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: The City will certify that no spills occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no spills occurred. • Annual Report (previously termed Collection System Questionnaire): The City will update for each calendar year by April 1.	Enter data into the CIWQS Online Sewer Spill Database1 (http://ciwqs.waterboards.ca.gov/) certified by the Legally Responsible Official(s) 2. All information required by CIWQS will be captured in the Sanitary Sewer Spill Report. Certified spill reports may be updated by amending the report or adding an attachment to the spill report within 120 calendar days after the spill end date. After 120 days, the State Sewer Spill Program Manager must be contacted to request to amend a spill report along with a justification for why the additional information was not available prior to the end of the 120 days.
Biological Assessments	The City will conduct biological assessments following Category 1 Sewer Spills & for Sewer Spills reaching San Diego Bay	Biological assessment results will be uploaded into CIWQS for Category 1 Sewer Spills & for Spills reaching San Diego Bay.
Water Quality Monitoring	The City will conduct water quality sampling within 18 hours after initial spill notification for Category 1 Sewer Spills in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 Sewer Spills in which 50,000 gallons or greater are spilled to surface waters.
Record Keeping	The City will maintain the following records: • Spill event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for sewer spills of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate sewer spill Volume.	Self-maintained records shall be available during inspections or upon request.

[1] In the event that the CIWQS online sewer spill database is not available, the Principal Water Utility Supervisor will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the City will submit the appropriate reports using the CIWQS online sewer spill database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the sewer spill file.

[2] The City always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will besubmitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.

11.2 Sewer Spill Tracking Database and Sewer Spill Tracking

1. Data from the investigation of all sewer spills shall be entered in the Sewer Spill Tracking Database and into CIWQS per regulatory requirements.
2. The Shift/Duty Supervisors and Standby Supervisors shall be responsible for entering the data in the Sewer Spill Tracking Database in a timely manner. Original documents created or compiled during the investigation are archived on the City's G: drive. Also, the Emergency Response Duty Supervisor has hard copies of all spill investigations. All Sewer Spill Tracking information and associated documents shall be retained for five years from the date of the spill.
3. The Emergency Response Section is responsible for administering the Sewer Spill Database and CIWQS. Database maintenance procedures shall be performed weekly to ensure data integrity.
4. The WWC Emergency Response Section Supervisor shall be responsible for creating email notifications to key stakeholders to notify of a sewer spill.
5. The following business reports from SAP shall be made available by WWC staff in ad hoc use:
    - Sewer Spills by month, quarter, and calendar year
    - Sewer Spills by cause
    - Sewer Spills by geographical area
    - Sewer Spills by volume

11.3 Complaint Records

The City maintains records of all complaints received, whether or not they result in sanitary sewer spills in SAP. These complaint records include:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the spill or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential spill may have reached waters of the State
- Name, address, and contact telephone number of the complainant or informant reporting the potential spill (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work order information used to document all feasible and remedial actions taken

All complaint records will be maintained for a minimum of 5 years, whether or not they result in a sewer spill. Hardcopy spill incident files are stored with the shift supervisor from the shift that responded.

12 Post Sewer Spill Event Debriefing

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

Every sewer spill event is an opportunity to evaluate the City response and reporting procedures. Each sewer spill event is unique, with its own elements and challenges, including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 Sewer Spill events, all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future spill events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13 Failure Analysis Investigation

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

The objective of the failure analysis investigation is to determine the “root cause” of the spill and to identify corrective action(s) needed that will reduce or eliminate future potential for the spill to recur or for other spills to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Spill Report and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions, and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the spill and reviewing the video and logs
- Reviewing any Fats, Oils, Roots and Grease (FROG) related information or results
- Post spill debrief records

- Interviews with the public at the spill location

The product of the failure analysis investigation will be the determination of the root cause and the identificationand scheduling of the corrective actions. The Collection System Failure Analysis Form (in Sanitary Sewer Spill/Backup Response Workbook) will be used to document the investigation.

14 Sewer Spill Response Training

(Ref. SWRCB Order No. 2022-0103-DWQ D.6)

This section provides information on the training that is required to support this SERP.

14.1 Initial and Annual Refresher Training

All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system spill will receive training on the contents of this SERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. The City will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The City's Spill Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Spill Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Spill Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan

The City will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through electronic testing, interviews, and observations. The City will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any spill complaints.
4. Please describe your SOPs used to respond/mitigate spills when they occur.

5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical spill response activities have worked in the field. We understand from discussions with management earlier that you use the SERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any spill complaints in the field?
8. Can you tell us who is responsible for estimating spill volumes discharged? If it is you, please describe how you go about estimating the spill volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in spills (either onsite or via telephone) to further check out when the spill might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these spills, when else would you typically take any pictures of a spill?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate spill complaints.

14.2 Sewer Spill Response Drills

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g., mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

14.3 Sewer Spill Training Record Keeping

Records will be kept of all training that is provided in support of this plan. The records for allscheduled training courses and for each sewer spill emergency response training event will includedate, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working on City Sewer Facilities

All construction contractors working on City sewer facilities will be required to develop a project-specific SERP, to provide project personnel with training regarding the content of the contractor's SERP and their role in the event of a sewer spill, and to follow that SERP in the event that they cause or observe a sewer spill. Emergency response procedures

shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors will be provided and required to observe contractor procedures.

15 Authority

- Health and Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish and Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order No. WQ 2013-0058-EXEC effective September 9, 2013
- State Water Resources Control Board Order No. WQ 2022-0103-DWQ effective June 5, 2023

16 List of Appendices

- Appendix A: WWC Event Notification List
- Appendix B: Sewer Spill Reference Guide Pamphlet: Your Responsibilities as a Private Property Owner
- Appendix C: Door Hanger
- Appendix D: Warning Sign
- Appendix E: Sanitary Sewer Spill/Backup Response Workbook
- Appendix F: Sampling Site Maps

Appendix A. WWC Event Notification List

WWC Event Notification List (DD-D-002.0)

The Event Notification List identifies all parties notified in the event of a sanitary sewer spill. The parties notified depend on the type, magnitude, and location of the event.

Text notifications will be sent, providing initial notification and event details. Emails will be sent to serve as a summary of the incident. They will typically include maps and photographs and are sent to a larger group to ensure proper archiving and follow-ups.

The Duty Supervisor is responsible for notifying all appropriate persons. Any changes to this listing should be sent to the Deputy Director immediately.

Type of Event	Description	Notification Group(S)
Sanitary Sewer Spill (surface waters)	A discharge of Category 1 Sewer Spills as defined in Order No. WQ 2022-0103-DWQ and private spills greater than 1,000 gallons or private spills to surface waters of sewage from the public sanitary sewer collection system of the City of San Diego which enters a surface water body of water such as the Pacific Ocean, bay, river, lake, stream, creek, ordomestic water supply where there is a potential for human contact as defined by the County Department of Environmental Health.	1, 2, and 3
Sanitary Sewer Spill	A discharge of Category 2, 3, 4, and Private Lateral Sewer Spills, as defined in Order No. WQ 2022-0103-DWQ from the public sanitary sewer collection system of the City of San Diego at any point upstream of the sewage treatment plant.	1

GROUP 1

Sanitary Sewer Spill Notifications – Text and Email

The Duty Supervisor will notify via **cell phone, text message, and email** all relevant information to the following:

Doug Campbell, Assistant Director, Water Recovery and Pure Water Branch Office - (858) 292-6304 Cell - (619) 203-0966 Email – DACampbell@sandiego.gov	Margaret Llagas, Deputy Director, Wastewater Collection Division Office - (858) 654-4494 Cell - (858) 231-6574 Email – MLlagas@sandiego.gov
Kent Vian, Assistant Deputy Director, Wastewater Collection Division Office - (858) 654-4251 Cell – (619) 983-6057 Email – KVian@sandiego.gov	Terrell Powell, GWUS, ER Section Office – (858) 614-7541 Radio Number – 353 Cell – (619) 980-2429 Email – TPowell@sandiego.gov
Jean Fernandes, PWUS, ER Section Office - (858) 654-4153 / (858)-614-5772 Radio Number - 8793 Cell – (619) 517-6772 Email – JFernandes@sandiego.gov	Anna Vacchi Hill, Program Coordinator, Public Utilities Department Cell - (619) 886-1462 Email – vacchia@sandiego.gov
Alexandra Berenter, Deputy Director, External Affairs and Water Policy Branch Office - (619) 533-4112 Cell - (619) 541-3642 Email – ABerenter@sandiego.gov	Jennifer McBride, Supervising Public Information Officer, Communications Department Office - (619) 533-4573 Cell - (619) 876-7539 Email - JAMcBride@sandiego.gov
	Ramon Galindo, Senior Supervising Public Information Officer, Communications Department **(Will handle after-hours and weekend emergencies)** Cell - (619) 953-9332 Email - RHGalindo@sandiego.gov

GROUP 1

Sanitary Sewer Spill Notifications – Email Only

The Duty Supervisor will notify via **email** all relevant information to the following:

VACANT, Senior Civil Engineer, Wastewater Collection Division Email –	Jessica Mathews, Senior Biologist, Public Utilities Department Email – JMathews@sandiego.gov
TSW Storm Water Division Email – SWPPP@sandiego.gov Emaii – swpumpengpln@sandiego.gov	

GROUP 2

Sanitary Sewer Spills, Spills to Surface Waters

The Duty Supervisor will ensure that all the notification under this group is followed:

San Diego County Department of Environmental Health & Quality

- During Business Hours 7 a.m. – 4 p.m. M-F:
  - Joseph Palmer: (858) 495-5752
  - County Staff: (858) 495-5579 or (619) 366-1590
  - Beach and Bay Water Quality Hotline: (619) 338-2073
- After Business Hours:
  - County Communications Dispatch: (858) 565-5255 or (858) 505-6657

Regional Water Quality Control Board (RWQCB)

RWQCB will be notified through CIWQS system.

- Keith Yaeger: (619) 521-5899
- After Hours Hotline: (619) 516-1990

City Council Offices

Copies of all public and private sewer spills are to be emailed to all Council Offices impacted by the sewer spill.

Council District 1	joelacava@sandiego.gov	Council District 6	kentlee@sandiego.gov
Council District 2	jennifercampbell@sandiego.gov	Council District 7	raulcampillo@sandiego.gov
Council District 3	stephenwhitburn@sandiego.gov	Council District 8	vivianmoreno@sandiego.gov
Council District 4	henryfoster@sandiego.gov	Council District 9	seanelorivera@sandiego.gov
Council District 5	marnivonwilpert@sandiego.gov		

Navy Public Works Center (NAFAC Southwest Utilities Duty Desk)

If spill is from Navy/Marine Facilities or housing (excluding Marine Corps Recruit Depot):

- 24/7 – Duty Desk: (619) 556-7349

Storm Water Pollution Prevention Hotline:

All sewer spills, public or private, email Spill Report to: swppp@sandiego.gov and swpumpengpln@sandiego.gov

San Diego Police Department

If spill is due to vandalism, notify to conduct investigation:

- San Diego Police Dept. via Station #38: (619) 527-7663
- File Electronic Vandal Report (SDPD): (619) 531-2000

City of San Diego – Public Utilities Department – Environmental Standby Representative

GROUP 3

Sanitary Sewer Spills that reach surface waters including Mission Bay, Pacific Ocean, San Diego River, San Diego Bay, Penasquitos Lagoon, and Domestic Water Supply

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The Duty Supervisor will ensure that all the notification under this group is followed:

Marine Microbiology Lab

- During business hours (8 a.m. – 5 p.m.): (619) 758-2361
- WWCD Standby List and Notify On Call Biologist

City Council Offices

Copies of all public and private sewer spills are to be emailed to all Council Offices.

