City of Newport Beach Utilities

Sewer System Management Plan

April 2025

Waste Discharge ID - #8SSO10590
Water Board Region 8

APPROVED BY:

City Council - City of Newport Beach

April 29, 2025

Approved Date

PREPARED BY:

FISCHER COMPLIANCE LLC
PRACTICES THAT COMPLY

March 7, 2025

City of Newport Beach
Att: Mr. Casey Parks, Legally Responsible Official (LRO)
949 W. 16th Street
Newport Beach, CA 92663

Dear Mr. Parks,

We are pleased to present the new 2025 Sewer System Management Plan (SSMP) Update developed in partnership with Agency management. The 2025 Update meets and exceeds compliance with the Reissued WDR (State Water Board, Water Quality Order No. 2022-0103-DWQ, Attachment D-10 and Specifications 5.4). The 2025 SSMP has been completely revised to harmonize with industry standard guidelines and incorporates the latest SSMP Audit findings.

The 2025 SSMP is a declaration of what the Agency is doing to demonstrate full compliance with the Reissued WDR. Attachment A of the Reissued WDR (page A-4), states “A sewer system management plan is a living document which requires the Agency to Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.” This requires the Agency to periodically review and update the SSMP as necessary until its next required 6-year SSMP Update is completed.

We look forward to assisting the Agency wherever necessary to fully implementation its new 2025 SSMP Update.

Sincerely,

James Fischer, P.E.

Principal, Fischer Compliance LLC

Credentialed U.S. EPA NPDES Compliance Inspector

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Introduction

The City of Newport Beach provided detail, information and institutional insight in preparation to develop this Sewer System Management Plan (SSMP) or "Plan" with technical assistance from Fischer Compliance LLC and Sam Rose Consulting for meeting and exceeding compliance with the State Water Resources Control Board 2022 General Waste Discharge Requirements, Order WQ 2022-0103-DWQ for Sanitary Sewer Systems, referred to throughout this document as the WDR[1]. The SSMP has been developed to meet the size, scale and complexity of the City to serve as a "living document," that will be used as a tool to manage and operate the collection system. Further, the new 2024 Sewer System Management Plan Guidance Manual published by the Bay Area Clean Water Agency (BACWA) was utilized as a model for development of the SSMP to ensure the SSMP harmonizes with the latest available industry standard recommendations for the development and updating of SSMPs.

The City's commitment to meeting or exceeding regulatory requirements, along with their proactive approach to operation and management of the collection system has served them well as evidenced by the relatively few numbers of sewage spills it has experienced over the years and the high level of service provided to its customers.

Figure 1 provides key City spill metrics including data comparing the City's spill record with state and regional system data. The City consistently performs below both statewide and regional spill rate indices and net spill volumes for all categories of spills from its sanitary sewer collection system.

Collection System Spill Summary

Operational Indices: Newport Beach City CS

Spill Rate Indice (spills/100mi/yr)							
	Category 1			Category 2		Category 3	
	Main System	Laterals	Other	Main System	Other	Main System	Other
Newport Beach City CS	0.32	0.14	0.0	0.0	0.0	0.21	0.0
State Municipal(Public) Average	1.68	3.27	0.75	0.94	1.19	2.39	0.4
Region Municipal Average	0.47	0.11	0.09	0.35	0.98	0.45	0.06

Net Volume Spills Indice (gallons/1000 Capita/yr)							
	Category 1			Category 2		Category 3	
	Main System	Laterals	Other	Main System	Other	Main System	Other
Newport Beach City CS	7.32	0.1	0.0	0.0	0.0	0.71	0.0
State Municipal(Public) Average	4422.18	97.4	1674.98	441.55	1263.07	52.64	16.93
Region Municipal Average	388.89	3.78	13.68	56.16	152.13	1.41	0.08

Introduction: Figure 1 - City Spill Metrics (1/1/2019 to 11/18/2024)

1 See Order No. 2022-0103-DWQ

SSMP Organization

This SSMP is organized into 11 core elements following Attachment D of the WDR, with inclusion of applicable Specifications requirements.

Each Element in the SSMP includes the following technical contents.

1. Requirements – Provides the actual description of applicable requirements in the WDR.
2. Compliance – Describes the City's approach to complying with the WDR requirements.
3. Effectiveness – As measured by Key Performance Indicators (KPIs.)
4. Implementation – Demonstrates how the City will ensure the Plan is being carried out as described.
5. Resilience – Demonstrates the resilience that is addressed in the SSMP and built-in to the City's collection system and procedures.
6. Appendix Inclusions – List the items included in the Appendix for each SSMP Element, if any

ABBREVIATIONS AND ACRONYMS [2]

AGENCY	City of Newport Beach
BMP	Best Management Practices
CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CIPP	Cured in Place Pipe
CIWQS	California Integrated Water Quality System (State Water Board Online Spill Database)
CMMS	Computerized Maintenance Management System
CRW	Utilities Filed Crews
DIR	Utilities Director/Superintendent
ENG	Engineering Department
EPA	US Environmental Protection Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishment
GCD	Grease Control Device
GIS	Geographic Information System
I & I	Inflow and Infiltration
LRO	Legally Responsible Official
NPDES	National Pollutant Discharge Elimination System
QA/QC	Quality Assurance/Quality Control
RTU	Remote Terminal Unit
RWQCB	Regional Water Quality Control Board (Lahontan Region)
SCADA	Supervisory Control and Data Acquisition
SERP	Overflow Emergency Response Plan
SOP	Standard Operating Procedure
SPT	Utilities Superintendent
SSMP	Sewer System Management Plan
SUP	Utilities Supervisor
SWRCB	State Water Resources Control Board
WDID	Waste Discharge ID Number (CIWQS)
WDR	Sanitary Sewer Systems General Wastewater Discharge Requirements Order issued by the State Water Board (Order No. 2022-0103-DWQ)

1.0 Goal and Introduction

REQUIREMENTS

Att. D-1 (pg. D-2)

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 (see below):

1.1. Regulatory Context

WDR REQUIREMENTS

Att. D-1.1 (pg. D-2)

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

COMPLIANCE

The City of Newport Beach takes a proactive and systematic approach to maintaining their sewage collection system and is committed to fully implementing the WDR[3] which includes addressing all requirements and integrating a wide range of programs specifically designed for ensuring the integrity and efficiency of the sewer system. The City is dedicated to maintaining its collection system by implementing various work programs, scheduling work in a prioritized manner, utilizing resources effectively, and providing training to staff.

Work programs include CCTV inspections, pipe cleaning, manhole inspections, lift station maintenance, root control, source control, FOG Control, and pipe repair, to name a few. The City's High Priority maintenance program targets critical portions of the system to prevent spills. Work programs are described in more detail in Specifications 5.19 and Elements 4, 7, and 8 of this SSMP.

1.2. SSMP Update Schedule

WDR REQUIREMENTS

Att. D-1.2 (pg. D-3)

"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."

COMPLIANCE

The City utilizes the State Water Board's online lookup tool for ensuring all required due dates for updating its SSMP and completing its required SSMP Audits (see chart below).

Sewer System Management Plan & Subsequent Update Due Dates					
System Name	WDID Number	Original Plan Required Due Date	Required Plan Update Due Date	Required Plan Update Due Date	Required Plan Update Due Date*
Newport Beach City CS	8SSO10590	5/2/2009	5/2/2014	5/2/2019	5/2/2025

Audit Due Dates								
System Name	WDID Number	Original Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	End of Required 3-Year Audit Period**
Newport Beach City CS	8SSO10590	5/2/2011	5/2/2013	5/2/2015	5/2/2017	5/2/2019	5/2/2021	5/2/2024

Figure 1-1 - SSMP: Subsequent Update and Audit Due Dates

In addition to the schedule for the SSMP audits and updates, the City established maintenance goals and milestones, by establishing return intervals for maintenance and inspection activities. Examples include: 18-month gravity main cleaning interval, 10-year CCTV inspection interval, 1400 lower lateral condition assessments per year, annual easement inspections, Quarterly FOG inspections on all FSE's and lift stations are inspected weekly. The City's Capital Improvement Plan includes project schedules for completing work to improve the collection system. Programs, projects and schedules are monitored continuously throughout the 6-year SSMP update cycle.

EFFECTIVENESS

Key Performance Indicators:

1. Are SSMP Audits and SSMP Updates being performed as scheduled?
2. Has the Sewer System Management Plan been approved by the governing board on schedule (every six years)?
3. Are specific internally established sewer program milestones being monitored?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
1.2.1	Prepare for next SSMP Audit	Begin 5/2/2024	X	X	
1.2.2	Complete and Upload SSMP audit.	By 11/2/24	X	X	
1.2.3	Incorporate Audit Findings, update Change Log and Update SSMP	5/2/2025	X		
1.2.4	Board Approval and LRO Certification of SSMP	By 5/2/2025	X	X	

1.3. Sewer System Asset Overview

WDR REQUIREMENTS

Att. D-1.3 (pg. D-3)

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

a. *Location, including county(ies);*
b. *Service area boundary;*
c. *Population and community served;*
d. *System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;*
e. *Structures diverting stormwater to the sewer system;*
f. *Data management systems;*
g. *Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;*
h. *Estimated number or percent of residential, commercial, and industrial service connections; and*
i. *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."