If flow reaches Mission Bay, notify all of the following:

- Mission Bay District Manager (Bay): Stacy McKenzie (619) 235-1154
- Mission Bay Park District Manager (Shoreline): Dan Daneri (619) 235-5914

For Sewer Spills of 1,000 gallons or more to surface waters, notify:

- Office of Emergency Services (OES): (800) 852-7550

If flow reaches Ocean Beach, Mission Bay, or the San Diego River west of 1-5, notify:

- S.D. Lifeguards Service: (619) 221-8800 (24 hrs)
- Also, email Michael Cranston: MGCranston@sandiego.gov

If flow reaches San Diego Bay, notify:

- National Wildlife Refuge – Brian Collins, Refuge Manager: (619) 778-2003
- San Diego Port District Environmental Management 8 a.m. – 5 p.m.
  - Week Days: (619) 686-6254
  - After Hours & Weekends: (619) 686-6254 Leave message.
  - Also, call Harbor Police: (619) 686-8000 (24 hrs)
- Living Coast Discovery Center (Gunpowder Point area):
  - Ben Vallejos, Executive Director: (619) 865-5317
  - Katharine Mathews, Facilities Manager: (619) 865-2734
- San Diego Bay FWS:
  - Jill Terp, Deputy Project Leader Jill_terp@fws.gov (619) 719-8579
  - Andy Yuen, Project Leader, Andy_yuen@fws.gov (760) 535-7065
- U.S. Fish and Wildlife Service Spill Response (24-hour number for all hazardous spills): (760) 607-9768

- Tijuana Slough and San Diego Bay National Wildlife Refuges:
    - Brian Collins, Refuge Manager: (619) 778-2003

If spill comes from Mexico, notify:

- Carlos Pena, IBWC Office (619) 210-1370, Cell (619) 405-4224, Home (915) 261-6569

If spill results in the posting at waters of another City, notify appropriate Public Works Director/Department below:

- **Imperial Beach:** Eric Minicilli (619) 423-8311
- **Coronado:** Clifford Maurer (619) 522-7380 (answering service)
- Del Mar:
    - Public Works (858) 755-3294
    - 24 hr Emergency Posting (858) 756-1126
- Chula Vista:
    - Public Works (619) 397-6000 (6:30 a.m. - 4 p.m. Mon – every other Fri)
    - After Hours Emergency (CVPD) (619) 691-5151
- National City:
    - Public Works (619) 336-4580 (6 a.m.- 4:30 p.m. Mon-Thu)
    - After Hours Emergency (NCPD) (619) 336-4411 ext. 0

If the spill reaches a Lake, Reservoir, or Other Domestic Water Supply, notify:

- Water System Operations Division:
    - Hooman Partow - Office (619) 533-7577 Call Station 38
    - Michael Williams - Office (619) 668-3233 Call Station 38
- State Department of Health Services
    - Sean Sterchi Office (619) 525-4922
- California Department of Fish and Wildlife:
    - Bill Paznokas Office – (858) 467-4218
- Lake Hodges (only):
    - Escondido CWA: Gary Eaton (760) 271-9208
    - Control Center (760) 480-5534
- R.E. Badger Filtration Plant:
    - Core Schaeffer Cell: (858) 602-7611
    - Core Schaeffer Home (760) 749-7510

Positions Responsible for SSMP Program Development and Implementation

General Order Reference	SSMP Element/Measure	Responsible Positions	Contact Name	Contact Phone Number
D.1	Sewer System Management Plan Goal and Introduction	Legally Responsible Official	Margaret Llagas Kent Vian	Office (858) 654-4494 Cell (858) 231-6574 Office (858) 654-4251 Cell (619) 983-6057
D.1.1	Regulatory Context	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.1.2	Sewer System Management Plan Update	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.1.3	Sewer System Asset Overview	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.2	Organization	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.3	Legal Authority	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.5, D.5.1, D.5.2	Design and Performance Provisions	Associate Civil Engineer - Engineering and Program Management - Technical Resources	Hersy Enriquez	Office (858) 654-4411
D.6	Spill Emergency Response Plan	WWC PWUS, Emergency Response	Jean Fernandes	Office (858) 614-5772 Cell (619) 517-6772
D.7	Sewer Pipe Blockage Control Program	WWC FEWD Program Manager	Neil Trainor	Office (858) 614-4022
D.8.4	System Evaluation and Capacity Assurance Plan – Capital Improvement Plan	Senior Civil Engineer –Engineering & Program Management	Melissa Faber	Office (858) 614-5712
D.8.2	System Evaluation and Capacity Assurance Plan – Capacity Assessment and Design Criteria	Senior Civil Engineer – WW Planning / Sewer Modeling & CCTV Condition Assessment	Huy Nguyen	Office (858) 292-6487
D.8.3	System Evaluation and Capacity Assurance Plan – Prioritization of	Senior Civil Engineer –Engineering & Program	Huy Nguyen	See above

General Order Reference	SSMP Element/Measure	Responsible Positions	Contact Name	Contact Phone Number
	Corrective Action	Management – WW Planning / Sewer Modeling & CCTV Condition Assessment		
D.9	Monitoring, Measurement And Program Modifications	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.10	Internal Audits	Legally Responsible Official	Margaret Llagas Kent Vian	See above
D.11	Communication Program	Legally Responsible Official	Margaret Llagas Kent Vian	See above

Responsible for SSMP Operations and Maintenance (O&M) Program Development and Implementation

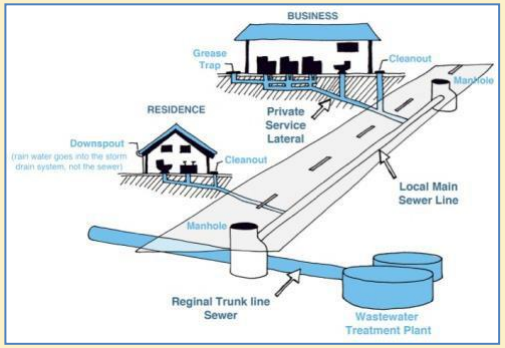
WDR Reference	SSMP O&M Program Measure	Responsible Positions	Contact Name	Contact Phone Number
D.4.1	Updated Map of Sanitary Sewer System	Associate Civil Engineer – WWC Operations Engineering	Jeff Van Every	Office (858) 654-4497
D.4.2	Preventative Operation and Maintenance Activities – Gravity Sewers	WWC GWUS – Cleaning	Terrell Powell	Office (858) 614-5731 Cell (619) 980-2429
D.4.2	Preventative Operation and Maintenance Activities – Planning and Scheduling for WWC	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planners)	Terrell Powell Kevin Evans Michele Wood	See above Office (858) 614-5769 Office (858) 614-5748
D.4.2	Preventative Operation and Maintenance Activities – WWC Pump Stations and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	Office (858) 614-4516 Office (858) 614-5768 Office (858) 654-4163
D.4.2	Preventative Operation and Maintenance Activities – WWTD Pump Stations No. 1 and No. 2 and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	See above
D.4.2	Preventative Operation and Maintenance Activities – Other WWTD Pump Stations and Force Mains	WWC GWUS, Sewer Pump Stations WWC Plant Technician Supervisor WWC Plant Maintenance Coordinators (Planners)	Ted Taylor Ray Burns (Metro PS) Daniel Carter (Muni PS)	See above
D.8.1	System Evaluation and Condition Assessment – Planning and Scheduling for WWC System	Senior Civil Engineer – Engineering & Program Management Condition Assessment Senior Civil Engineer – Engineering & Program Management – WW Planning / CCTV Condition Assessment	Ray Ngo Huy Nguyen	Office (858) 654-4173 See above
D.8.1	System Evaluation and Condition Assessment – Condition Assessment of Trunk Sewers, Interceptor Sewers, Gravity Sewer Mains, Manholes, WWTD and WWC Pump Stations and Force Mains	Senior Civil Engineer – Engineering & Program Management WW Planning / Sewer Modeling and CCTV Condition Assessment	Huy Nguyen	See above

WDR Reference	SSMP O&M Program Measure	Responsible Positions	Contact Name	Contact Phone Number
D.8.1	System Evaluation and Condition Assessment – CIP and Schedule	Senior Civil Engineer – Engineering & Program Management WW Planning / Sewer Modeling and CCTV Condition Assessment	Huy Nguyen	See above
D.8.1	System Evaluation and Condition Assessment – City Crew Repairs and Rehabilitation	WWC GWUS, Construction	Sean Willis	Office (858) 654-4132 Cell (760) 705-7541
D.8.1	System Evaluation and Condition Assessment – City Crew CCTV Inspection	WWC GWUS – Cleaning WWC Plant Maintenance Coordinators (Planner)	Terrell Powell	See above
D.4.3	Training	WWC GWUS, Cleaning and Emergency Response	Terrell Powell	See above
D.4.4	Equipment Inventory – WWC Pump Stations and Force Mains	WWC GWUS – Sewer Pump Stations Operations WWC Principal Plant Technician Supervisor	Melody Shaw-Sydnor Ted Taylor	See above
D.4.4	Equipment Inventory – WWTD Pump Stations No. 1 and No. 2 and Force Mains	WWTD WW Chief Plant Operator	Tim Carroll	Office (661) 406-6675
D.4.4	Equipment Inventory – Other WWTD Pump Stations and Force Mains	WWTD WW Chief Plant Operator	Tim Carroll	See above
D.4.4	Equipment Inventory - Gravity Sewers	WWC GWUS, Cleaning and Emergency Response and WWC GWUS, Construction	Terrell Powell Sean Willis	See above

Appendix B. Sewer Spill Reference Guide Pamphlet: Your Responsibilities as a Private Property Owner

How a Sewer System Works

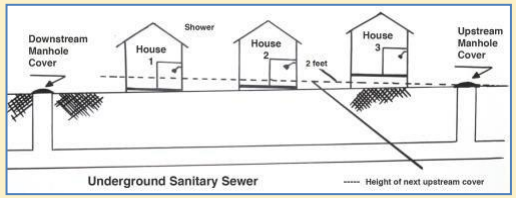
A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines.
Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping* ***shall*** *be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer spillsor surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves* ***shall*** *be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

City of San Diego (619) 515-3525

Discharge of untreated or partially treated sewage is prohibited by law. If you would like more information on this prohibition, please contact any of the following:

Department of Environmental Health and Quality
(858) 505-6700 or (800) 253-9933

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

San Diego Regional Water Quality Control Board:
(619) 516-1990
Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES): (800) 852-7550

California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.

Sewer Spill Reference Guide

The City of SAN DIEGO

Your Responsibilities as a Private Property Owner

Provided to you by:

City of San Diego
9150 Topaz Way
San Diego, CA 92123
(619) 515-3525

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes spills through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

CAUTION!

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Call for assistance: (619) 515-3525

Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer systemthrough pipe defects and illegal connections

Prevent most sewage backups with a BackflowPrevention Device

This type of device can help prevent sewage backups intohomes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lidsonto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls,ground/landscape around a building.

The following are indicators of a possible obstruction inyour sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drainvery slowly.

What to do if there is a spill:

Immediately notify the City of San Diego. Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for clean-up.If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or notusing the water
- Keep sewage out of the storm drain system usingsandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and makerepairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Sewer Contractors."
- Always notify your sewer/public works department orpublic sewer district of sewage spills.

Spill clean-up inside the home:

For large clean-ups, a professional cleaning firm should becontacted to clean up impacted areas. If you hire a contractor, it is recommended to get estimates from morethan one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean-up.

Other Tips:

- Keep children and pets out of the affected area untilclean-up has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles duringclean-up of the affected area.
- Discard items that cannot be washed and disinfected(such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that hasbeen contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring,concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units,and dehumidifiers.
- After completing clean-up, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Letit stand for 30 min. If water is cloudy, use ¼ teaspoon ofhousehold bleach per 1 gallon of water.
- Wash clothes worn during clean-up in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until youronsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill clean-up outside the home:

- Keep children and pets out of the affected area untilclean-up has been completed.
- Wear rubber boots, rubber gloves, and goggles duringclean-up of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place ingarbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drainas the bleach can harm the environment.
- After clean-up, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per1 gallon of water.
- Wash clothes worn during clean-up in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until youronsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

Appendix C. Door Hanger

The City *of*
SAN DIEGO

On (date)_____, at

(location)_____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ The City-maintained portion of your sanitary sewer lateral and cleared the line.
- ☐ Your portion of the sanitary sewer lateral, which is your responsibility to maintain. We also found the City's portion of the lateral and the main to be flowing normally.

If you require assistance to clear your portion of the lateral you can search the internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor we recommend getting estimates from more than one company.

City of San Diego representative notes:

_____
_____
_____

City of San Diego Representative:

_____

For questions or comments, please call:

(619) 515-3525

The City *of*
SAN DIEGO

On (date)_____, at

(location)_____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ The City-maintained portion of your sanitary sewer lateral and cleared the line.
- ☐ Your portion of the sanitary sewer lateral, which is your responsibility to maintain. We also found the City's portion of the lateral and the main to be flowing normally.

If you require assistance to clear your portion of the lateral you can search the internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor we recommend getting estimates from more than one company.

City of San Diego representative notes:

_____
_____
_____

City of San Diego Representative:

_____

For questions or comments, please call:

(619) 515-3525

Appendix D. Warning Sign

Spill Emergency Response Plan
Public Posting

DANGER

RAW SEWAGE • AVOID CONTACT

PELIGRO

AGUA CONTAMINADA • EVITE TODO CONTACTO

City of San Diego
(619) 515-3525

Appendix E. Sanitary Sewer Spill/Backup Response Workbook

The City of SAN DIEGO

Spill Emergency Response Plan

Sanitary Sewer Spill and Backup Response Workbook

INSERT TAB:
Start Here

- ☐ If this is a Category 1 Sewer Spill greater than or equal to 1,000 gallons, **immediately notify the Senior Shift Supervisor** to make the notification to CalOES within 2 hours.
- ☐ **For Category 1 Sewer Spills:** Beach & Bay Advisory Hotline Land and Water Quality Division at (619) 338-2073. After hours contact HIRT (Hazardous Incident Response Team) at (858) 505-6657.
- ☐ **Refer to the Regulatory Reporting Guide** for additional reporting requirements.
- ☐ **If there is a backup into a residence or business:** Contact the Engineering Section's designee for assessment of damages.
- ☐ **For Water Sampling:** EMTS Marine Microbiology Laboratory (619) 758-2300
- ☐ **For Restoration/Remediation:** Senior Shift Supervisor will contact dispatch for restoration contractor.
- ☐ **For any media inquiries/requests:**
  Public Information Officer (619) 533-4571

Don't forget to take photos!

Wastewater Crew:	Print Name: _____
☐ Follow the instructions on the Spill/Backup Response Flowchart and complete forms in this workbook as indicated. ☐ Complete the chain of custody record (to the right) and deliver this workbook to the Senior Water Utility Supervisor.	Initial: _____ Date: _____ Time: _____

Senior Water Utility Supervisor:	Print Name:
☐ Review the Spill Event Checklist and the forms in this booklet. Contact the Wastewater Crew for additional information if necessary. ☐ Confirm that all required regulatory notifications have been made. ☐ If this was a Sewer Backup, complete the Backup Forms Checklist. ☐ Complete the Collection System Failure Analysis Form. ☐ Enter data into CIWQS. ☐ Complete the Chain of Custody record (right) and file this booklet	Initial: _____ Date: _____ Time: _____

Sewer Spill Event Checklist

Date of Spill: _____ Spill Location/Name: _____

CIWQS Event ID #: _____ Category? □ 1 □ 2 □ 3 □ 4 OES#: _____

Property Damage? □ Yes □ No Work Order #:

- ☐ Effort made to contain and return a portion/all tothe sanitary sewer
- ☐ Pictures/video taken of sewer spill
- ☐ Pictures taken of affected/unaffected area
- ☐ If property damage, start that process
- ☐ Pictures taken of containment efforts
- ☐ If Cat 1 > 1000 gals:
  OES Control #
- ☐ Impacted waters identified?
- ☐ No impacted waters?
- ☐ Spill Report Form Complete (includes fields forall required fields in CIWQS, and a sketch of spill)
- ☐ Volume Estimation Worksheet(s) done
- ☐ Start Time Determination Form done
- ☐ Initial review of forms is complete (ensure consistency with dates, times, volumes, andother data)
- ☐ Review of photos and videos (label/date)
- ☐ Start Folder for all documentation for this sewer spill event. Put everything in it (Field Reports, Worksheets/Forms, follow-up work orders, notes,pics, drawings, etc. CIWQS print outs and emails)
- ☐ Failure Analysis
  - TV to determine cause
  - Review Asset History
- ☐ Determine next steps to prevent recurrence
- ☐ Document findings and next steps on SpillReport
- ☐ Submit Draft in CIWQS w/in 3 business days (forCategories 1 and 2 only)
- ☐ Print CIWQS Draft hard copy and email
- ☐ Review CIWQS, Spill Report, Worksheets, CMMS,and any other documentation to ensure data is consistent (e.g., dates, times, volumes, cause, follow-up action, etc.
- ☐ Attach photos, forms etc. to CIWQS
- ☐ Submit Ready to Certify in CIWQS (with sufficienttime for P.W.U.S. review)
- ☐ Print CIWQS Ready to Certify and email
- ☐ Hand folder to LRO
- ☐ LRO review folder and CIWQS verify for accurateand consistent data
- ☐ Certify in CIWQS (within 15 calendar days forCategories 1 & 2, 30 days after the spill for Categories 3 & 4)
- ☐ Print Certified CIWQS and email
- ☐ Any changes? Change in CIWQS and hard copiesand explain changes, print our current version
- ☐ Move completed folder to Spill Binder
- ☐ For 50, 000 gallons or larger
  - □ Follow Water Quality Monitoring andSampling procedures
  - □ Map of where samples were taken
  - □ Sampling results
  - □ Write Technical Report
  - □ Attach to CIWQS
  - □ Add to Spill Folder/Binder
- ☐ If any changes are made to SSMP
  - □ Update SSMP and link on CIWQS to SSMP
  - □ Add change to SSMP Change Log
  - □ If change is substantive, re-certify SSMP

INSERT TAB:
Regulatory Reporting

Internal Notifications:
If this is a Category 1 Sewer Spill, or if a business has been impacted by a mainline stoppage sewer backup, or ifresidents are displaced from their home due to a mainline blockage: Notify the Deputy Director or their designee using the Supervisor Spill Text Notification (B-4). They will make any additional internal notifications at their discretion.

External Notifications:

Deadline	Category 1 Sewer Spill	Category 2	Category 3	Category 4	PLSD
Within 2 hours after awareness of sewer spill	• Contact Beach & Bay Advisory Hotline during business hours, or HIRT after hours. • If the spill is greater than or equal to 1,000 gallons, call CalOES. • Notify San Diego County Department of Environmental Health	-	-		-
As soon as possible	• Notify Technical Services Microbiology • If flow reaches Mission Bay, notify Mission Bay District Manager and Mission Bay ParkDistrict Manager • If flow reaches Ocean Beaches, Mission Bay,or San Diego River, West of I-5, notify San Diego Lifeguards Service. • If flow reaches San Diego Bay, notify SanDiego Port District Environmental Management. • If spill comes from Mexico, notify IBWC Office • If spill results in posting at waters of anotherCity, notify the appropriate Public Works Director/Department • If spill reaches a lake, reservoir, or other domestic water supply, notify Water System Operations Division, State Department Health services, California Dept of Fish and Wildlife, and Escondido CWA (Lake Hodges only)	-	-		-
	• Notify Storm Water Pollution Prevention Hotline. • Notify City Council Offices • If spill is from Navy/Marine Facilities, or housing (excluding The Marine Corps Recruit Depot), immediately notify, the Navy Public Works Center(NAFAC Southwest Utilities). • If spill is due to vandalism, notify San Diego Police Department to conduct investigation. • If spill impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the city, notify theClaims Office.				-
Within 24 hours	Notify San Diego RWQCB*	-	-		Notify San Diego RWQCB if ≥ 1,000 gal and reached, or probably will be discharged to, surface water

Deadline	Category 1 Sewer Spill	Category 2	Category 3	Category 4	PLSD
18 Hours after awareness of sewer spill	If 50,000 gal or more were not recovered, begin water quality sampling.	-	-		-
3 Business Days after awareness of sewer spill	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-		-
15 Days after response conclusion	Certify Spill Report in CIWQS. Update as needed until 120 days after spill end date.	Certify Spill Report in the CIWQS database. Update as needed until 120 days after spill end time.			
30 Days after end of calendar month in which sewer spill occurred	-	-	Certify Spill Report in CIWQS. Update as needed until 120 days after spill end date.	Report/certify monthly total spill volume & total number of Category 4 spills	Enter Spill Report in CIWQS.
45 days after sewer spill end date	If 50,000 gal or more were not recovered, submit Sewer Spill Technical	-	-		-

* Can report by phone, email or fax. Information that must be reported: Name and phone number of person reporting, responsible agency (City of San Diego), impacted surface waters (if any), start date and time of the spill (if known), spill end date and time, and confirmation that the local health services agency has or will be notified.

Note: For reporting purposes, if one sewer spill event results in multiple appearance points, complete one spill report in the CIWQS Sewer Spill Online Database, and report the location of the spill failure point, blockage or location of the flow condition that caused the spill, including all the discharge points associated with the spill event.

Sewer Spill Categories and PLSDs:

Category 1: Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

Category 2: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire spill discharged to the storm drain system is fully recovered and disposed of properly.

Category 3: Discharges of untreated or partially treated wastewater of equal to or greater than 50 gallons and less than 1,000 gallons, resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire spill discharged to the storm drain system is fully recovered and disposed of properly.

Category 4: Discharges of untreated or partially treated wastewater of less than 50 gallons, resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire spill discharged to the storm drain system is fully recovered and disposed of properly.

Private Lateral Sewage Discharge (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately-owned lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of will be reported to the California Integrated Water Quality System (CIWQS) Online Sewer Spill Database.

Please see Notification Contact List attachment for current list with names and contact information.

Authorized Personnel:

The City's Legally Responsible Officials (LROs) are authorized to perform regulatory reporting of sewer spills and toelectronically sign and certify spill reports in CIWQS. The LROs are:

- Deputy Director
- Assistant Deputy Director

Contact Information:

Contact	Telephone/Email
Beach & Bay Advisor Hotline (Land and WaterQuality Division)	Business hours: (619) 338-2073 Email: LWQDuty.DEHQ@sdcoounty.ca.gov After hours: Contact HIRT
CalOES	(800) 852-7550
California Dept ofFish and Wildlife	Office(858) 467- 4218
City CouncilOffices	District 1: District 2: District 3: District 4: mailto:seanelorivera@sandiego.gov District 5: mailto:marnivonwiplert@sandiego.gov District 6: mailto:chriscate@sandiego.gov District 7: mailto:raulcampillo@sandiego.gov District 8: District 9:
Claims Office	Sr Claims Adjustor
County Department of EnvironmentalHealth	During Business Hours 7 a.m. – 4 p.m. M-F Environmental Health Specialists County Communications Dispatch:
Escondido CWA(Lake Hodges only)	Control Center
HIRT (Hazardous Incident Response Team)	After hours: (858) 505-6657 Business hours: Contact B&B, see contact information above.
IBWC Office	
Mission Bay	Mission Bay District Manager (Bay): Mission Bay Park District Manager (Shoreline):
Navy Public Works Center	24/7 Duty Desk: (619) 556-7349 Supervisor for Environmental Spill Protection: (619) 532-2273

Contact	Telephone/Email
Public Works Directors/Departments	**Imperial Beach:** **Coronado:** **Del Mar:** Public Works **Chula Vista**: Public Works After Hours Emergency (CVPD) **National City**: Public Works After Hours Emergency (NCPD)
S.D. Lifeguards Service	(619) 221-8800 (24 hrs) Also, email Lifeguard Sergeant
San Diego Police Department	Station #38: (619) 527-7663
San Diego Port DistrictEnvironmental Management	8 a.m. – 5 p.m. Week Days: (619) 686-6254 After Hours & Weekends: (619) 686-6254 (leave message) Also, call Harbor Police: (619) 686-6272 (24 hrs)
State Department Health services	
State Water ResourcesControl Board Walter Mobley	(916) 323-0878 Walter.Mobley@waterboards.ca.gov
Stormwater Pollution Prevention Hotline	(858) 541-4360
Technical Services Microbiology	During business hours (8am– 5pm): (619) 758-2361 Email Deputy Director & Biologist
Water System Operations Division	Deputy Director, Call Station 38
R.E. Badger Filtration Plant	

Notifications Log

Agency	Date/Time	Spoke to/Left Message	Notes

Please see Notification Contact List attachment for current list with names and contact information.

Please follow the event notification process for reporting spills (Sewer Spills, SSB, and PLSD). To disseminate critical information to management regarding any sewer spill, S.W.U.S staff, Standby Supervisor, and OCA personnel **will respond to the spill location.** Once a sewer spill has been confirmed, the following information needs to be provided immediately via text to PWUS ER Section. **If unavailable**, please contact GWUS or your direct supervisor. This includes ER Days, Nights, Weekend Shift, & Standby Duty Supervisors.

SUBJECT TEXT: PRELIMINARY NOTIFICATION-CITY/ PRIVATE SEWER SPILL

• OES #:_____ TIME:_____(within 2 hours of notification)

• NOTIFICATION:_____ TIME:_____ DATE:_____ ORDER:_____

• ADDRESS/LOCATION:_____

• MAIN EQ:_____ LATERAL EQ:_____

• MANHOLE EQ:_____

• CAUSE OF SPILL:_____

• LAST CLEANED DATE:_____

• RATE – GPM:_____

• ESTIMATED TOTAL GALLONS SPILLED:_____

• FINAL SPILL DESTINATION:_____

• ANY DAMAGES:_____

• CORRECTIVE ACTIONS:_____

• CONTACT DEPUTY DIRECTOR FOR DETAILS.

LUTH & TURLEY: (On Call Supervisor) **619-579-8673 press #9**
SSB/Sewer Spill Damage Investigators – WWC Engineering Section

PLEASE READ THE DEFINITION FOR SSB BELOW:

SSB – A wastewater backup into a building or solely onto private property from a private lateral that is caused by a blockage or other malfunction in the Collection System and ***has caused damages to private property.(Have dispatch call out the private restoration company, Luth and Turley to mitigate damages).***

Please see Notification Contact List attachment for current list with names and contact information.

SWUS - PRIMARY NOTIFICATION CONTACTS

PWUS, Emergency Response Section

SWOS, Pump Station Section

EXCLUDE FROM NOTIFICATIONS BELOW PERSONNEL: NOTIFIED BY GWUS OR PWUS ONLY

Deputy Director, Wastewater Collection Division

Assistant Deputy Director, Wastewater Collection Division

Public Information Officer, Communications Department

Deputy Director, Customer Support, Public Utilities Department

Director, Public Utilities Department

Executive Assistant Director, Public Utilities Department

Assistant Director, Water Recovery Branch, Public Utilities Department

INSERT TAB:
Flowchart

Spill/Backup Response Flowchart

Start Here

Does the spill/backup appear to be due to a problem in the **City-owned/maintained** sewer line?

NO

This is a Private Lateral Sewage Discharge (PLSD)

1. Notify the property owner that the blockage is in their private lateral and that the City does not have legal authority to maintain or perform work on privately-owned laterals.
2. Give customer the "Your Responsibilities as a Private Property Owner" pages.
3. Recommend to customer they hire a contractor to clear their line.
4. If customer is not home:
   - Complete Door Hanger and leave on customer's door.
   - Leave a message on the customer's voicemail.
5. Contact Shift Supervisor to notify the Regional Water Quality Control Board.
6. If the property owner is unable or unwilling to address the cause of the spill, immediately contact the Shift Supervisor and discuss whether Code Enforcement or the County Department of Environmental Health should be notified.
7. If you are directed to break the stoppage and clean up the PLSD, Be sure to document City staff time and equipment used for potential billing purposes, and take pictures.