COMPLIANCE

The service area is the City of Newport Beach (See Figure 1-2), which is in Orange County, and has a population of approximately 85,000. 80% percent of service connections are residential, 20% commercial and >1% industrial

The City operates 203 miles of gravity mains, 108 miles of (lower) laterals (upper laterals are privately-owned), 21 lift stations, 5 miles of force main pipe, 7 siphons and 7 diversion structures.

The City's data management system is Quest, which is a custom database developed by the City and is discussed further in Element 4.2.

The service area presents several challenges. The terrain is approximately 25% flat with the remainder hilly to steep. The elevation change is from sea level to 585'.

Some facilities are adjacent too, and in close proximity to the ocean making containment and recovery efforts difficult, as spills in certain areas of the city have the ability to go directly to the ocean. Cell phone reception is poor is some areas hindering communication at times.

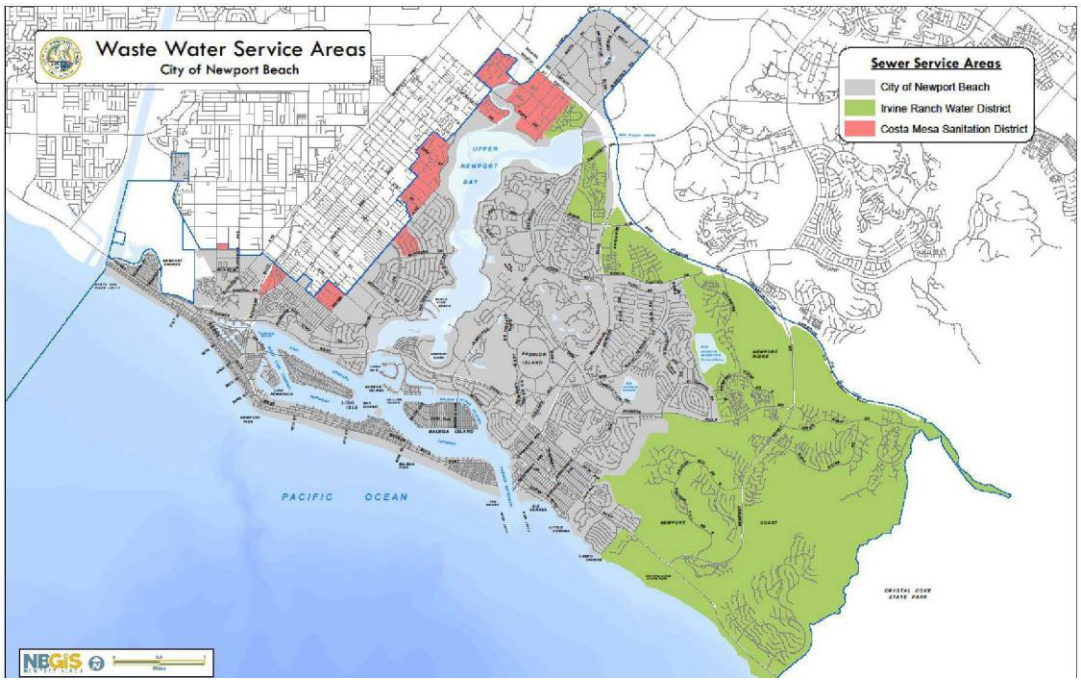


Figure 1-2 -City Service Area Location Map

"Seawalls" are used to help keep the high tide waters from flooding the city streets, but there are occasions when the walls are breached. High ground water tables make it challenging to perform excavation repairs.

The City experiences a high population turnover (due to tourism/vacations) from the winter months (75,000) to the summer months, where summer populations increase by approximately 400% leading to significantly higher flows in the sewer pipes. Accessibility, in vacation areas, is an issue - tight quarters, narrow roads and on-street parking make it difficult to maneuver maintenance and construction equipment.

The City uses Geographic Information System (GIS) technology to manage its system maps. City staff have the ability to draw in updates and add comments on the mapping system, which are used by GIS staff to update the map viewer.

EFFECTIVENESS

Key Performance Indicators:

1. Are asset statistics periodically reviewed and updated as necessary?
2. Are corrections addressed in a timely manner?
3. Are system maps up to date?

IMPLEMENTATION PLAN/SCHEDULE

No	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
1.3.1	Review City-owned asset statistics and element description; update as necessary	At beginning of audit cycle and when significant changes have been made.	X	X	X
1.3.2	Update Maps	After suggested updates and after installation projects		X	X

RESILIENCE

Resilience is addressed for Element 1 by:

- Adhering to an SOP for collecting and managing asset data.
- Redundancy: More than one member of staff is trained and able to retrieve and manage the data.
- Implementing a QA/QC process to help ensure information is accurate.
- Using Calendar Reminders to ensure compliance deadlines are met.

Specifications 5.2 – SSMP Development and Implementation

WDR REQUIREMENTS

Spec. 5.2 (pg. 18)

To facilitate adequate local funding and management of its sanitary sewer system(s), the City 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 SSMP, 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.

COMPLIANCE

The City's current Sewer System Management Plan (SSMP) has been updated to meet the requirements of Order WQ 2022-0103-DWQ and addresses the required Elements. The SSMP addresses management, operations and maintenance procedures. The City maintains an active CCTV program to identify defects, which are then prioritized for repair, replacement, rehabilitation, or modified maintenance schedules. (See Elements 4 and 8.)

The City is proactive in keeping up with current industry standards, technology and best practices and stays abreast by reviewing industry periodicals, networking, attending industry conferences and workshops, vender presentations and from contractor feedback. In addition, the City participates in a local Waste Discharge Requirements working group, which meets quarterly and reviews/discusses regulations, best practices and information sharing regarding problems and solutions.

Specifications 5.7 – Allocation of Resources

WDR Requirements

Spec. 5.7 (pg. 22)

The City shall comply with the following requirements:

a. *Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and*
b. *Allocate the necessary resources to its sewer system management program for: (a) compliance with this General Order, (b) full implementation of its updated SSMP, (c) system operation, maintenance, and repair, and (d) spill responses.*

COMPLIANCE

The City maintains various funding sources to maintain financial stability, to meet its operational needs for its sewer system operations. Funding sources include:

- Sewer Connection Fee: One-time fee for each connection to the public sewer.
- Sewer Use Charge: Monthly fixed charge based on water meter size. The monthly fixed charge recovers portions of fixed cost elements such as operating and capital components, maintenance and services, and customer billing.
- Consumption Charge (based on water consumption): The consumption charge recovers costs associated with volume demands.
- Most recent Rate Study was completed in 2023
- The City currently employs 13 staff for the operation and maintenance of its sewer collection system and owns and operates the necessary equipment to effectively maintain its collection system.

Provisions 6.1 - Enforcement Provisions

WDR REQUIREMENTS

Provisions 6.1 (pg. 27)

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.

COMPLIANCE

The City is aware of the consequences for noncompliance including associated penalties for violations. The City maintains a proactive stance with full implementation of its SSMP.

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.

Provisions 6.3 Sewer System Management Plan Availability

WDR REQUIREMENTS

Provisions 6.3

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.

COMPLIANCE

The City publishes its SSMP on its website and maintains paper copies in its offices which are available to the public.

2.0 Organization

WDR REQUIREMENTS

Att. D-2 (pg. D-3)

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:

a. *The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order.*
b. *The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan Elements.*
c. *Organizational lines of authority.*
d. *Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county health officer, county environmental health agency, and State Office of emergency Services.)*

COMPLIANCE

The above items are addressed in order below:

The Utilities Department oversees, manages and maintains the water, wastewater (sewer), storm drain and tidal valve system, street sweeping, streetlights and oil and gas operations for the City of Newport Beach. Mark Vukojevic PE is the Utilities Director and has authorized the City's Utilities Superintendent, Casey Parks and Wastewater Supervisor, Mike Lynch to serve as Legally Responsible Officials. Both Mr. Parks and Mr. Lynch have 25 years' experience in wastewater collections and meet the requirements set forth in Specifications 5.1 of the WDR.

Table 2.1 below identifies the persons responsible for implementing specific SSMP elements.