YES

1. Document arrival time.
2. Consider the need to call out additional staff, contractor or mutual aid assistance.
3. If it is possible that this is a Category 1 Sewer Spill greater than or equal to 1,000 gallons, immediately contact Shift Supervisor to makethe 2-hour notification to CalOES.

1. **Document the service call according to City procedures.**
2. **STOP. Do not continue to PAGE 2**

BEGIN DIVERSION AND CONTAINMENT, AS NECESSARY

1. DIVERT AWAY FROM SENSITIVE AREAS:

a. Cover unplugged storm drains w/mats, or use dirt/other material to divert sewage away from sensitive areas (e.g., schools, playgrounds, intersections, etc.)

b. ENSURE PUBLIC CONTACT DOES NOT OCCUR. Use cones/barricades to isolate area.

2. CONTAIN SPILL & RETURN TO SYSTEM, IF POSSIBLE:

a. Plug storm drain catch basins and divert flow to catch basin or use rubber mats to cover basin inlet.

b. Build/excavate a berm to channel flow to downstream sanitary sewer manhole (*barricade manhole if left open)*

c. Use bypass pumps to pump around blockage until it can be removed

d. Divert to low area of ground where it can be collected later

3. PHOTOGRAPH HOW THE SPILL WAS DIVERTED/CONTAINED, AS APPROPRIATE

ADDRESS CAUSE OF SPILL/BACKUP ASAP

1. For pump station related Spills/Backups refer to that station's Emergency Response Plan.
2. For Spills/Backups not related to a pump station, relieve the stoppage. Note the distance from themanhole and catch/remove debris that could cause another stoppage. After flow has returned to normal, clean the pipe thoroughly.
3. Photograph staff activities while clearing the blockage, as appropriate.

Go to PAGE 2

Continue from PAGE 1

Has the spill reached surface waters?

YES

1. If any recreational water body has been impacted due to spill, post signs warning public of contaminated water to prevent exposure and any potential risk. If the City is unable to post signs for any reason, notify County Environmental Health so they can arrange for signs to be posted.
2. Shift Supervisor: Contact Beach & Bay Advisory Hotline during business hours, or HIRT after hours.
3. Consider the need to sample surface waters the spill may have reached:
   - If preliminary volume estimates of the spill are 50,000 gallons or greater, begin collecting as soon as possible but no later than 18 hours after becoming aware of the spill.
   - If people are fishing or swimming in the waters, collect samples regardless of the volume of the spill.
4. Refer to and follow the sampling standard operating procedure (SOP).

NO

Is it feasible/practical to contain/recover any of the spill from the surface waters?

NO

YES

Contain/recover/clean up as much of the spill in the waters and shoreline as possible. Contact the Principal Water Utility Supervisor to request outside assistance, as appropriate.

Were storm drains impacted?

YES

STORM DRAIN CLEANING SOP

1. Seal or berm the storm drain immediately downstream of point the spill reached
2. Photograph impacted storm drain catch basins before cleaning
3. Vacuum any visible sewage – *Record the volume of sewage recovered*
4. Using dechlorinated water, flush impacted sections of storm drain with 3X amount of spill, if possible – *Record volume of flush water*
5. Ensure all visible signs of sewage have been removed
6. Return flush water to sanitary sewer – *Record volume of flush water recovered*
7. Photograph storm drain catch basins after cleaning is completed

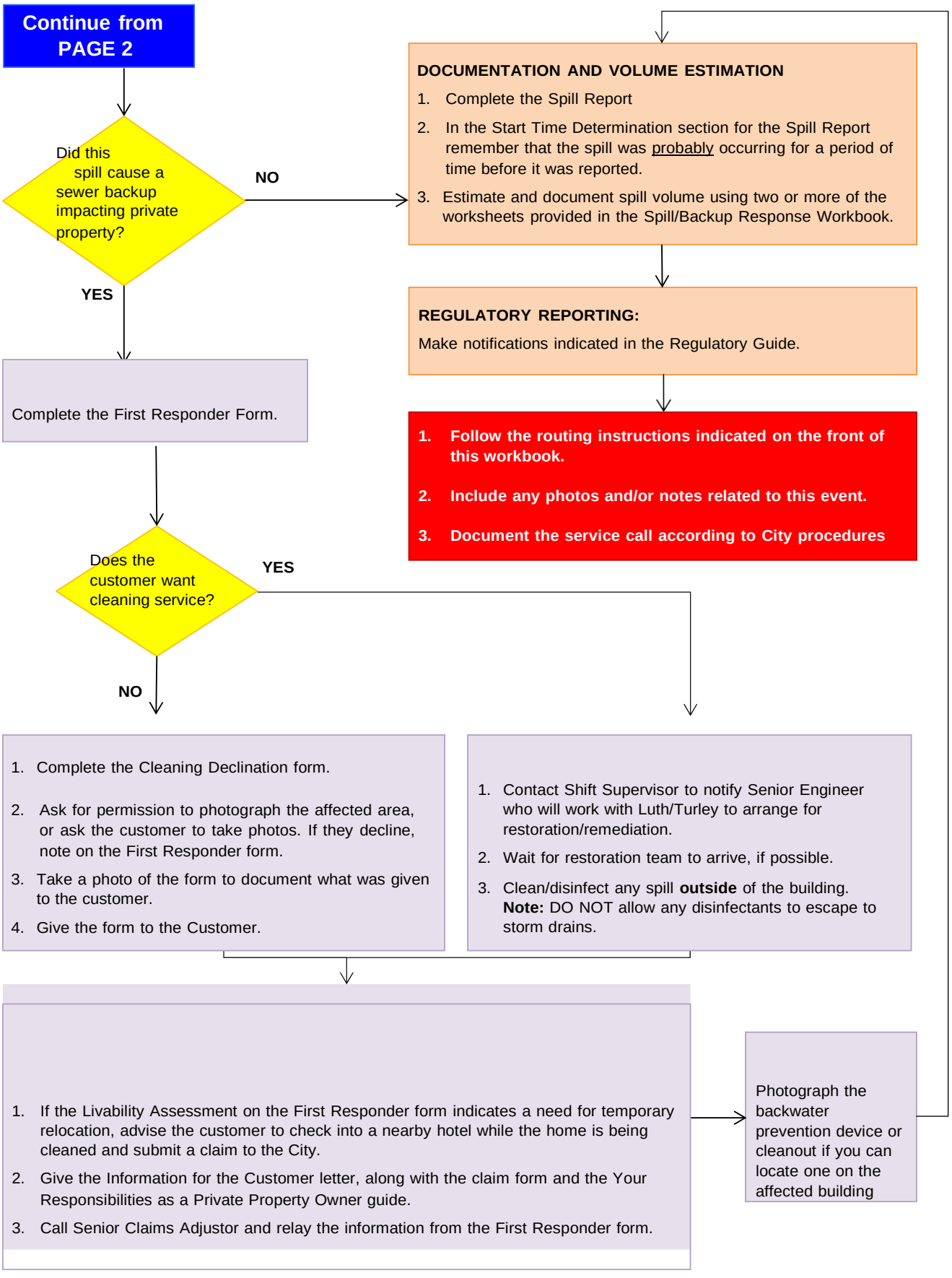
NO

IMPACTED AREA CLEAN-UP, AS NECESSARY

1. **Assign staff to begin clean-up.** If you might use the area measured volume method to estimatethe volume, draw a sketch of the spill footprint and capture dimensions before washing it down.
2. **Remove all signs of gross pollution** with a shovel, broom, and bucket. (toilet paper, solids, grease, etc.)
3. **Flush area w/dechlorinated water – Unless raining.** (*3X amount of spill, if possible)*
   a. Setup berm/other means to contain all water so it can be returned to sewer
   b. Don't use disinfectants if they may enter storm drain system and not be fully recovered or if they may enter a water body
4. **Address saturated soil** with removal and/or in-place treatment, depending on the extent of the contamination, the location, and land use. Take measures to prevent accidental contact by the public. NOTE: addressing saturated soil may involve returning to the site one or more days after the spill event.
5. **Photograph the area when clean-up operations are complete**

Go to PAGE 3

Spill/Backup Response Flowchart



INSERT TAB:
Sewer Spill Report

PHYSICAL LOCATION DETAILS	
Spill location name	
Latitude of spill location	
Longitude of spill location	
County	San Diego
Regional Water Quality Control Board	San Diego – Region 9

VOLUMES BY DESTINATION	Volume Spilled (Gallons)	Volume Recovered (Gallons)
2.a/2.b Estimated spill volume that reached a separate storm drain that flows to a surface body of water? (If not all recovered, this is a Category 1)		
2.c/2d Estimated spill volume that directly reached a drainage channel that flows to a surface water body? (Any volume spilled is a Category 1)		
2.e/2.f Estimated spill volume discharged directly to a surface water body? (Any volume spilled is a Category 1)		
2.g/2.h Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures).		
	Volume Spilled	**Volume Recovered**
Total Volume Spilled (Verify this matches the table in between 2.h and 3 in CIWQS)		

Information that was relied on to estimate the volume that reached surface waters (if applicable):

DATE/TIME DETERMINATIONS		
	DATE	**TIME**
Start of Sewer Spill (Use Start Time Determination/NotesBelow)		
Agency Notified		
Collection System Operator Dispatched		
Collection System Operator Arrived		
End of Sewer Spill		
End of Spill Response		

Start Time Determination/Notes

Don't forget to take photos!

Witness 1: _____
Name Contact Information

Where did you see sewage spill from?

Manhole Inside Building Vent/Clean Out Catch Basin Wet Well/Lift Station Other: _____

When did you notice the sewage spilling? _____ AM / PM Date_____ /_____/_____

When did you last observe **NO Spill** occurring?_____AM / PM Date_____ /_____/_____

Comments: _____

_____

Witness 2: _____
Name Contact Information

Where did you see sewage spill from?

Manhole Inside Building Vent/Clean Out Catch Basin Wet Well/Lift Station Other: _____

When did you notice the sewage spilling? _____ AM / PM Date_____ /_____/_____

When did you last observe **NO Spill** occurring?_____AM / PM Date_____ /_____/_____

Comments: _____

_____

Witness 3: _____
Name Contact Information

Where did you see sewage spill from?

Manhole Inside Building Vent/Clean Out Catch Basin Wet Well/Lift Station Other: _____

When did you notice the sewage spilling? _____ AM / PM Date_____ /_____/_____

When did you last observe **NO Spill** occurring?_____AM / PM Date_____ /_____/_____

Comments: _____

_____

Start Time Determination/Notes continued

If the volume of the spill and rate of flow are known, divide volume by rate of flow to get duration of spill event.

Gallons ÷____GPM = Minutes (Sewer Spill Duration).

Subtract the Duration from the Spill End Date/Time to establish the Spill Start Date/Time.

Other Efforts to Determine Start Time:

_____

_____

_____

_____

Other Comments Regarding Spill Start Time:

_____

_____

_____

_____

Estimated Spill Start Time: _____ AM / PM Date:_____/_____/

Spill End Time: _____ AM / PM Date:_____/_____/

SEWER SPILL FIELD REPORT
Spill location description:
Number of appearance points:
Spill appearance points: (Check all that apply) ☐ Backflow Prevention Device ☐ Force Main ☐ Gravity Mainline ☐ Inside Building/Structure ☐ Lateral Clean Out (Private/Public) ☐ Lower Lateral (Private/Public) ☐ Manhole ☐ Pump Station ☐ Upper Lateral (Private/Public) ☐ Other Sewer System Structure:
Spill appearance point explanation. (Enter information here if “Other” or multiple appearance points were selected):
Description of terrain surrounding the point of discharge/spill, including the direction of theflow:
Final spill destination: (Check all that apply) ☐ Building/Structure ☐ Combined Storm Drain ☐ Drainage Channel ☐ Other (Specify Below) ☐ Paved Surface ☐ Separate Storm Drain ☐ Street/Curb and Gutter ☐ Surface Water ☐ Unpaved Surface
Explanation of final spill destination (Enter information if “Other” was selected):

SEWER SPILL FIELD REPORT

Spill cause: (Check One)

- ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV)/Backwater Valve Failure
- ☐ Construction Diversion Failure
- ☐ CS Maintenance Caused Spill/Damage
- ☐ Damage by Others Not Related to CS Construction/Maintenance (Specify Below)
- ☐ Debris from Construction
- ☐ Debris from Lateral
- ☐ Debris-General
- ☐ Debris-Rags
- ☐ Debris Wipes/Non-Dispersible
- ☐ Flow Exceeded Capacity (Separate CS Only)
- ☐ Grease Deposition (FOG)
- ☐ Inappropriate Discharge to CS
- ☐ Natural Disaster
- ☐ Operator Error
- ☐ Other (Specify Below)
- ☐ Pipe Structural Problem/Failure
- ☐ Pipe Structural Problem/Failure – Installation
- ☐ Pump Station Failure – Controls
- ☐ Pump Station Failure – Mechanical
- ☐ Pump Station Failure – Power
- ☐ Rainfall Exceeded Design, I and I (Separate CS Only)
- ☐ Root Intrusion
- ☐ Siphon Failure
- ☐ Surcharged Pipe (Combined CS Only)
- ☐ Vandalism

Spill cause explanation: (Required if Spill Cause is “Other”)

SEWER SPILL FIELD REPORT		
Where did failure occur? ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure ☐ Force Main ☐ Gravity Mainline ☐ Lower Lateral - Public ☐ Manhole ☐ Other (Specify Below) ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Siphon ☐ Upper Lateral - Private		
Explanation of where failure occurred: (Required if Where Failure Occurred is “Other”)		
Was spill associated with a storm event?	YES	NO
Diameter of sewer pipe at the point of blockage or failure:	inches	
Material of sewer pipe at the point of blockage or failure:		
Estimated age of sewer asset at the point of blockage or failure (if applicable):	years	
Spill Response Activities. (Check all that apply) ☐ Cleaned-Up ☐ Mitigated Effects of Spill ☐ Contained All or Portion of Spill ☐ Other (Specify Below) ☐ Restored Flow ☐ Returned All Spoil to Sanitary Sewer System ☐ Property Owner Notified ☐ Other Enforcement Agency Notified		
Explanation of spill response activities: (Required if spill response activities is “Other”):		

SEWER SPILL FIELD REPORT		
Spill corrective action taken: (Check all that apply) ☐ Add location to, or increase frequency check, in Preventive Maintenance Program ☐ Adjusted Schedule/Method of Preventive Maintenance ☐ Enforcement Action Against FOG Source ☐ Inspected Sewer Using CCTV to Determine Cause ☐ Other (Specify Below) ☐ Plan Rehabilitation or Replacement of Sewer ☐ Repaired Facilities or Replaced Defect		
Explanation of corrective action taken: (Required if spill corrective action is “Other”)		
Is there an ongoing investigation?	YES	NO
Health warnings posted?	YES	NO
Did spill result in beach closure?	YES	NO
Name of Impacted Beach(es): (Enter N/A if none)		
Name of impacted surface waters:		
Information relied on to determine whether any portion of the spill reached a surface water:		

SEWER SPILL FIELD REPORT
Water quality samples analyzed for: (Check all that apply) ☐ Dissolved Oxygen ☐ Other Chemical Indicators(s) – Specify Below ☐ Biological Indicator(s) – Specify Below ☐ No Water Quality Samples Taken ☐ Not Applicable to the Spill ☐ Other (Specify Below)
Explanation of water quality samples analyzed for: (Required if water quality samples analyzed for is "Other chemical indicator(s)", "Biological indicator(s)", or "Other")
Water quality samples analyzed for: (Check all that apply) ☐ Dissolved Oxygen ☐ Other Chemical Indicators(s) – Specify Below ☐ Biological Indicator(s) – Specify Below ☐ No Water Quality Samples Taken ☐ Not Applicable to the Spill ☐ Other (Specify Below)
Explanation of water quality sample results reported to: (Required if water quality sample results reported to is “Other”)
Method and explanation of volume estimation methods used: (Check all that apply) ☐ Eyeball Estimate ☐ Measured Volume ☐ Duration and Flow Rate ☐ Counting Upstream Connections ☐ Other (Explain):

INSERT TAB:
Volume Estimation

Miscellaneous Computations & Examples

To convert inches to feet (NOTE: for the purposes of this worksheet, the unit of measurement will be in feet for formula examples)	Divide the inches by 12 or use the chart on the right. **Example 1:** 27" ÷ 12 = 2.25' **Example 2:** 1¾" = ?' 1" (0.08') + ¾" (0.06') = 0.14'
Volume of one cubic foot	7.48 gallons of liquid
Area: Two-dimensional measurement represented in square feet (SQ/FT or ft^2)	Square/rectangle: Area = Length x Width Circle: Area = π x r^2 (where π ≈ 3.14 and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet (CU/FT or ft^3)	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = π x r^2 x Depth (where π ≈ 3.14 and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Wet Stain on Concrete or asphalt surface	If the depth is not measurable because it is only a wet stain, use the following estimated depths: Depth of a wet stain on concrete surface: 0.0026' (1/32") Depth of a wet stain on asphalt surface: 0.0013' (1/64") These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error. One gallon of water was poured onto both asphalt and concrete surfaces. Once the area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. This process was repeated several times.
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Use that number in your formula to determine volume.

Convert Inches to Feet

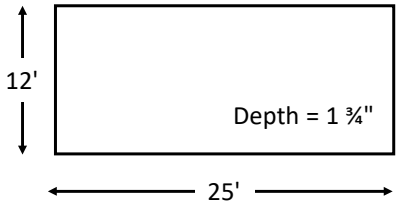
Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Miscellaneous Computations & Examples (continued)

Convert Inches to Feet	
Inches	**Feet**
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Area/Volume of a Rectangle or Square

Formula: Length x Width x Depth = Volume in **cubic feet**



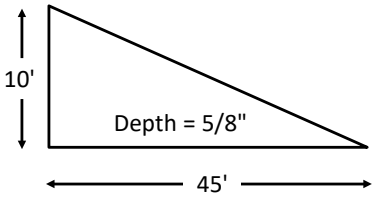
25' (Length) X 12' (Width) X 0.14' (Depth) = **42 Cubic Feet** (Volume)

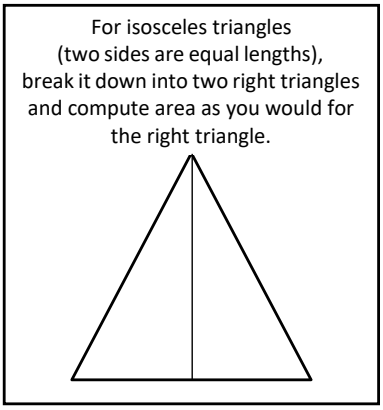
Multiply the volume by 7.48 gallons to determine the volume in **gallons**:

42 ft³ (Volume) X 7.48 (gal/ft³) = **314.16 gallons** (Volume)

Area/Volume of a Right Triangle

Formula: ½ x Base x Height x Depth = Volume in **cubic feet**



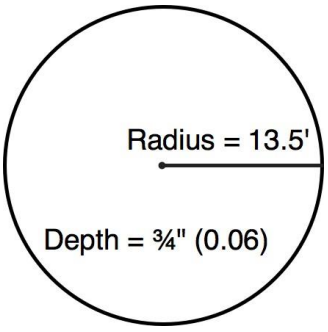


0.5 X 45' (Base) X 10' (Height) X 0.05' (Depth) x 7.48 (gal/ft³) = 84.15 gallons (Volume)

Area/Volume of a Circle

Formula: π x r² x Depth = Volume in **cubic feet**

The radius is ½ the diameter, which is a straight line passing from side to side through the center of a circle.



13.5' (Radius) X 13.5' (Radius) X 3.14 (π) X 0.06' (Depth) x 7.48 (gal/ft³) = 256.8 gallons (Volume)

Volume Estimation: Eyeball Estimation Method (for ≤100 gallons) E-2

STEP 1: Position yourself so that you have a vantage point where you can see the entire sewer spill.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the spill, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated Spill Volume (gallons)**
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other:_____gallons		x_____gallons	
Estimated Total Spill Volume:			

STEP 5: Is rainfall a factor in the spill? ☐ Yes ☐ No

If yes, what volume of the observed spill volume do you estimate is rainfall?_____gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated spill volume by subtracting the rainfall from the spill volume:

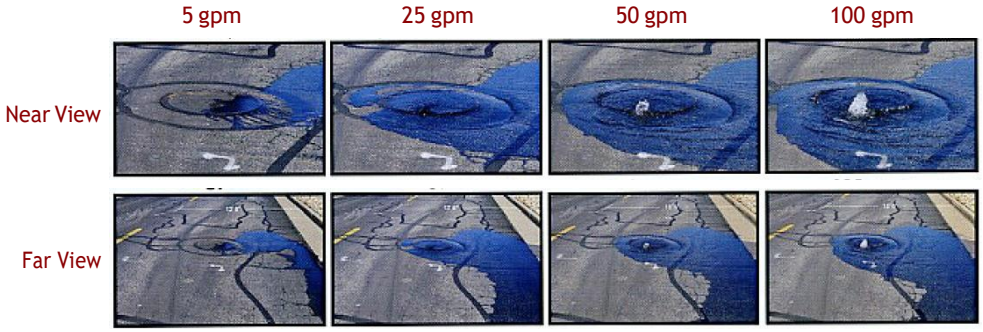
gallons – _____ gallons = _____ gallons Estimated Spill Volume

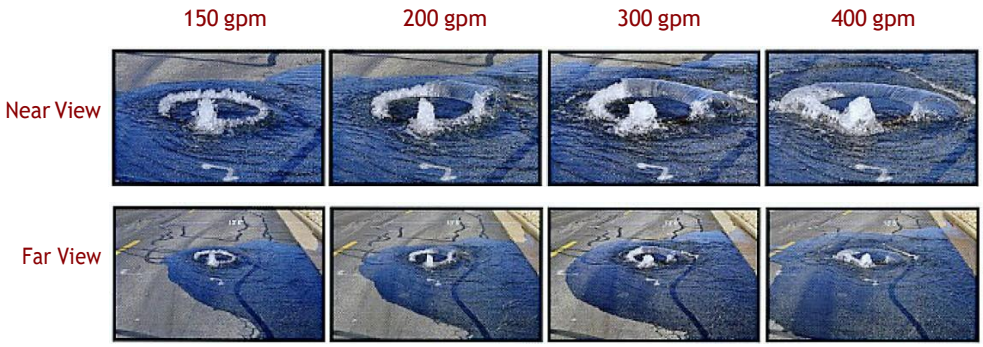
Rainfall **Total Estimated Spill Volume**

Volume Estimation: Duration and Flow Rate Comparison Method E-3

Compare the sewer spill to reference images below to estimate flow rate of the current spill. **NOTE: If the manhole cover in your picture has vent holes or more than one pry hole, do not use these pictures for comparison.**

Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual sewer spill:





SSCSC Manhole Spill Gauge: CWEA Southern Section Collections Systems Committee Spill Simulation courtesy of Eastern Municipal Water District

Flow Rate Based on Photo Comparison:_____gallons per minute (gpm)

Start Date and Time	1.
End Date and Time	2.
Spill Event Total Time Elapsed (subtract Line 1 from Line 2. Show in minutes.)	3.
Average Flow Rate GPM (Account for diurnal flow pattern)	4.
Total Volume Estimated Using Duration and Flow Method (Line 3 x Line 4)	5.

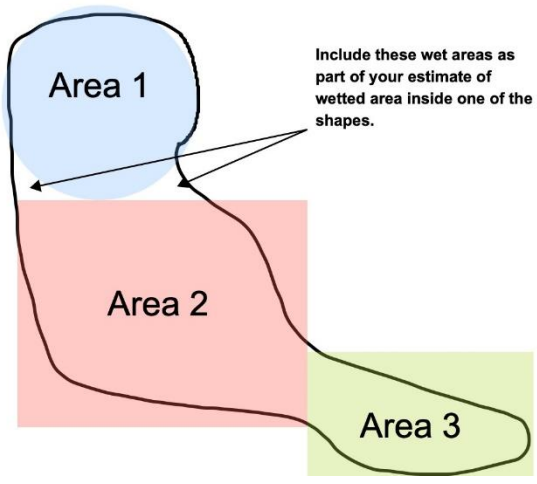
Volume Estimation: Area/Volume Method

Spill Date:_____ Location: _____

STEP 1: Describe spill area surface: Asphalt Concrete Dirt Landscape Inside Building
Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into rectangles and circles. Label each area. See example below.

EXAMPLE:



Dimensions: 2.5' diameter
+/- 100% of the surface inside the circle is wet

Dimensions: 8' x 6'
+/- 80% of the surface inside the rectangle is wet

Dimensions: 6' x 3'
+/- 60% of the surface inside the rectangle is wet

STEP 3: Calculate the area of the footprint by completing the table below for each area in Step 2. Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. If the depth is not measurable because it is only a wet stain, use the following estimated depths:

- Depth of a wet stain on concrete surface: 0.0026' (1/32")
- Depth of a wet stain on asphalt surface: 0.0013' (1/64")

Rectangles:

Area # (from labeled drawing)	Length	X	Width	X	% Wet	=	Area	X	Depth	=	Volume
	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

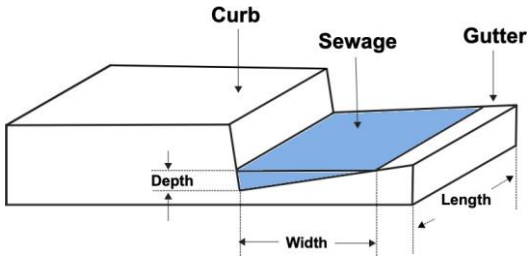
Circles:

Area # (from labeled drawing)	π	X	Radius	X	Radius	X	% Wet	=	Area	X	Depth	=	Volume
	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

STEP 4: If part of the spill is in a gutter, use the formula below to calculate the volume:

_____X_____X_____X 0.5 =_____ft^3

Length Depth Width **Volume**



STEP 5: Calculate Total Spill Volume (sum of all of the volume calculations above): _____ft^3

STEP 6: Convert from cubic feet to gallons by multiplying by 7.48.

_____ft^3 x 7.48 gallons = _____gallons

spill volume in cubic feet **Total estimated volume**

Volume Estimation: Upstream Connections Method E-5

Spill Date:_____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this spill:_____EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the spill was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated Spill Volume per EDU.

	Flow Rate Per EDU				**Sewer Spill**	
	A	**B**	**C**	**D**	**E**	**F**
Time Period	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Minute	Minutes spill was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated Spill Volume per EDU:						

STEP 3: Multiply the Estimated Spill Volume per EDU from Step 2 by the number of EDUs from Step 1.