Implementation Responsibilities	
Sewer System Management Plan Elements	**Responsible Position**
1 – SSMP Plan, Goal and Introduction	
1.1 Regulatory Context	Utilities Superintendent
1.2 SSMP Update Schedule	Utilities Superintendent
1.3 Sewer System Asset Overview	Utilities Supervisor
2 – Organization	Utilities Director/Superintendent
3 – Legal Authority	Utilities Director / Legal Counsel
4 – Operations and Maintenance Program	
4.1 Updated maps of Sanitary Sewer System	Utilities Supervisor/GIS Division
4.2 Preventive Operation & Maintenance	Utilities Supervisor
4.3 Training	Utilities Supervisor
4.4 Equipment Inventory	Utilities Crew Chiefs
5 – Design/Performance	
5.1 Updated Design Criteria & Construction Standards	City Engineer
5.2 Procedures and Standards	Utilities Superintendent
6 – Spill Emergency Response Plan	Utilities Superintendent
7 – Sewer Pipe Blockage Program	Utilities Supervisor
8 – System Eval, Capacity Assurance, Capital Imp.	
8.1 System Evaluation and Condition Assessment	City Engineer
8.2 Capacity Assessment and Design Criteria	City Engineer
8.3 Prioritization of Corrective Action	Utilities Supervisor
8.4 Capital Improvement Plan	City Engineer
9 – Monitoring, Measurement & Program Mods	Utilities Supervisor
10 – Internal Audits	Utilities Superintendent
11 – Communication Program	Utilities Superintendent

Table 2-1 Organization Implementation Responsibilities

Responsible Position Contact Information		
Position Title	**Phone**	**Email**
City Engineer	949-644-3319	jhoulihan@newportbeachca.gov
Utilities Director	949-718-3401	mvukojevic@newportbeachca.gov
Utilities Superintendent	949-718-3477	cparks@newportbeachca.gov
Utilities Supervisor	949-718-3415	mlynch@newportbeachca.gov
Utilities Crew Chief	949-718-3416	daguirre@newportbeachca.gov
Utilities Crew Chief	949-718-3416	jgarrett@newportbeachca.gov
Utilities Crew Chief	949-718-3416	ppiersall@newportbeachca.gov

Table 2-2 Responsible Position Contact Information

Organizational Lines of Authority

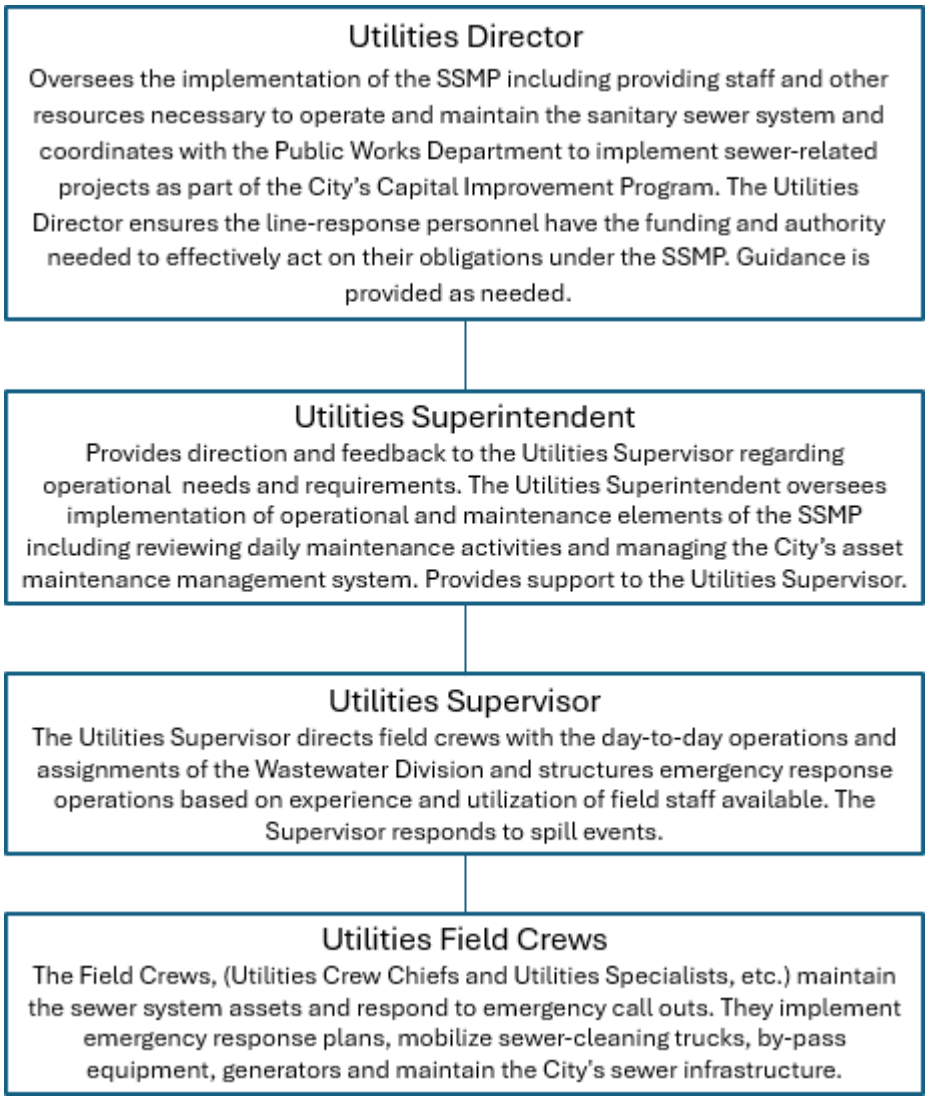


Figure 2-1 - Organizational Lines of Authority

Abbreviated Org Chart

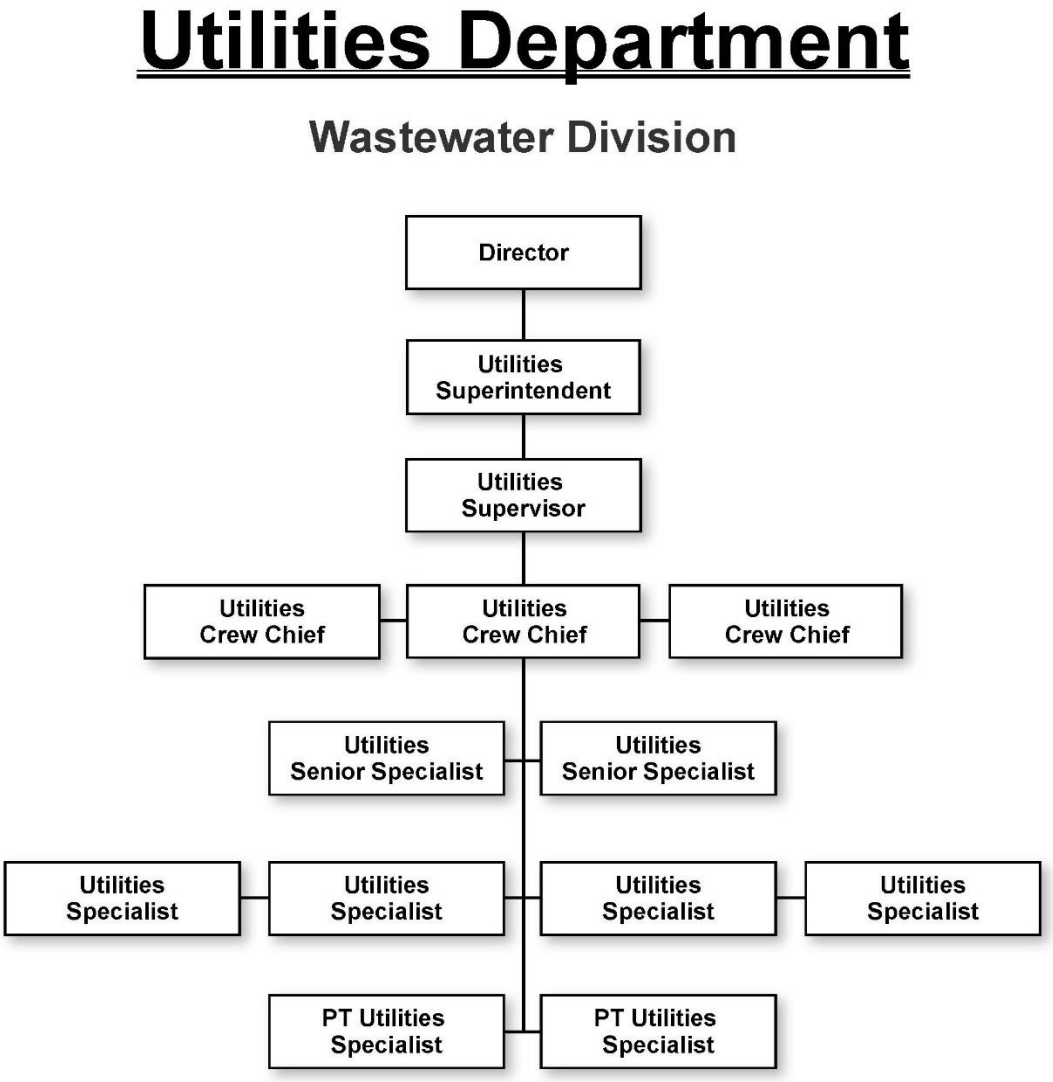


Figure 2-2 Abbreviated Org Chart

Chain of Communication for Reporting Spills

Figure 2-3 City Chain of Communication for Reporting Spills

EFFECTIVENESS

Key Performance Indicators:

1. Have there been any changes requiring updates to the Organizational Chart?
2. Have there been instances when a service call for a spill was not properly routed to response personnel?
3. Were all spill response activities documented and forwarded to the LRO?
4. Have there been any changes in assigned responsibilities for implementing the Sewer System Management Plan?
5. Is there a process in place to ensure all contact information remains up to date?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
2.1	Review names, contact information and position responsibilities. Update as necessary.	Annually	X	X	
2.2	Review Chain of Communication outcomes for all spill responses	Each Spill Event	X	X	
2.3	Review Organizational Chart for any changes. Update as necessary.	Annually	X		

RESILIENCE

Resilience is addressed for Element 2 by:

- Ensuring that more than one person is capable and responsible for specific duties for the implementation of the Sewer System Management Plan, e.g., back-up personnel.
- Designation of more than one LRO to help ensure full and continuous coverage of duties.
- Testing the phone notification system to ensure calls are received and routed to appropriate personnel.

3.0 Legal Authority

WDR REQUIREMENTS

Att. D-3 (pg. D-4)

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:

a. 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;
b. Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
c. Require that sewer system components and connections be properly designed and constructed;
d. Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
e. Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
f. Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

COMPLIANCE

The above items are addressed in order below:

Municipal Code 14.24

Municipal Code 14.28

Municipal Code 19

a. **Illicit Discharges:** The City's Municipal Code, Chapter 14, Section 28.020 gives the City the authority to prohibit discharges to the City's sewer system.

b. **Sewer and Storm Drain Collaboration:** The City owns and maintains the sewer and storm drain systems within its service area and both utilities are within the same department. Therefore, the City has de facto legal authority to collaborate and coordinate, as required.

c. **Proper Design and Construction:** (Municipal Code 14.24) The City has its Standard Plans and Specifications for the Construction of Sanitary Sewers, which ensures the sewer lines and connections are properly designed and constructed. The City's specifications by reference incorporate the Standard Specifications for Public Works Construction ("The Greenbook"), which also helps insure proper design and construction of sewer facilities.

d. **Access to Laterals:** (Municipal Code 14.24.020) The City requires all new properties and existing properties that redevelop to install a sewer cleanout at the property line. These cleanouts are required at the time building permits are issued. This cleanout provides access to the City for maintenance and inspection of the public portion of the (lower) lateral. The cleanouts are installed and inspected according to City Standards. Typically, the City-owned cleanouts are in public easements (sidewalks) allowing access for repairs and maintenance.

e. **Enforce Violations:** (Municipal Code 14.28.100) The City of Newport Beach has a Municipal Code to enforce violations of its sewer ordinances. The City Attorney has verified our legal authority for inspection and

enforcement. Any person, firm, or corporation violating the provisions of Municipal Code are subject to administrative citations, misdemeanor punishments, termination of service, and abatement of conditions on property if necessary.

f. **Obtain Easements and Access Agreements:** (Municipal Code 19.40.010) The City's service area is Newport Beach proper. The Public Works Department is the authority for easements. Access agreements are tied to the permitting process. A building permit and/or encroachment permit will not be issued until an access agreement or easement agreement (whichever is needed) has been granted by the property owner.

EFFECTIVENESS

Key Performance Indicators:

- Are the City ordinances and standards adequate for fulfilling the Sewer System Management Plan legal requirements?
- Does the City have a process in place for periodic review and evaluation of ordinances?
- Have there been instances when the code or ordinance did not address a need or circumstance?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			DIR	SPT	SUP
3.1	Review Ordinance to confirm all documents provide necessary required legal authority	Once per 6-year SSMP Update Cycle	X		
3.3	Monitor and Document occasions when ordinance(s) failed to address issues as intended.	Continuously	X	X	X

RESILIENCE

- Resilience is addressed for Element 3 by:
- Keeping abreast of industry trends and local ordinances that may affect operations.

4.0 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 Sewer System

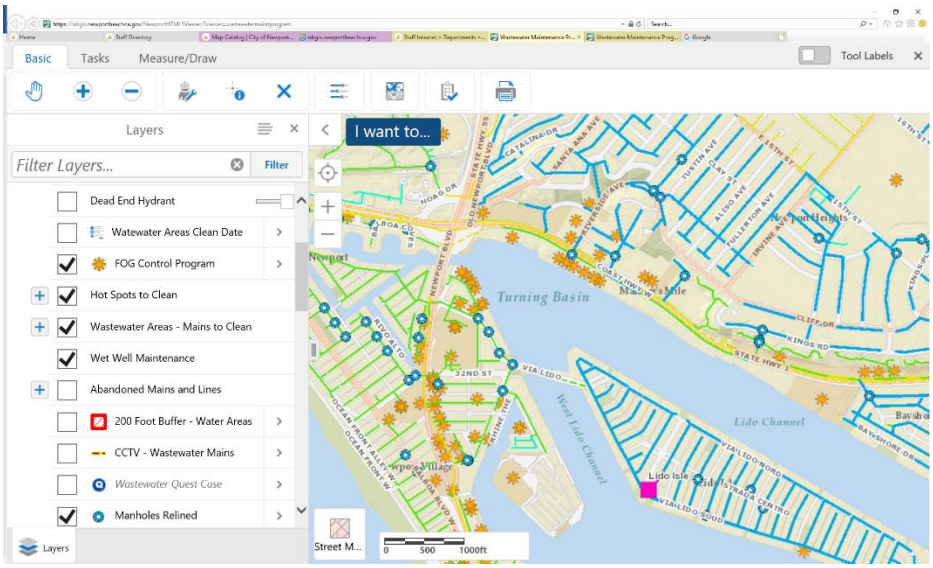
WDR REQUIREMENTS

Att. D-4 (pg. D-4)

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.

COMPLIANCE

The City of Newport Beach uses Geographic Information System (GIS) technology to create, maintain, and manage maps and data sets associated with its wastewater collection system. The wastewater system GIS mapping is maintained by City Information Technology Department staff. Pipe inventory data includes ownership, installation year, diameter, length, material, status, record drawing reference, and other information. Manhole inventory data includes ownership, installation year record drawing reference, and other information. Each layer has a reference to record drawings and as-builts (if available). The record drawing includes all the information on each line and pump station. The focused GIS wastewater layers page is available to all appropriate City staff and is continuously updated as new facilities are constructed and pipelines are replaced.



The locations of all storm water facilities are also included on separate layers in the GIS. The City recognizes the link between a spill and its path of travel into the storm drain facility and ultimately to the receiving waters. The City has educated its staff to understand the storm drain network and utilize the network to capture a spill if it has entered the storm drain system.

The City understands the National Pollutant Discharge Elimination System (NPDES) regulations for storm drain system owners, including the provisions of the MS4 Permit. The MS4 Permit contains requirements prohibiting spills into the storm drains. The MS4 Permit requires the storm drain system owners to adopt measures that will decrease the possibility of SSOs. The City attends the meetings of the MS4 Permit Co- Permittees in order to coordinate the effort of the storm drain and sewer system owners. Many of the MS4 Permit's municipal obligations (including storm drain system maintenance) are assigned to the City's Storm Drain Division within the Utilities Department.

The City's map viewer is available to the public and the City will share it upon request.

EFFECTIVENESS

Key Performance Indicators:

- Were all map updates completed in a timely manner?
- Are all staff trained in the procedure for providing map update information?
- Are newly installed sewer assets incorporated into the system maps?
- Are there terrain features or assets that should be incorporated in future map updates (e.g. exposed pipe, siphons, ARVs, surface water, etc.)

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
4.1.1	Review map update procedures with all affected staff.	Annually		X	X
4.1.2	Review/ensure all newly installed facilities have been updated and included in the system maps	Annually		X	X

4.2. Preventive Operation and Maintenance Activities

WDR REQUIREMENTS

Att. D-4 (pgs. D-4/D-5)

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.

COMPLIANCE

The purpose of a scheduling system is to program all required inspection and maintenance activities within the collection system to help proactively prevent blockages/operational problems or spills.

The City's collection system is divided into 26 areas to provide a platform for a systematic approach of maintenance and inspection activities.

The City utilizes its own staff for gravity main cleaning, which is done on an 18-month interval. Pipe repairs are prioritized based on severity and are completed on a case-by-case basis. The City is in the process of determining an optimal schedule for completion of lower lateral assessments, currently performing 1,400 per year. Manholes are inspected during the course of other maintenance activities. The City's root control program consists of contracted (annually) chemical root control and hydro-cleaning conducted by City staff utilizing root cutting nozzles. CCTV inspections are performed by contracted services on a 10-year interval. Pump stations are inspected weekly, and the wet wells are cleaned quarterly.

The City has maintenance programs, which outline work to be done and is scheduled by Supervisors and Crew Chiefs. Repairs are performed based on severity and are completed on a case-by-case basis. The City also utilizes Quest to document work completed such as repairs and installations.

The City keeps historical data on all maintenance activities, which can be accessed through GIS from desktop and tablet computers.