_____gallons X_____=_____gallons
Volume per EDU # of EDUs Estimated Spill Volume

STEP 4: Adjust spill volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted spill estimate (attach a separate page if necessary).

Total Estimated Spill Volume:_____gallons

INSERT TAB:
Backup Forms

Backup Forms Checklist (Backup Only) F-1

Complete this form only if there is a backup into a residence or business.

Instructions to Wastewater Crew:

1. Take photo of each form before giving it to the customer for documentation.
2. Tear the forms listed below from this Workbook and hand them to customer. *Leave the First Responder Form (F-2) in this Workbook, do not give it to Customer.*
3. Check each item that was provided to the customer.
4. Have customer sign below.

Forms/Documents:

- ☐ F-3: Declination of Cleaning Services
- ☐ F-4: Customer Information Letter
- ☐ F-5: Your Responsibilities as a Private Property Owner
- ☐ F-6: Claim Form

Formularios / Documentos:

- ☐ F-3: Declinación de los Servicios de Limpieza
- ☐ F-4: Carta de Información del Cliente
- ☐ F-5: Sus Responsabilidades Como Propietario de Una Propiedad Privad
- ☐ F-6: Formulario de Reclamación

Forms Provided to:

Formularios Proporcionados a:

_____
Customer Name

_____
Nombre del cliente

_____
Customer Signature

_____
Firma del cliente

_____
Date

_____
Fecha

Check here if customer declines to sign: ☐

Marque aquí si el cliente se niega a firmar: ☐

Forms Provided by: _____ _____ _____
Employee Name Initial Date

Instruction to Principal Water Utility Supervisor

Send photos, including the photo of the Declination of Cleaning Services, and a copy of the First Responder form to:

Senior Claims Adjustor

First Responder Form (Backup Only)

Complete this form only if there is a backup into a residence or business.

Fill out this form as completely as possible.
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas.

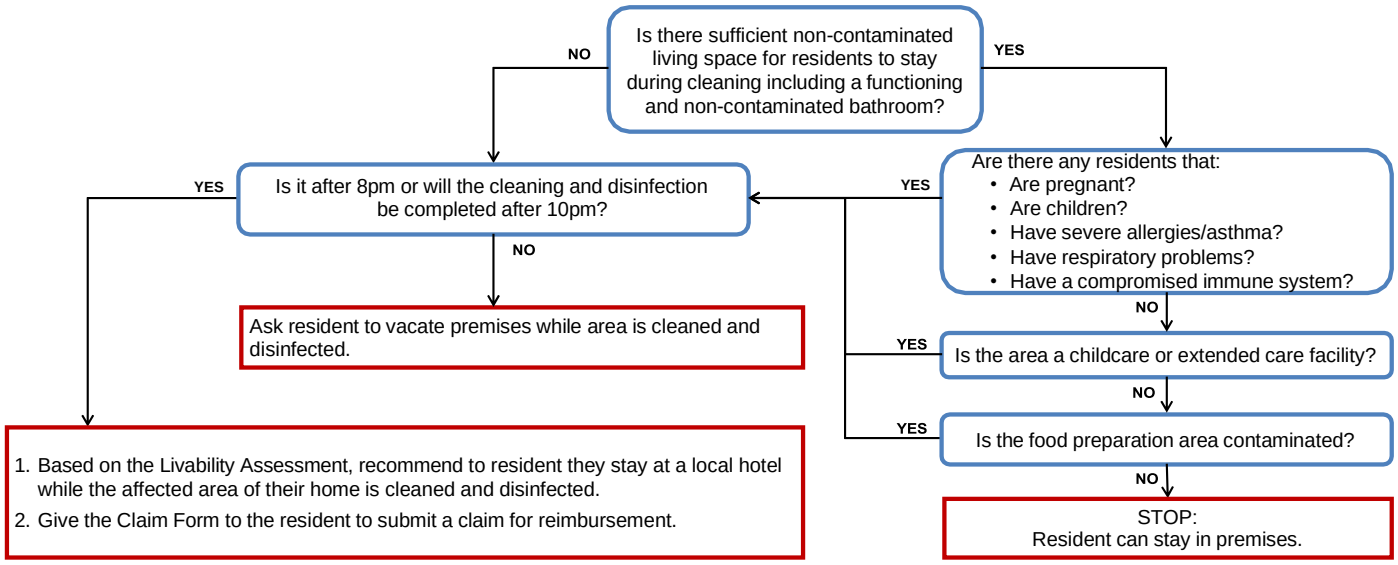
PERSON COMPLETING THIS FORM: Name: _____ Title: _____	PHONE: DATE: TIME:
TIME STAFF ARRIVED ON-SITE:	
DOES THE CUSTOMER WANT THE CITY TO CALL FOR CLEANING SERVICE? ☐ Yes ☐ No If no, give the customer the Cleaning Declination Form and have them sign here: _____ If customer called a cleaning contractor, provide name and contact number:	
RESIDENT NAME: ☐ Owner ☐ Renter ADDRESS: PHONE:	IF RENT, PROPERTY MANAGER(S): OWNER: ADDRESS: PHONE:
# OF PEOPLE LIVING AT RESIDENCE:	

Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:
Numbers of Photographs or Videos Taken: ☐ Photographs ☐ Video ☐ Customer did not provide or allow photographs	Where are photos/video stored?	

Is nearest upstream manhole visibly higher than the drain/fixture that spilled? ☐ Yes ☐ No
Does property have a Property Line Cleanout or BPD? ☐ Cleanout ☐ BPD ☐ Neither ☐ Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the spill? ☐ Yes ☐ No ☐ Unknown
Have there ever been any previous spills at this location? ☐ Yes ☐ No ☐ Unknown
Has the resident had any plumbing work done recently? ☐ Yes ☐ No ☐ Unknown *If YES, please describe:*

GO TO Page 2

LIVABILITY ASSESSMENT

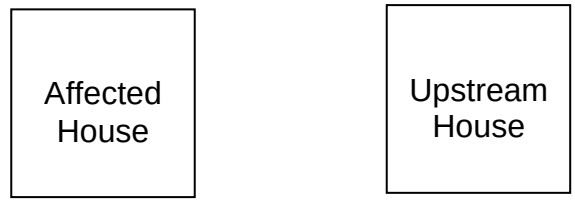


- **Temporary lodging was offered by the City and either (check one): ☐ Accepted ☐ Rejected**

SANITARY SEWER LINE BLOCKAGE LOCATION

PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:	
Customer Cleanout Was: ☐ Non-Existent ☐ Full ☐ Empty	Agency Owned/Maintained Cleanout was: ☐ Non-Existent ☐ Full ☐ Empty

On the diagram below, indicate the location of the sewer line and where the problem occurred.



Recommended Follow-Up Action(s):

Did sewage go under buildings? ☐ Yes ☐ No ☐ Unsure

Declination of Cleaning Services (Backup Only) F-3

Customer Information		
NAME:	ADDRESS:	TELEPHONE:

ON (date)	AT (time)	Approximately (quantity)	GALLONS OF: ☐ Sewage ☐ Grey Water ☐ Toilet Bowl Water ☐ Odor ☐ Other (describe):

Spilled from (or odor emanating from) ☐ Toilet ☐ Shower/Tub ☐ Washer ☐ Other (describe):	The spill affected the following areas *(check one)*: ☐ Bathroom ☐ Bedroom ☐ Hallway ☐ Garage ☐ Kitchen ☐ Crawlspace ☐ Other (specify):

The spill affected the following flooring:
☐ Tile ☐ Wood Flooring
☐ Linoleum ☐ Carpet
☐ Other (specify):

and/or additional materials:
☐ Area Rugs ☐ Towels
☐ Clothing ☐ Other (specify):

This Form Completed By: Name: _____ **Date:** _____

(Write legibly) Title: **Time:**

CUSTOMER, please read the following and sign below. I/We acknowledge that the City of San Diego (City) has offered to provide professional cleaning and decontamination services to remediate the sewage backup and/or spill described above and that we declined the offer. We further understand and acknowledge that because we have declined, any necessary remediation activities will be conducted without City assistance, and that the City will not accept responsibility for work performed by persons other than those engaged by the City. The City will also not accept responsibility for any charges related to this incident that are not usual and customary.

CLIENTE, lea lo siguiente y firme a continuación. Reconozco / reconocemos que la Ciudad de San Diego (Ciudad) se ha ofrecido a proporcionar servicios profesionales de limpieza y descontaminación para remediar la acumulación de aguas residuales y / o el desbordamiento descrito anteriormente y que rechazamos la oferta. Además, entendemos y reconocemos que debido a que nos hemos negado, cualquier actividad de remediación necesaria se llevará a cabo sin la ayuda de la Ciudad, y que la Ciudad no aceptará responsabilidad por el trabajo realizado por personas que no sean contratadas por la Ciudad. La Ciudad tampoco aceptará responsabilidad por ningún cargo relacionado con este incidente que no sea habitual y habitual.

Customer Signature Firma del cliente*:		**Date:**
The information above was explained to the customer by the following employee:	**Name:**	**Title:**
	Signature:	**Date:**

**Note to responders: if customer declines to sign this form, then have a co-worker sign here as a witness:*

*Name:*_____ *Signature:*_____ *Date:* _____

Recommendations to customer to clean up the spill:

- Keep pets and children out of the affected area
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during clean-up of the affected area.
- Remove and discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing clean-up, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow water to cool before washing your hands.) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash all clothes worn during the clean-up in hot water and detergent (wash separately from uncontaminated clothes).
- Wash clothes contaminated with flood or sewage water in hot water and detergent. Use a laundromat for washing large quantities of clothes and linens until your onsite wastewater system has been professionally inspected and services.
- Seek immediate attention if you become injured or ill.

Customer Information Letter (Backup Only) F-4

Dear Property Owner:

We recognize that sewer backup incidents can be stressful and require immediate response while all facts concerning how an incident occurred are still unknown. Rest assured that we do all we can to prevent this type of event from occurring in the first place. Nevertheless, occasionally tree roots or other debris in the sewer lines causes a backup into homes immediately upstream of the blockage. At this time the City is investigating the cause of this incident.

If the City is found to be responsible for the incident, we are committed to cleaning and restoring your property, and to protecting the health of those affected during the remediation process.

The cleaning contractor provided by the City has been selected because of their adherence to established protocols that are designed to assure to all parties thorough, cost-effective and expeditious cleaning services. You also have the right to select your own cleaning contractor, but the City does not guarantee payment of fees/expenses incurred and reserves the right to dispute fees/expenses deemed not usual and customary.

To discuss this matter, contact the Principal Water Utility Supervisor. To submit a claim for damages, complete the Claim Form and contact the Senior Claims Adjustor.

Sincerely,
The City of San Diego

What you need to do now:

- Minimize the impact of the loss by responding promptly to the situation.
- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s) until clean-up has been completed.
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.

Carta de Información del Cliente F-4 (en español)

Estimado Propietario:

Reconocemos que los incidentes de respaldo de alcantarillado pueden ser estresantes y requieren una respuesta inmediata, mientras que aún se desconocen todos los hechos relacionados con cómo ocurrió un incidente. Tenga la seguridad de que hacemos todo lo posible para evitar que este tipo de evento ocurra en primer lugar. Sin embargo, ocasionalmente las raíces de los árboles u otros escombros en las líneas de alcantarillado provocan un retroceso en las casas inmediatamente aguas arriba del bloqueo. En este momento, la Ciudad está investigando la causa de este incidente.

Si se determina que la Ciudad es responsable del incidente, nos comprometemos a limpiar y restaurar su propiedad y a proteger la salud de los afectados durante el proceso de remediación.

El contratista de limpieza proporcionado por la Ciudad ha sido seleccionado debido a su adherencia a los protocolos establecidos que están diseñados para asegurar a todas las partes servicios de limpieza completos, rentables y rápidos. También tiene derecho a seleccionar su propio contratista de limpieza, pero la Ciudad no garantiza el pago de las tarifas / gastos incurridos y se reserva el derecho de disputar las tarifas / gastos que se consideren no habituales y habituales.

Para discutir este asunto, comuníquese con el Supervisor Principal de Servicios de Agua. Para presentar un reclamo por daños, complete el formulario de reclamo y comuníquese con el Ajustador Senior de Reclamaciones.

Atentamente,

La Ciudad de San Diego

Qué debes hacer ahora:

- Minimice el impacto de la pérdida respondiendo rápidamente a la situación.
- No intente limpiar el área usted mismo, deje que la empresa de limpieza y restauración se encargue de ello.
- Mantenga a las personas y las mascotas alejadas de las áreas afectadas hasta que se haya completado la limpieza.
- Apague cualquier aparato que use agua.
- Apague los sistemas de calefacción / aire acondicionado.
- No retire artículos del área; la empresa de limpieza y restauración se encargará de esto.
- Si le hicieron trabajos de plomería recientemente, comuníquese con su plomero o contratista e infórmeles de este incidente.