The City has a Hot Spot program that includes known problem areas, such as portions of the system affected by roots and grease, that require higher frequency maintenance intervals. Maintenance intervals are either monthly or quarterly. These are managed through GIS using tablets in the field.

EFFECTIVENESS

Key Performance Indicators:

- Are the agency's maintenance, operations, and engineering work orders periodically audited for accuracy and completeness?
- Does the agency monitor "open," "overdue," or "not yet completed" work orders to ensure completion of tasks?
- Are inspection and maintenance activities reducing the number and volume of spills?
- Is maintenance work being completed as scheduled?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	**SUP**	**CCRW**
4.2.1	Monitor "Past Due" work orders to ensure critical work is being completed	Quarterly		X	X
4.1.3	Review scheduled PMs to ensure the prescribed schedule remains appropriate.	Annually		X	X

4.3. Training

WDR REQUIREMENTS

Att. D-4 (pg. D-5)

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.*

COMPLIANCE

The City maintains an adequate training budget and provides in-house technical training for equipment and collection system operations and maintenance.

The City uses a combination of on-the-job training, conferences, seminars, and other training opportunities to provide technical training for its wastewater collection system staff.

The City requires all Wastewater personnel to have at a minimum, Grade-1 certification provided by the California Water Environment Association (CWEA) and annual training provided ensures that the Wastewater staff maintain their CWEA certifications.

All employees receive thorough training on the Department's SSMP, their roles and the roles of others. The Department conducts tabletop exercises to reinforce this training. All employees are required to keep relevant portions of the SSMP with them at all appropriate times.

The City requires all Wastewater staff that cross-trains within the Maintenance & Repair (M&R) division or chooses to take the after-hours duty to maintain a California State Water Resources Control Board ((SWRCP) Grade D1. The pump crew chief and several other staff have formalized training in the repair and maintenance of the pumps.

Periodic training is provided to all appropriate personnel on the City's Spill Emergency Response Plan. Training includes review of spill response procedures, volume estimations, documentation, reporting, practical exercises and scenario-based drills to help ensure competent responses to spill events. Staff designated as Data Submitters receive training on the City's procedures for reporting spills to the California Integrated Water Quality System (CIWQS) database.

The City has developed spill response procedures for Contract Service personnel who perform work for the City. Minimum requirements include:

- Immediately notify the City of any sewage spill they encounter.
- Make attempts to contain the spill
- Cordon off the area to keep the public safe
- Remain onsite until City staff arrives and relieves them.

The City has seven emergency on-call contractors under contract who specialize in wastewater, are appropriately trained and are available to respond to any needed emergency. City staff typically call out contracted services and would be on-site to attend to any spill event while contracted services perform repairs.

EFFECTIVENESS

Key Performance Indicators:

- Has all training been completed as scheduled?
- Have records of training and attendance been documented and maintained?
- Have all staff demonstrated ability and knowledge after each training event?
- Have contractors received, at a minimum, direction for reporting and responding to spills.

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	**SUP**	**CRW**
4.3.1	Review training documentation to ensure all staff have received required training	Annually	X	X	
4.1.2	Review agreements with contractors and/or Pre-Job meeting minutes to ensure contract personnel have received instruction for responding to sewage spills	Each Contract	X	X	

4.4. Equipment Inventory

WDR REQUIREMENTS

Att. D-4 (pg. D-5)

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

COMPLIANCE

The City maintains an inventory of equipment and has identified critical spare parts, which are stocked and readily available when needed. The City attempts to use the same model pumps in as many stations as possible to simplify maintenance and replacement. Twice yearly, staff inventories all piping supplies (VCP, & PVC pipe, fittings & couplings), all main line sewer cleaning supplies (degreasers, root cutters & saws, high pressure hoses, etc.), and pump station replacement parts (glands, check valves & plug valves.)

The City has all the necessary equipment to work on sewer line maintenance and repairs or pump station maintenance and repairs. In addition to small tools, the City has a full fleet of equipment at its disposal. The City also has mutual aid arrangements with neighboring wastewater agencies and cities.

EFFECTIVENESS

Key Performance Indicators:

- Have inventory lists been audited as scheduled?
- Have any inventory deficiencies or omissions been discovered and rectified?
- Has the agency experienced any equipment failure that inhibited a spill response?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CCRW
4.4.1	Audit inventory lists to ensure stock is adequate	Annually		X	X
4.4.2	Check with vendors to ensure critical parts lead times are as expected.	Annually		X	X

RESILIENCE

Resilience is addressed for Element 4 by:

- Developing an SOP for updating maps when errors are discovered.
- Developing and using forms (paper or electronic) for data collection to help ensure all pertinent information is consistently collected.
- Periodically evaluating inspection cycle intervals to help ensure they are optimized.
- Requiring staff to demonstrate ability and/or knowledge for all training activities.
- Monitoring equipment and critical spare parts usage for and trends.
- Performing periodic audits of the Vehicle, Equipment, and spare parts Inventories.

Specifications 5.19 - Operations and Maintenance

WDR REQUIREMENTS

Spec. 5.19 (pg. 27)

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.

COMPLIANCE

Proactive Sewer Cleaning

The City of Newport Beach proactively and systematically cleans every gravity sewer pipe segment in the wastewater collection system at least once every 18- months on a systematic cleaning cycle. This cleaning cycle consists of cleaning groups of pipes, organized by areas. The City uses three different hydro-vac cleaning trucks depending on the pipe and location. The variety of trucks gives the City the flexibility to respond and perform maintenance in small tight alleys and easement areas. Crews also use root cutting nozzles and root foaming products to control roots. The City has identified tree roots in conjunction with grease as the primary cause of spills in the City.

All maintenance documentation is uploaded to the City's GIS system and the electronic "Quest" service and work order request system. A color-coded area map is also used which shows the date of the last cleaning for the entire 18-month City-wide cleaning schedule. The more vigilant the City is in taking a proactive stance to maintain the main line sewer pipes, the more likely staff is to prevent problems and find problems or areas of concern that need attention.

High Maintenance Areas and Preventative Maintenance Cleaning

Areas needing more frequent cleaning - known as "high maintenance areas" - are cleaned as frequently as monthly and quarterly. This preventive maintenance sewer cleaning is utilized for sewer pipes with a known history of one or more maintenance issues such as root intrusion, grease accumulation, or debris deposition. These also include inverted siphons that run under flood control channels and bay crossings or commercial areas with multiple restaurants. High Maintenance Area cleaning schedules include:

- Airport Area (Monthly)
- High Maintenance Area 1 (Monthly)
- High Maintenance Area 2 (Quarterly)
- Wet Wells (Every 3 Months)
- Traffic Control Areas (Every 6 months)

The City has one hydro truck and two combination hydro-vacuum trucks specifically for spill cleanup, each with a two-person crew. The City also has additional backup combination hydro-vacuum truck available for use from the Storm Drain Division. The City sends out two crews daily, sometimes three, based on staff availability.

CCTV Inspections

The City utilizes both in-house staff and contracted services to conduct CCTV inspections of sewer lines. These inspections asses the condition of the lines, monitor high maintenance areas (annually), evaluate recent repairs, and support the City's goal of inspecting the entire system within a ten-year cycle. In addition, the City performs post-construction inspection of sewer pipes after any work is performed on or near sewer lines to ensure the integrity of the sewer facilities.

After sewer lines are inspected, identified defects are rated based on their condition, prioritized by severity and incorporated into the City's Capital Improvement Program.

Pump (Lift) Stations

The City, utilizing a two-person crew, maintains 21 sewer pump stations throughout its service area. The City uses the recommended pump maintenance schedule for the piping, valves, and other equipment in the station and valve vault provided by the City's consultant Engineers of over 45 years, Sales and Service Company (ESSCO). All stations are inspected at least once per week.

ESSCO serves as the City's primary contact during emergencies. The City also uses SCADA and communication systems to monitor pump station flow and receive alarms for dispatching crews. Certain pump stations have emergency power generators on site and portable emergency pumps and generators are housed by the Utilities Department in the event of a failure.

Additionally, the City has standardized its use of materials in the pumping stations for ease of maintenance and replacement. This includes the pumps, liquid level indicators, remote terminal units (RTU's), valves, piping, and radios.

Construction Repairs

The City also has an additional Wastewater crews that help maintain the City's sewer infrastructure. This includes a two-person repair crew that primarily installs, repairs or replaces sewer lines, sewer laterals, cleanout, and manholes.

These crews are also available to assist with hydro-vac cleaning, as needed.

The City uses "no-dig" pipeline rehabilitation as often as possible. The City considers no-dig technology an important tool in pipeline rehabilitation as systems reach their life expectancy. Another important tool used by the Department is vacuum excavation. The City still utilizes the standard method of pipeline removal and replacement in conjunction with new pipeline re-lining technologies.

Lateral Program

The City has developed a lower lateral program that begins with CCTV inspections to evaluate condition. Identified issues are assessed to determine the best course of action, may include immediate jetting to remove obstructions, establishing a preventive maintenance (PM) schedule, performing repairs, both excavation and trenchless options, and consideration for placement into the City's root control program. Currently the City is assessing approximately 1,400 laterals per year and is continuously evaluating the program to determine the optimal effort needed to begin reducing the frequency of lateral spills. Records of the lateral inspections and maintenance are kept on the cities GIS system.

Manhole Inspection Program

The City has established a manhole inspection program that involves a top-down inspection method, where

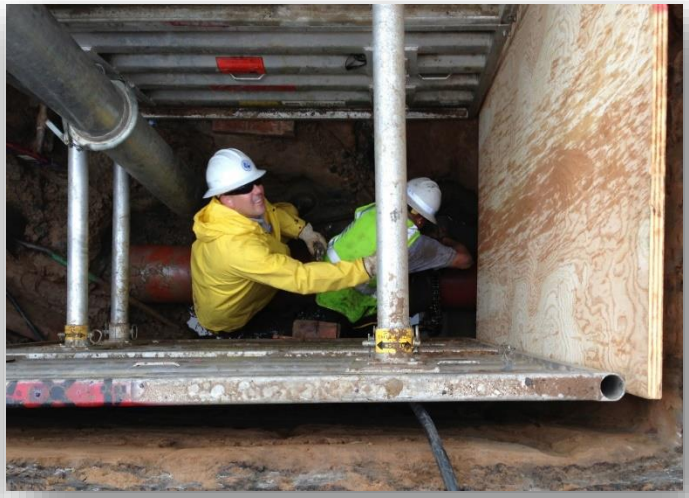
manholes are visually inspected without entry. An inspection form is used to provide guidance to the inspector and for documentation of findings. Currently, the gravity main cleaning crews are performing these inspections at all manholes that are opened during maintenance activities. If an issue that needs attention is discovered, the City will use the Quest system to create a work order, which will be completed on a prioritized basis.

Easement Inspection Program

Easements are inspected in the course of the 18-month cleaning cycle. The easements are checked for access when staff go out to clean the lines. There are a few easements in difficult areas that are checked more frequently.

FOG Inspection Program

The City has established a grease control and FSE inspection program. The City has a dedicated contractor that inspects all FSE's on a quarterly basis. The contractor inspects all grease control devices, inspects kitchen areas, checks for pumping and lateral cleaning records, inspects new grease control device installations, performs plan checks for new FSE's, and trains FSE staff on proper FOG control procedures. Records are kept for all inspections and compliance. To enforce and monitor for compliance, the city issues FOG control permits to all the FSE's in its service area.



5.0 Design and Performance Provisions

5.1. Updated Design Criteria/Construction Standards/Specifications

WDR REQUIREMENTS

Att. D-1.1 (pg. D-5)

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.

COMPLIANCE

The City's Utilities, Public Works and Community Development Departments require all new or rehabilitated sewer installations to be tested and inspected pursuant to the Municipal Code, the City's standard plans and any conditions stipulated on (required) permits. The primary design and performance standards the City's use in design and installations of new sewer systems are:

- City of Newport Beach Municipal Code
- City of Newport Beach Standard Drawings and Standard Specifications
- GIP project specific Special Provisions and Technical Specifications.
- Standard Specifications for Public Works Construction (Greenbook)

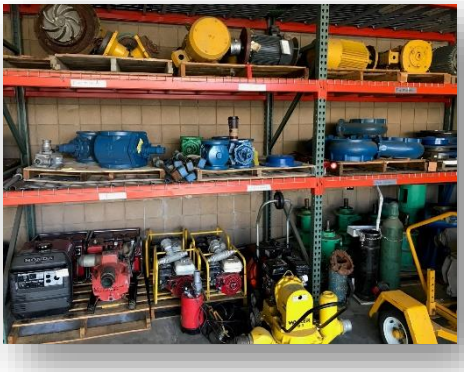
The standards listed above outline construction specifications for installing new wastewater systems, pump stations, and other appurtenances, and for rehabilitation and repair of existing wastewater systems. Design criteria include specifications for items such as pipe materials, minimum sizes, minimum cover, strength, minimum slope, trenching and backfill, structure standards, and other related provisions. All new construction, rehabilitation, or repair of the sanitary sewer system adheres to these standards. In addition, the City will use additional written specifications known as Special Provisions and Technical Specifications for specialized construction or projects.

Pipe Capacity is addressed in the Current Master Plan.

EFFECTIVENESS

Key Performance Indicators:

- Is plan checking QA/QC processes helping to ensure adherence to the standards?



IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	ENG
5.1.1	Ensure all project plans are approved in accordance with the City's Standard Specifications and Details.	Each Project			X
5.1.2	Verify design standards and hydraulic model previously completed are adequate and consistent with current standards of practice.	2017			X

5.2. Procedures and Standards

WDR REQUIREMENTS

Att. D-1.1 (pg. D-5)

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

COMPLIANCE

The City's standard public works contract provides that work is not placed into service and accepted by the City until inspection and testing are completed. The City provides continuous inspection during the construction of sewer facilities and believes that proper installation is the key element to ensure proper operation and maximum life expectancy. City inspectors use the City's Design Criteria, Standard Drawings and the Greenbook Inspection Manual for reference. Experience and training also allow inspectors to provide excellent observation of contractors' work. With regard to testing sewer lines, the City uses the Greenbook recommended air-testing, and video inspection procedures on all new and repaired/rehabilitated main lines and video inspects sewer lines after they are constructed. Liners installed in manholes are spark tested to ensure the integrity of the liner.

Testing and approval of newly constructed or rehabbed pump stations is included in the contracts.

EFFECTIVENESS

Key Performance Indicators:

- Were any design or installation deficiencies found during warranty inspections?
- Are deviations from standard procedures and/or specs, testing, etc., justified and documented?
- Does the City stay abreast of industry design standards and technical advances in the industry?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	ENG
5.2.1	Verify inspection procedures are adequate and consistent with current standards of practice	Due in 2032 (10-year cycle)			X
5.2.2	Verify design standards and hydraulic model previously completed are adequate and consistent with current standards of practice.	Due in 2032 (10-year cycle)			X

RESILIENCE

Resilience is addressed for Element 5 by:

- Staying abreast of industry trends and standards.
- Performing warranty inspections of newly installed or repaired assets to evaluate design and installation practices.
- Evaluating as-built changes for trends and areas for design and performance improvements.

6.0 Spill Emergency Response Plan

WDR REQUIREMENTS

Att. D-1.1 (pg. D-6)

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.*

COMPLIANCE

Sewer service calls are high priority events that demand a prompt response. Upon notification of a potential sewer spill, city staff is dispatched immediately. After hours, the City's Duty person responds with a goal of being onsite within 30 minutes. If it is determined there is an overflow caused by a failure of City-owned sewer facilities, the City will dispatch the appropriate crews to investigate, identify the cause, and provide appropriate action to minimize the effects of the overflow on public health and quality of surface waters.

The City’s Spill Emergency Response Plan has been updated and follows current regulations that have been in effect since June 5, 2023. Subsequently, the City conducted training that included classroom training, hands-on training and drills.

The City’s SERP addresses all the requirements as stated in Attachment D, 6 of the WDR and is available on the City’s website

EFFECTIVENESS

Key Performance Indicators:

- Have staff spill response efforts helped to prevent the discharge of sewage to surface waters?
- Do post-spill assessments indicate staff are following the procedures outlined in the SERP?
- Is SERP training effective and trainees demonstrating adequate knowledge and abilities?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
6.1	Perform SERP training including practice drills.	Annually		X	X
6.2	Review Post Spill Assessments to ensure adherence and to indemnify any trends that should be addressed	Annually	X	X	X

RESILIENCE

Resilience is addressed for Element 6 by:

- Multiple staff are trained to respond to spill events
- Post-spill assessments are conducted to evaluate staff adherence to the SERP and to identify areas for improvement.
- Data collection forms direct staff to collect all the required data to be submitted to CIWQS and are designed as a guide to a proper spill event response.
- The City employees several different spill volume estimation methods to account for different circumstances.

7.0 Sewer Pipe Blockage Program

WDR REQUIREMENTS

Att. D-7 (pg. D-7)

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:

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

COMPLIANCE

Municipal Code 14.30

Municipal Code 14.28

a. The City's Public Outreach program includes efforts to educate customers on "what not to flush,' and kitchen Best Practices. This is accomplished through flyers, newsletters and doorhangers for both general and targeted outreach, messaging on the City website, including a means for the public to contact the City, and presence at community events. The Outreach efforts vary from year to year.

b. Pipe blocking substances collected during maintenance and repair activities or collected during spill responses are brought to City drying beds and then disposed of at the nearby Orange County Sanitation Districts treatment plant.

c. The City's Municipal Code, Chapter 14.28.020 gives the City the authority to prohibit discharges to the City's sewer system.

d. The Municipal Code, Chapter 14.30 is dedicated to control of fats, oils and grease and provides the City the authority to require grease removal devices, maintenance requirements, best management practices and kitchen best practices and recordkeeping requirements.