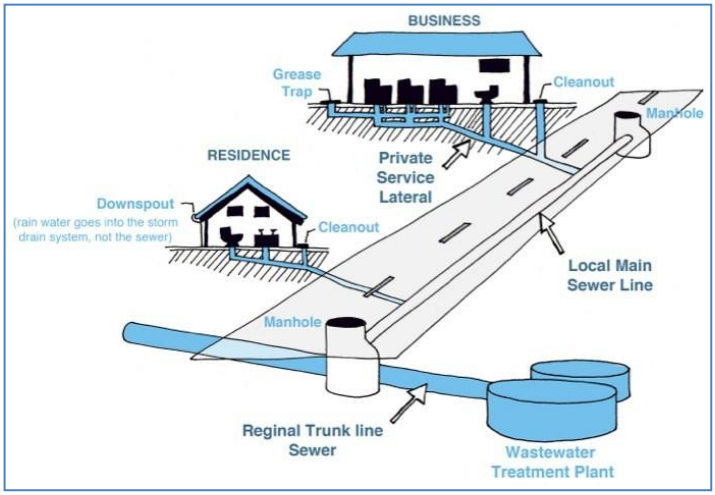
Your Responsibilities as a Private Property Owner (Backup Only) F-5: Page 1

How a Sewer System Works

A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes spills through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches. Common causes of sewage spills include grease build-up, tree roots, broken/cracked pipes, missing or broken cleanout caps, undersized sewers, and groundwater/rainwater entering the sewer system through pipe defects and illegal connections.



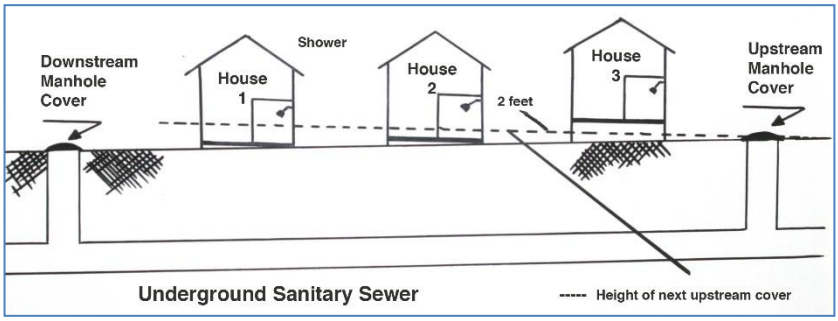
Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping **shall** be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer spills or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves **shall** be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



Your Responsibilities as a Private Property Owner (Backup Only) F-5: Page 2

Spill clean-up inside the home:

For large clean-ups, a professional cleaning firm should be contacted to clean up impacted areas, If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean-up.

Seek immediate attention if you become injured or ill during or after the clean-up process.

Other Tips:

- Keep children and pets out of the affected area.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during clean-up.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing clean-up, wash your hands with soap and water. Use water that has been boiled for 1minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during clean-up in hot water & detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.

Spill clean-up outside the home:

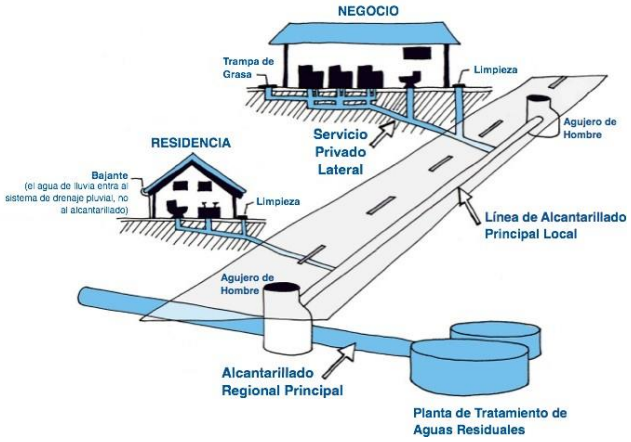
- Keep children and pets out of the affected area until clean-up has been completed.
- Wear rubber boots, rubber gloves, and goggles during clean-up of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After clean-up, wash hands with soap and water. Use water that has been boiled for 1 minute (allow tocool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during clean-up in hot water and detergent (wash apart from uncontaminatedclothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a laundromat until your onsite wastewater system has been professionally inspected and serviced.

Cómo funciona un sistema de alcantarillado

Las tuberías de alcantarillado de un propietario se denominan servicios laterales y están conectadas a líneas troncales principales y regionales locales más grandes. Los servicios laterales se ejecutan desde la conexión en el hogar hasta la conexión con el sistema de alcantarillado del Distrito. Estos laterales son responsabilidad del propietario y deben ser mantenidos por el propietario.

¿Cómo ocurren los derrames de aguas residuales?

Los derrames de aguas residuales ocurren cuando las aguas residuales en las tuberías subterráneas se desbordan a través de un pozo de acceso, limpieza o tubería rota. La mayoría de los derrames son relativamente pequeños y se pueden detener y limpiar rápidamente, pero si se los deja desatendidos, pueden causar riesgos para la salud, dañar viviendas y negocios y amenazar el medio ambiente, las vías fluviales locales y las playas. Las causas comunes de derrames de aguas residuales incluyen acumulación de grasa, raíces de árboles, tuberías rotas / agrietadas, tapas de limpieza faltantes o rotas, alcantarillas de tamaño insuficiente y aguas subterráneas / pluviales que ingresan al sistema de alcantarillado a través de defectos en las tuberías y conexiones ilegales.



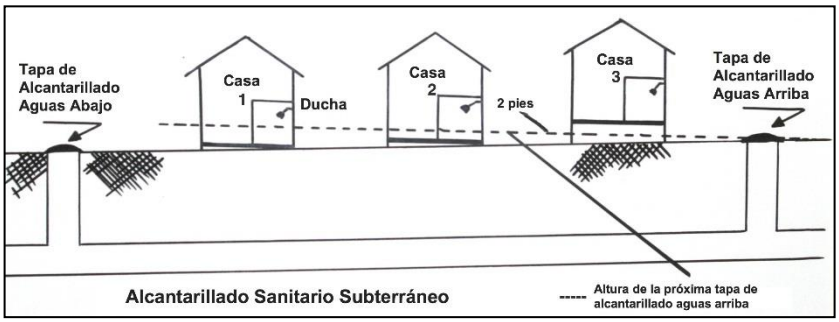
Prevenga la mayoría de las copias de seguridad de aguas residuales con un dispositivo de prevención de reflujo

Este tipo de dispositivo puede ayudar a prevenir las copias de seguridad de aguas residuales en hogares y empresas. Si aún no tiene un dispositivo de prevención de reflujo, comuníquese con un plomero o contratista profesional para instalar uno lo antes posible.

¿Se requiere que mi hogar tenga un dispositivo de prevención de reflujo?

La Sección 710.1 del Código Uniforme de Plomería (UPC) establece: “Los accesorios de tuberías de drenaje que tienen llantas de nivel de inundación ubicadas debajo de la elevación de la siguiente boca de alcantarilla corriente arriba o la alcantarilla privada que atiende dicha tubería de drenaje deben protegerse contra el reflujo de aguas residuales al instalar un tipo de válvula de evacuación ”. La intención de la Sección 710.1 es proteger el interior del edificio de los desagües o sobrecargas de alcantarillado de la línea principal.

Adicionalmente, U.P.C. 710.6 dice: Las válvulas de aguas residuales deben ubicarse donde puedan ser inspeccionadas y reparadas en todo momento y, a menos que estén continuamente expuestas, deben estar encerradas en un pozo de mampostería equipado con una cubierta removible del tamaño adecuado.



Limpieza de derrames dentro de la casa:

Para grandes limpiezas, se debe contactar a una empresa de limpieza profesional para limpiar las áreas afectadas. Si contrata a un contratista, se recomienda obtener estimaciones de más de una compañía. A veces, el seguro del propietario de vivienda pagará la limpieza necesaria debido a las reservas de alcantarillado. No todas las pólizas tienen esta cobertura, así que consulte con su agente.

Si decide limpiar un pequeño derrame dentro de su casa, protéjase de la contaminación observando las siguientes medidas de seguridad. Aquellas personas cuya resistencia a la infección esté comprometida no deben intentar este tipo de limpieza.

Busque atención inmediata si se lesiona o se enferma durante o después del proceso de limpieza.

Otros consejos:

- Mantenga a los niños y mascotas fuera del área afectada.
- Apague los sistemas de calefacción / aire acondicionado
- Use botas de goma, guantes de goma y gafas durante la limpieza.
- Deseche los artículos que no se puedan lavar y desinfectar (como: colchones, alfombras, cosméticos, juguetes, etc.)
- Retire y deseche los paneles de yeso y el aislamiento contaminado con aguas residuales o aguas de inundación.
- Limpie a fondo todas las superficies duras (como pisos, concreto, molduras, muebles de madera y metal, mostradores, electrodomésticos, fregaderos y otros accesorios de plomería) con agua caliente y ropa o detergente para platos.
- Ayude al proceso de secado con ventiladores, unidades de aire acondicionado y deshumidificadores.
- Después de completar la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje que el agua se enfríe antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de lejía doméstica por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

Limpieza de derrames fuera de la casa:

- Mantenga a los niños y las mascotas fuera del área afectada hasta que se haya completado la limpieza.
- Use botas de goma, guantes de goma y gafas protectoras durante la limpieza del área afectada.
- Limpie los sólidos de alcantarillado (material fecal) y colóquelos en un inodoro o bolsa doble que funcione correctamente y colóquelos en un contenedor de basura.
- En áreas de superficies duras como el asfalto o el concreto, es seguro usar una solución de lejía al 2%, o ½ taza de lejía a 5 galones de agua, pero no permita que llegue a un drenaje de tormenta ya que la lejía puede dañar la ambiente.
- Después de la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje enfriar antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de cloro por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

The City of SAN DIEGO

CLAIM AGAINST THE CITY OF SAN DIEGO

Present claim by personal delivery or mail to the **City of San Diego, Risk Management Department, 1200 Third Avenue, Suite 1000, San Diego, CA 92101** or via email to **RiskManagement@sandiego.gov.** Including the claimant's email address on the returned claim form is highly recommended. Claims for death, injury to person or personal property must be filed no later than six (6) months after the occurrence (Gov. Code Section 911.2). All other claims must be filed within one (1) year of the occurrence.

* = **Required** (Gov. Code Section 910)

Received Via ☐ **Email** ☐ **US Mail** ☐ **Over the Counter** ☐ **Inter-Office Mail**

A.

Claimant Name* (First, Middle, Last)	**Claimant Date of Birth** Mo / Day / Year
Claimant Address*	**Claimant Phone Number**
City* / **State*** / **Zip***	**Claimant Social Security Number**

B.

Send Official Notices and Correspondence To: * **Phone Number**

Address*

City* **State*** **Zip*** **Email Address**

C.

Date of Incident* / **Day** / **Year** / **Time of Incident** **DAM** ☐**PM**

Location of Incident or Accident (Be Specific)*

Basis of Claim - State in detail all facts and circumstances of the incident.*

State why you believe the City is responsible for the alleged injury, property damage, or loss

D.

Description of Alleged Injury, Property Damage, or Loss*

CLAIM AGAINST THE CITY OF SAN DIEGO

Vehicle Information - If your claim relates to a motor vehicle or impound, provide the following information and attach proof of insurance and a copy of the current registration.

Year	Make of Vehicle	Model	License Plate No.	Driver's License No.

Insurance Company	Policy Number	Claim Number

Contact Name	Phone Number	Email Address

Additional Information - Please provide any additional information that might be helpful in considering your claim, including names of witnesses, treating physicians, hospitals, proof of damages such as invoices, receipts, estimates, a diagram, and photographs.

E.

Name and Department of City Employee who Allegedly Caused Injury or Loss (If Known)*	City Vehicle Type/Description	License Plate No./Unit No.

F.

Damages Claimed*- If your claim does not exceed ten thousand dollars ($10,000), state the basis of your computation of the amount claimed. (Attach supporting medical bills, invoices, repair estimates, etc.)

a. Amount claimed as of claim date $ _____

b. Estimated amount of future costs $ _____

Total Amount $ _____

If your claim exceeds ten thousand ($10,000), Government Code 910(f) requires that you indicate whether or not the claim is a "limited civil case." Check one.*

☐ **Limited** (up to $25,000) ☐ **Unlimited** (over $25,000)

G.

Signature* - Claim form **must** be signed by claimant or party filing the claim. (Gov. Code Section 910.2)

Warning: It is a criminal offense to file a false claim. (California Penal Code § 72). I have read the matters and statements made in the above claim and I know the same to be true of my own knowledge, except as to those matters stated upon information or belief and as to such matters. I believe the same to be true. I certify under penalty of perjury that the foregoing is true and correct.

_____
Printed Name of Signatory and Relationship to Claimant

_____ _____
Date **Signature of Claimant or Person Acting On Behalf of Claimant***

The City of SAN DIEGO

CLAIM AGAINST THE CITY OF SAN DIEGO

Claim Form Instructions

Disclaimer: The instructions that follow are to assist you in filling out the attached claim form. These instructions are in no way legal advice. Please be sure that your claim is against the City of San Diego, California. Claims can be filed in person during regular business hours M-F or by mail at 1200 Third Ave., Ste.1000, San Diego, CA 92101. Please allow 45 days to process your claim.