All food service establishments are given a FOG Control Best Management Practices Binder that includes:

- FOG Control Program Cover letter
- Newport Beach Municipal Code 14-30 FOG Control
- Kitchen BMP Training Guide
- Kitchen BMP Training Log
- Kitchen Best Management Practices Chart
- Waste Cooking Oil Collection Log
- Drain is Not a Dump Poster
- FOG Control Video - The Drain is Not a Dump English
- FOG Control Video - The Drain is Not a Dump Spanish
- FOG Control Video - The Drain is Not a Dump Mandarin

e. The City's Municipal Code, Chapter 14.30 provides the legal authority to inspect grease producing facilities. The city contracts these inspections to Environmental Compliance Inspection Services (ECIS). Each grease producing facility is inspected annually, with quarterly follow-ups for any issues found.

f. The City has identified problem areas within the collection system and addresses pipe blocking issues through its maintenance practices, which includes: (10-year cycle) CCTV Inspection program, High Frequency Cleaning program and annual Root Control program.

g. In addition to the City's source control program, hydro-cleaning of gravity lines is performed on an 18-month interval and on a systematic basis to control grease, roots and debris to ensure continuity of service. New problems found through the CCTV inspection program are brought to a supervisor's attention and evaluated to determine the best course of action to mitigate or eliminate.

EFFECTIVENESS

Key Performance Indicators:

- Have there been any blockages/spills from any identified problem area?
- Is the agency receiving feedback on public outreach efforts?
- Is the debris and other sewage solids collected during cleaning activities being disposed of appropriately?
- Have there been spills due to excessive fats, oil, grease, roots, or non-dispersible wipes discovered in the sewer system during the audit period?
- Are there repeat offenders among FSEs?
- Are enforcement trends decreasing?
- Are Source Control and Collection staff included in the plan check process?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
7.1	Review/evaluate enforcement and inspection findings and implement changes as necessary.	Annually		X	X
7.2	Review spill rates and causes and make changes to maintenance programs, as necessary.	Annually		X	X

RESILIENCE

Resilience is addressed for Element 7 by:

- Inspection of select assets directly downstream of grease producing businesses to ensure source control is effective.
- Residential FOG outreach and education program.
- Performance of regular assessments of system assets to monitor performance.
- QA/QA process for evaluating pipe cleaning effectiveness.
- Daily disposal of pipe blocking materials retrieved during maintenance activities.

8.0 System Evaluation, Capacity Assurance, Capital Improvements

WDR REQUIREMENTS

Att. D-8 (pgs. D-7/D-8)

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

WDR REQUIREMENTS

Att. D-8 (pgs. D-7/D-8)

The City SSMP must include procedures to:

a. Evaluate the sanitary sewer system assets utilizing the best practices and technologies available.
b. Identify and justify the amount (percentage) of its system for its condition to be assessed each year.
c. 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.

d. Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods.
e. 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.
f. Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
g. Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: (a) sea level rise, (b) flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; (c) wildfires; and (4) increased power disruptions.

COMPLIANCE

a. The City utilizes contracted services to CCTV inspect the gravity main system on a 10-year cycle. Defects are coded using the NASSCO Pipeline Assessment Certification Program (PACP), which provides consistent assessment and ranking of defects. City crews CCTV inspect the (City-Owned) lower laterals. All findings are documented and subsequently evaluated.

Pump stations are inspected weekly, and findings are documented and evaluated. Pump stations are evaluated by both collection system staff and public works staff. The resulting maintenance and repair activities are completed in a prioritized order.

b. The City has historically CCTV inspected the 203-mile gravity main system on a 10-year interval. This inspection pace has served the City well, as it has experienced 17 gravity main spills in the 10-year period ending August 2024, which equates to an average of less than one spill per 100 miles of gravity pipe over the last 10 years.

Year	# of Spills	Spills/100 miles of Pipe
2015	6	2.95
2016	1	0.50
2017	1	0.50
2018	1	0.50
2019	4	1.97
2020	1	0.50
2021	0	0.00
2022	1	0.50
2023	3	1.47
2024	0	0.00
	17 (total)	**0.84 (average)**

Table 8-1 Gravity Main Spills per 100 Miles of Pipe

In addition, the City maintains an aggressive gravity main cleaning program by completing the system cleaning cycle in 18 months. This effort, along with the 10-year CCTV inspection cycle helps the City maintain a high success rate transporting sewage to the treatment plant without service disruptions and spills.

The City is in the development stage of its Lateral Program, which begins with CCTV inspection of each lateral. Initial efforts and findings are being evaluated to determine the optimal return interval for this program.

The City does not maintain a backlog of repairs. The City periodically monitors system performance to see if inspection and maintenance intervals need to be adjusted.

The Overall condition of the gravity main system is good. Defects discovered via CCTV inspections are addressed either by performing lining or point repairs on a case-by-case basis (by City staff or contracted services) or including projects in the City's Capital Improvement Program.

c. The City considers (basically) their entire system as having a higher level of environmental consequence, should a sewer facility fail, due to its proximity to the ocean and beaches. Some facilities are in such close proximity that a spill would go directly to the ocean. This is the driving force behind the 18-month cleaning cycle and high frequency cleaning program.

The City's GIS program has identified all sewer facilities within 200 feet of surface water and repairs have been performed as deemed necessary.

d. In addition to CCTV inspections described previously in this document, the City performs visual inspections of manholes and the City's pump stations and monitors the performance of siphons by visually inspecting the up and downstream manholes.

e. The City is not aware of instances of exfiltration from its sewer system. The service area has high groundwater tables and the water pressure around and above the pipe would impede sewage from exfiltrating.

   The City recognizes sewage could exfiltrate from the same locations that infiltration occur should the water tables drop below the pipes. Severe instances of infiltration are repaired on a prioritized basis. The City coordinates with the Orange County Sanitation City to measure the salinity content in the sewer, measured at manholes. When discovered at a high level, City CCTV crews inspect upstream attempting to locate instances of infiltration.

f. CCTV inspection records, including rated defects, and video records are maintained in GIS for each inspection. Manhole and lift station inspections are documented. All are used for condition assessment of the assets.

g. The City has commissioned a study to determine if rising sea levels would have an impact on the protective seawalls in the City. The study indicated the seawalls are not at the end of their useful life, and the City is planning for eventual replacement and incremental increases in height.

   Generally, the City is not impacted by rain events as rainfall is minimal in the City and severe storms are infrequent, but due to low lying areas the City has an active operational pumping and response plan to address rainfall, storms, and flooding.

   Except for certain pump stations, drought and the possibility of wildfire are not considered to be a threat to the performance of the collection system.

   The City maintains an active rolling stock inventory of emergency generators and monitors power disruptions during planned maintenance outages, storms and PSPS events.

EFFECTIVENESS

Key Performance Indicators:

- Has the City maintained its schedule for CCTV inspections and is data being reviewed in a timely manner.

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
8.1.1	Review/evaluate enforcement and inspection findings and implement changes as necessary.	Annually		X	X
8.1.2	Review spill rates and causes and make changes to maintenance programs, as necessary.	Annually		X	X
8.1.3	Hold meeting to discuss any issues that may result from climate changes	Annually			

8.2. Capacity Assessment and Design Criteria

WDR REQUIREMENTS

Att. D-8 (pgs. D-7/D-8)

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.*

COMPLIANCE

The City has completed its Sewer Master Plan, which incorporates a hydraulic analysis of every line in the system and plans for increasing capacity for those lines found unable to handle future master planned flows.

The current system capacity can convey the current dry weather and wet weather peak sewer flows, without issues. The Sewer Master Plan was prepared and reviewed by AKM Consulting Engineers in 2010. The City's Water Master Plan and water production records, indicate water use and sewer use has been on a 20-year downward trend.

EFFECTIVENESS

Key Performance Indicators:

- Number of capacity-related spills or surcharge condition during the audit period?
- Has the system responded to rain events as indicated by the hydraulic model?
- Has there been any changes to zoning designations (residential, commercial, industrial)?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
8.2.1	Monitor/Evaluate significant rain events to see if they exceed the design storm in the hydraulic model.	Each significant rain evet		X	X
8.2.2	Identify and monitor flood-prone areas susceptible to erosion form rain events	After each significant rain event		X	X
8.2.3	Monitor flows in each basin and update the hydraulic model	Per Engineering Department schedule			X

8.3. Prioritization of Corrective Action

WDR REQUIREMENTS

Att. D-8 (pgs. D-7/D-8)

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.

COMPLIANCE

All defects discovered from CCTV inspections of the gravity system are rated using the PACP defect coding system. Defects or operational issues discovered during routine pump station inspections are documented and prioritized.

Collections staff evaluates and prioritizes each defect considering the likelihood of the defect causing a spill and the consequence of a spill. Staff determines the best course of action and timeline to rectify.

When evaluating the likelihood and consequence of the spill, the City considers the potential impact on public health and the environment. Examples assets that would be considered a higher risk include high volume pipes, assets in remote locations where discovery and/or response may be delayed, proximity to surface water or wetlands, and proximity to densely populated areas of the city including tourist areas and parks and playgrounds. Additionally, the City has identified areas where pipes run along bluffs where erosion or mud slides could impact sewer operations.

Issues found that require more immediate attention are typically rectified by City staff or contracted services. Typical options to rectify gravity main and manhole problems include performing excavation or trenchless repair, placing the line on a preventive maintenance schedule and/or including the line in the root control program. Pump station issues are generally rectified immediately unless adequate redundancy is in place, which would lower the priority.

Larger, more involved work, that does not require immediate attention, such as line replacement or rehabilitation, is recommended by collection staff to be included in the City's Capital Improvement Program, which is facilitated by the Public Works Department.

The 2010 Sewer Master Plan contains a list of each project identified as necessary to increase the capacity of portions of the system. No improvements are required in the short term and long-term improvements will be planned according to development and metered sewer flows. During the design of each project, alternative designs are considered.

EFFECTIVENESS

Key Performance Indicators:

- Has the City adhered to its system evaluation/condition assessment schedule?
- Has the City adhered to its prioritization/corrective procedures for sewer repair and capacity improvement projects?
- Have projects been completed before deficiencies caused failures?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	Eng
8.3.1	Utilize all available data for prioritizing corrective actions considering severity and consequences of potential spills.	Each CIP Update	X	X	X

8.4. Capital Improvement Plan

WDR REQUIREMENTS

Att. D-8 (pgs. D-7/D-8)

The capital improvement plan must include the following items:

a. *Project schedules include completion dates for all portions of the capital improvement program.*
b. *Internal and external project funding sources for each project; and*
c. *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.*

The City of Newport Beach Capital Improvement Program (CIP) serves as a plan for public improvements, special projects, on-going maintenance programs, and the implementation of the City's Master Plans.

COMPLIANCE

a. There are three sewer projects included in the current CIP involving adjusting manhole grades, pump station improvements and sewer mainline lining and repair. There is no standard length of time to complete a capital project. A project can take several months or several years to finish.
b. Capital spending can span multiple fiscal years. The Newport Beach CIP budget is adopted annually along with the City's operating budget. Generally, sufficient funds are appropriated for the work to be performed one year at a time and follow detailed project schedules established every July. The funding source for sewer projects is the Wastewater Enterprise fund.
c. The Utilities Superintendent provides recommendations to the Engineering department for capital improvement projects based on findings from inspections and operational performance.

EFFECTIVENESS

Key Performance Indicators:

- Has the agency's capital improvement plan schedule been adhered to?
- Have there been any instances when a failure or service disruption has occurred that would have been prevented if a project been completed?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	Eng
8.4.1	Hold regular coordination meetings, with all parties, to help keep the projects on track and resolve issues that may arise in a timely manner.	Annually	X		X
8.4.2	For schedules that are not kept, justify and document the reason.	Each Delayed project			X

RESILIENCE

Resilience is addressed for Element 8 by:

- Is there an annual review of the Capital Improvement Plan by all necessary individuals including both Engineering and Operations?

9.0 Monitoring, Measurement, and Program Modifications

WDR REQUIREMENTS

Att. D-9 (pg. D-9)

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

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

COMPLIANCE

a. The City maintains documentation on all inspection and maintenance activities. Most of this data is maintained in an electronic format allowing for ease of access and analysis. This helps City staff to make sound decisions and prioritize activities when dealing with scheduled and unscheduled maintenance activities. Areas for improvement discovered during SSMP audits are prioritized and scheduled for implementation.

b. The SSMP has been designed to include key performance indicators (KPIs) for each element, which are used to measure effectiveness. These KPIs are reviewed and evaluated annually to help ensure the City is effectively implementing its SSMP.

c. The City is committed to continuous improvement and monitors and evaluates performance of work programs to ensure intended outcomes are achieved while looking for areas of improvement. Goals are established and monitored for core work programs, including CCTV inspections, pipe cleaning, manhole inspections pipe repairs and lift station inspections. Goals are measured against the City's spill rate trends.

d. Deficiencies and areas for improvement discovered through audits and periodic review of work programs are evaluated. If it is determined that SSMP procedures and/or operation and maintenance activities need to be changed to be more effective, the new way-of-doing is monitored and evaluated for effectiveness. To further improve effectiveness the City evaluates audit findings and incorporates changes as necessary.

e. The City monitors spill trends, at a minimum every three (3) years during required audits. This helps the City to know where best to place its limited resources and efforts to reduce spills.

EFFECTIVENESS

Key Performance Indicators:

- Are SSMP Elements being periodically evaluated for effectiveness?
- Are work activities and spill events being documented?
- Has a plan and schedule been established to address audit findings/deficiencies from the last audit?
- Is Trend Analysis being performed on spill causes?
- Have work programs been assessed and updated as necessary?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
9.1	Assess work programs to ensure outcomes are as intended	Annually	X	X	
9.2	Ensure updates to work programs and the SSMP based on assessments.	As Needed	X	X	
9.3	Monitor and evaluate spill trends. Document efforts.	Annually	X	X	

RESILIENCE

Resilience is addressed for Element 9 by:

- Development of key performance indicators to measure effectiveness of the Sewer System Management Plan.
- Performing periodic reviews of the Sewer System Management Plan to help ensure the plan is being properly implemented.
- Developing and adhering to a timeline to correct deficiencies found during the audit process.
- Periodically evaluating work programs to help ensure effectiveness.

10.0 Internal Audits

WDR REQUIREMENTS

Att. D-10 (pg. D-10)

The City SSMP 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.

Compliance

The City completed its last audit In May 2017 and will complete audits every three (3) years moving forward. The objective of the audit is to evaluate compliance, implementation and effectiveness of the SSMP.

The SSMP includes a description of how the City will comply with the requirements of each Element. The audit review includes an evaluation to determine if compliance has been met.

Implementation is evaluated by determining if the City is executing the SSMP as stated.

Effectiveness is evaluated by using key performance indicators, which have been developed specifically for each element.

An additional evaluation is performed to comply with Specifications 5.6 addressing resilience. Resilience indicators have been developed for each element, and they serve to demonstrate how resilience is built into the SSMP and inspection, maintenance and spill response activities.

Any deficiencies discovered through the audit process are noted and a plan and schedule to implement corrective measures is established.

EFFECTIVENESS

Key Performance Indicators:

- Have audits been performed as required?
- Have the audits assessed compliance, implementation, and effectiveness?
- Have deficiencies been identified?
- Has a plan and schedule to rectify the deficiencies been established?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
10.1	Schedule audits in advance of due dates to ensure adequate time to complete. Agency has 6 months to complete the audit from the end of the audit period.	Begin end of audit period	X	X	
10.2	Ensure a plan and schedule is developed to address deficiencies.	Once the Audit is completed	X	X	

RESILIENCE

Resilience is addressed for Element 10 by:

- Periodically evaluate key performance indicators during the audit period to assess effectiveness and make corrections, if necessary, prior to the audit.
- Evaluate previous audit to ensure deficiencies have been rectified.
- Calendar the audit due dates and complete the audit on time.

11.0 Communication Program

WDR REQUIREMENTS

Att. D-11 (pg. D-10)

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

a. 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.*

b. Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:
- *System operation, maintenance, and capital improvement-related activities.*

COMPLIANCE

a. The City communicates with the public in several different ways. Should the City experience a spill that may require closure of public areas or enter a source of drinking water, the City immediately contacts the Orange County Healthcare Agency, who takes over from that point.

   The City's SSMP is posted on the City Website where there is also a "Contact Us" feature, allowing for ease of communication.

   The City Council will approve the SSMP every 6 years during a regular board meeting. As this will be an agenda item, the public will have the opportunity to comment.

   The SSMP is posted on the City's website, which provides the public several ways to contact the City, via the "Contact Us" feature.

b. The City does not currently have satellite systems.

EFFECTIVENESS

Key Performance Indicators:

- Does the agency place all Sewer System Management Plan action items on the agenda for regular counsel/board meetings?
- Does the agency have signage, or other means, readily available to notify the public of environmental or public risk factors related to a sewage spill?
- Does the agency perform outreach to residential customers?

IMPLEMENTATION PLAN/SCHEDULE

No.	Plan	Schedule	Responsible Party		
			SPT	SUP	CRW
11.1	Ensure the Board of Directors approves the SSMP per schedule	Every 6 years	X		
11.2	Ensure the SSMP is posted on the City Website and the link functions properly.	Annually	X		
11.3	Ensure Sewage Spill Warning signs are readily available to communicate with the public when necessary	Annually		X	

RESILIENCE

Resilience is addressed for Element 11 by:

- Use the Sewer System Management Plan as a tool to communicate to the public how the agency is managing the system.
- Maintain a consistent presence in the service area by attending community events or issuing periodic newsletters or other communications to the public.
- Make it clear and easy for the public to contact the agency.