Section A

- **Claimant Name, Address, and Phone Number** - State the full name, mailing address, and phone number of the person or entity claiming personal injury, damage, or loss, or the party who is filing a claim on behalf of another person or entity, such as an insurance carrier filing a claim as subrogee of their named insured.
- **Date of Birth** - State claimant's date of birth including month, day, and year.
- **Social Security Number** - State the claimant's social security number. Section 111 of the Medicare, Medicaid, and SCHIP Extension Act of 2001 (MMSEA) requires all Responsible Reporting Entities (RREs), including the City of San Diego, to report all claims involving bodily injury or medical treatment. The City is unable to process payments without a Social Security Number or Tax Identification Number. Failure to provide your SSN#, Tax ID# and/or your Medicare Health Insurance Claim Number (HCIN) will delay the processing of your claim and any settlement that may be due.

Section B

- **Official Notices and Correspondence** - Provide the name, mailing address, and phone number of the person to whom all official notices and other correspondence should be sent, if other than claimant. This official contact person can be the claimant or a representative of the claimant. If this section is completed, all official notices and correspondence will be sent to the person listed.

Section C

- **Date of Incident** - State the exact month, day, and year of the incident giving rise to your claim.
- **Time of Incident** - State the exact time, including AM or PM, of the incident giving rise to your claim.
- **Location of Incident or Accident** - Include the city, exact street address, block number and/or cross street.
- **Basis of Claim** - State in detail all facts supporting your claim, including all facts and circumstances of the incident.

Section D

- **Description of Alleged Injury, Property Damage, or Loss** - Provide a detailed description of the alleged injury, damages or loss.
- **Vehicle Information** - For claims relating to property damage to a motor vehicle or injuries arising out of the operation of a motor vehicle, please provide the following: year, make, model and vehicle license plate number of your vehicle or the vehicle you were in, along with the name of the driver, insurance carrier, policy number, the insurance company claim number and their contact information. We also need vehicle information to process vehicle impound claims.
- **Additional Information** -Provide photographs, diagrams, invoices, estimates and/or receipts in support of your allegations. Include name, address, and phone number of witnesses, medical providers, and/or hospitals. You may also attach additional pages as needed.

Section E

- **Name and Department of City Employee, if known.**

Section F

- **Damages Claimed** - State the total amount of money you claim in damages. Provide a breakdown of each item of damages and how that amount was computed. You may include future anticipated expenses or losses. Please attach copies of all bills, receipts, and repair estimates. If the claim involves property damage, please provide two repair estimates. The Government Code provides that if the claim is for less than $10,000, the claimant must state the total amount claimed and the basis of this computation. If the claim exceeds $10,000, no dollar amount needs to be provided, but the claimant must indicate the applicable court jurisdiction. Limited civil jurisdiction cases are those involving damages under $25,000; unlimited civil jurisdiction cases are those involving damages of $25,000 or more.

Section G

- **Signature of Claimant or Representative** - Please be sure to sign and date the Claim Form. Print the name of signatory and your relationship to claimant. The claim must be signed by the claimant or by an official representative of the claimant.
- To receive a date/time stamped copy of your claim, please submit the original Claim Form and a copy of the completed Claim Form along with a self-addressed stamped envelope.

For additional information, contact the Risk Management Department, Public Liability Division at 619-236-6670.

INSERT TAB:
Failure Analysis

OFFICE USE ONLY

Incident Report #	Prepared By
Spill/Backup Information	
Cause	

Summary of Historical Spills/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	

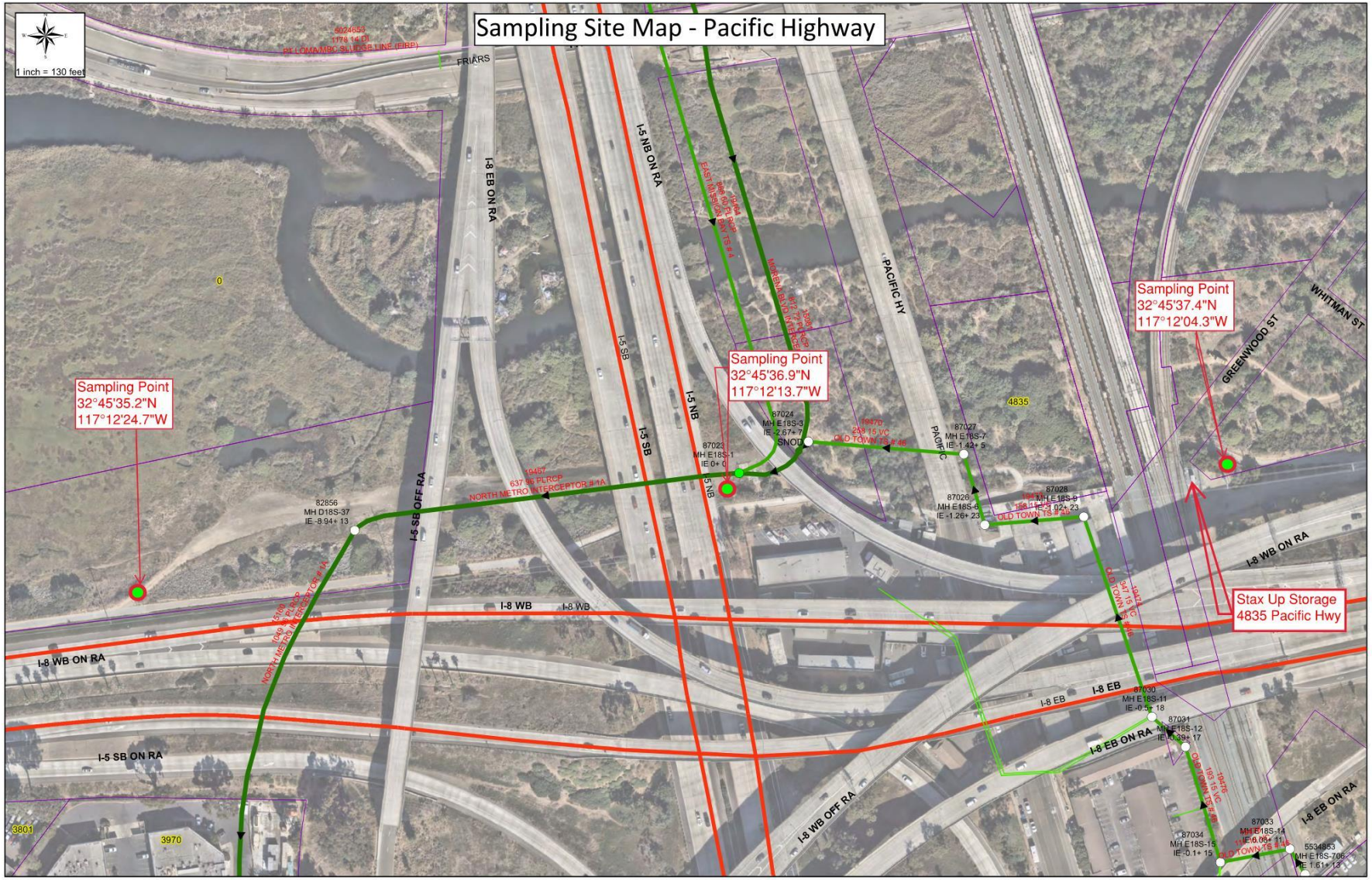
Summary of CCTV Information	
CCTV Inspection Date	Tape Name/Number
CCTV Tape Reviewed By	CCTV Review Date
Observations	

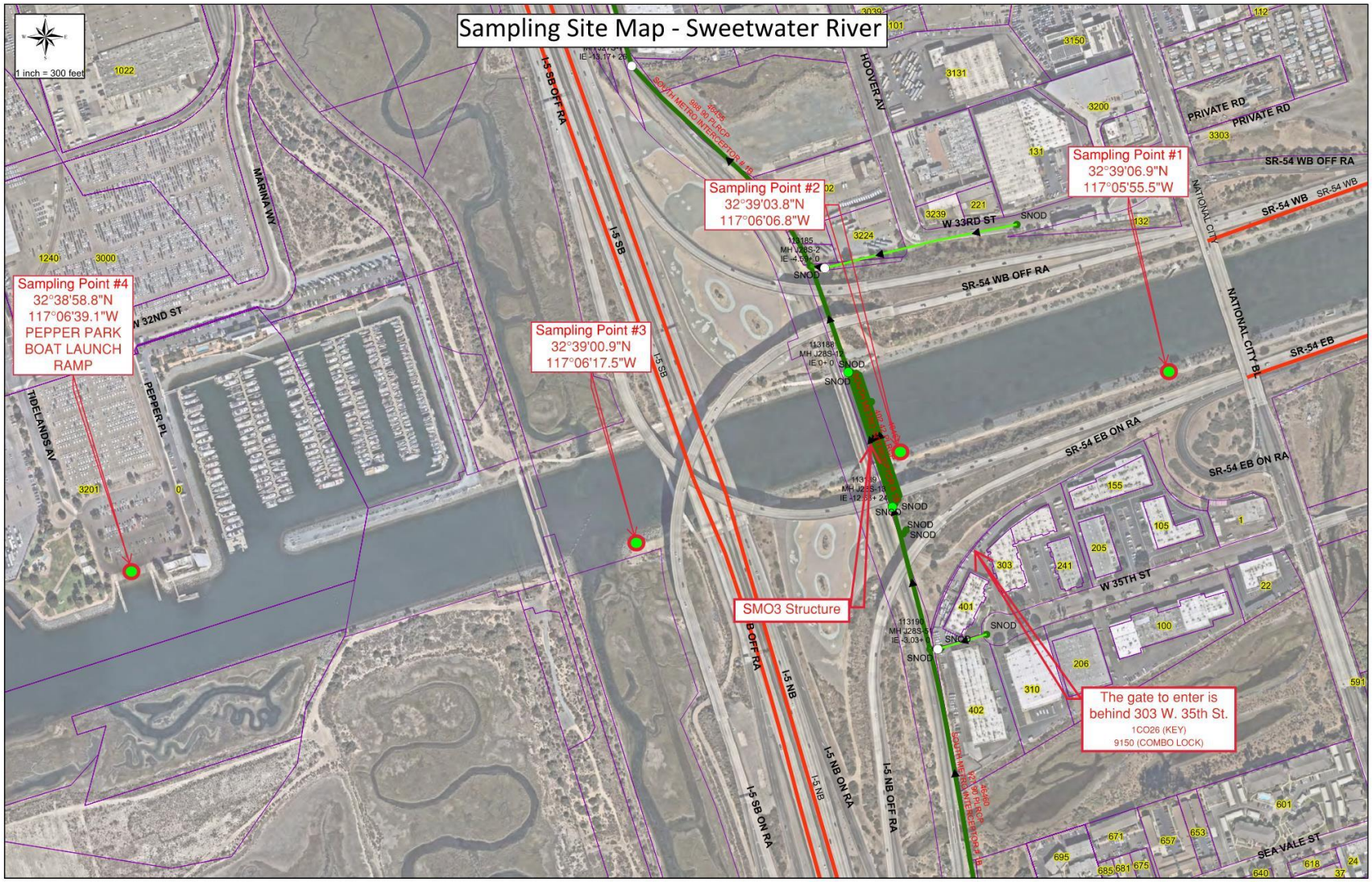
Go to Side B

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Spill Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed by:			Review Date:		

Appendix F. Sampling Site Maps


Sampling Site Map - Famosa Slough
1 inch = 90 feet
N
W
E
S
I-8 WB
I-8 EB
Sample Point
32°45'20.6"N
117°13'40.8"W
PRIVATE RD
LOMA RIVIERA CT
LOMA RIVIERA DR
ORLEANS EAST
ORLEANS WEST
RUE D ORLEANS
WEST POINT LOMA BL
WEST POINT LOMA
FAMOSA BL
ADRIAN ST
Trailhead - Famosa Slough
4302 W. Point Loma Blvd


Sampling Site Map - Pacific Highway
1 inch = 130 feet
Sampling Point
32°45'35.2"N
117°12'24.7"W
Sampling Point
32°45'36.9"N
117°12'13.7"W
Sampling Point
32°45'37.4"N
117°12'04.3"W
Stax Up Storage
4835 Pacific Hwy
I-8 WB ON RA
I-8 WB
I-8 EB ON RA
I-8 EB
I-8 WB OFF RA
I-5 SB ON RA
I-5 SB OFF RA
I-5 NB ON RA
I-5 SB
I-5 NB
PACIFIC HY
FRIARS
GREENWOOD ST
WHITMAN ST
4835
3801
3970


Sampling Site Map - Sweetwater River
1 inch = 300 feet
Sampling Point #4
32°38'58.8"N
117°06'39.1"W
PEPPER PARK
BOAT LAUNCH
RAMP
Sampling Point #3
32°39'00.9"N
117°06'17.5"W
Sampling Point #2
32°39'03.8"N
117°06'06.8"W
Sampling Point #1
32°39'06.9"N
117°05'55.5"W
SMO3 Structure
The gate to enter is
behind 303 W. 35th St.
1CO26 (KEY)
9150 (COMBO LOCK)
MARINA WY
W 32ND ST
TIDELANDS AV
PEPPER PL
I-5 SB OFF RA
I-5 SB
HOOVER AV
PRIVATE RD
PRIVATE RD
SR-54 WB OFF RA
SR-54 WB
SR-54 WB
NATIONAL CITY
W 33RD ST
SR-54 WB OFF RA
NATIONAL CITY PL
SR-54 EB
SR-54 EB ON RA
SR-54 EB ON RA
W 35TH ST
I-5 NB
I-5 NB ON RA
I-5 NB OFF RA
I-5 SB ON RA
I-5 NB
SEA VALE ST