



Sewer System Management Plan

2025 SSMP Update

Carson / Los Angeles County Public Works

Los Angeles, California
August 29, 2025



CITY OF CARSON
The Jewel of the South Bay



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Appendix I – Not Used

Appendix J – Not Used

Appendix K – Not Used

Acronyms

Acronym	Definition
ACO	Accumulative Capital Outlay
BMP	Best Management Practices
BSD	Building and Safety Division
CCTV	Closed Circuit Television
CAD	Computer-Aided Design and Drafting
CALOSHA	California Occupational Safety and Health Administration
CAP	Condition Assessment Program
CIP	Capital Improvement Plan
CIPP	Cured-In-Place Pipe
CIWQS	California Integrated Water Quality System
CGRG	Community and Government Relations Group
CS	Collection System
CSMD	Consolidated Sewer Maintenance District
CWEA	California Water Environment Association
EPD	Environmental Programs Division
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
GI	Grease Interceptor
GIS	Geographic Information System
GRD	Grease Removal Device
IBEW	International Brotherhood of Electrical Workers
I/I	Infiltration and Inflow
IWDP	Industrial Waste Disposal Permit
LACO	Los Angeles County Ordinance
LACPW	Los Angeles County Public Works
LACSD	Los Angeles County Sanitation Districts
LDD	Land Development Division
LRO	Legally Responsible Official
LVMWD	Las Virgenes Municipal Water District
MMS	Maintenance Management System
MSMD	Marina Sewer Maintenance Division
NASSCO	National Association of Sewer Service Companies
PACP	Pipeline Assessment and Certification Program
PM	Periodic Maintenance

Acronym	Definition
PMD III	Project Management Division III
SCADA	Supervisory Control and Data Acquisition System
SERP	Spill Emergency Response Plan
SMD	Sewer Maintenance Division
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
WDR	Wastewater Discharge Requirements

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1 Goal and Introduction

1.1 Regulatory Context

The City of Carson along with Los Angeles County Public Works (LACPW) has prepared this updated Sewer System Management Plan (SSMP) pursuant to the State Water Resources Control Board (SWRCB) December 6, 2022, Statewide Sanitary Sewer Systems General Order 2022- 0103-DWQ (General Order). This SSMP provides a management plan for Los Angeles County Public Works (PW), which administers the following Sewer Maintenance Districts (Districts) in Los Angeles County responsible for operating and maintaining the collection systems:

- Consolidated Sewer Maintenance District (CSMD); and
- Marina Sewer Maintenance District (MSMD);

In addition, through service agreements, PW operates and maintains the collections systems for the Cities of Irwindale, West Hollywood, and Montebello.

This SSMP provides a management plan for Carson, which is part of the CSMD.

Table 1-1 summarizes the General Order requirements addressed by this SSMP¹. These requirements are defined by General Order specifications and associated General Order attachments. All agencies that own and operate collection systems greater than one 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 a SSMP	Entire SSMP
5.3 Certification of SSMP and Plan Updates	Requires 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 City to certify and upload SSMP to CIWQS.	Entire SSMP
5.6 System Resilience	Requires LACPW to include and implement system-specific procedures to proactively prioritize operations and maintenance, 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 City to maintain system capacity to convey dry weather and forecasted wet weather flows	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

Table 1-1: Summary of General Order Requirements

Specification	Description	Linkage to SSMP
5.19 Operation and Maintenance	Requires City and LACPW to maintain in good working order and operate as design any facilities, treatment or control systems design to contain and convey sewer.	D.4 Operations and Maintenance D.8 System Evaluation, Capacity Assurance and Capital Planning

This document serves as the 2025 update to the SSMP approved and adopted by the City Council at a public meeting. Appendix A1 includes documentation of approval by the Board. Appendix A2 includes the General Order.

The sewer-related services that the Districts provide vary from city to city depending on the service agreements. Table 1-2 summarizes the CSMD cities and the sewer-related services currently provided by the LACPW to each of the cities. LACPW applied for coverage under the reissued General Order for facilities it owns, and the CSMD member cities applied for coverage under the reissued General Order for facilities they own. LACPW and the member cities own the sewer mainlines and the point of connection to the sewer mainlines, but do not own any portion of the sewer lateral beyond the sewer connection.

LACPW, as operator of the CSMD and MSMD, prepares and updates the SSMP for activities the LACPW performs for managing, operating, and maintaining sewer systems including the Districts. The cities, as well as the other County departments serviced by CSMD, as owners of their respective systems, are responsible for preparing and updating an SSMP specific to the collection system owned by those entities. Some cities within the CSMD have either adopted the Los Angeles County Code or have established local ordinances or resolutions governing the performance of items stipulated in the General Order. Cities are responsible for implementing the legal authorities required by the General Order. Cities also are responsible for conducting capacity studies of their collection system when necessary and correcting identified hydraulic deficiencies. The CSMD performs functions required by the General Order related to the operation and maintenance of sanitary sewer systems.

A pdf copy of this SSMP is available on the internet at:

LACPW: <https://dpw.lacounty.gov/sewer/ssmp.pdf>

Table 1-2: LACDPW Sewer-Related Services to the 38 CSMD Cities¹

City	CSMD	ACO Program	Sewer Maintenance Agreement	Building and Safety	Industrial Waste	City Engineers
Agoura Hills	X	X			X	
Artesia	X	X		X	X	
Baldwin Park	X	X				
Bellflower	X	X			X	
Bell Gardens	X	X			X	
Bradbury	X	X				
Calabasas	X	X			X	
Carson	X	X			X	
Commerce	X	X			X	
Cudahy	X	X			X	
Diamond Bar	X	X			X	
Duarte	X	X			X	
Glendora	X	X				
Hawaiian Gardens	X	X			X	
Hidden Hills	X	X				
Industry	X	X		X		
Irwindale			X	X	X	
La Cañada Flintridge	X	X		X	X	
La Habra Heights	X	X				
Lakewood	X	X		X	X	
La Mirada	X	X		X	X	
Lawndale	X	X		X	X	
Lomita	X	X		X	X	
Maywood	X	X				
Montebello			X			
Palos Verdes Estates	X	X				
Paramount	X	X			X	
Pico Rivera	X	X			X	
Rancho Palos Verdes City/Central	X	X			X	
Rolling Hills	X	X		X		

Table 1-2: LACDPW Sewer-Related Services to the 38 CSMD Cities¹

City	CSMD	ACO Program	Sewer Maintenance Agreement	Building and Safety	Industrial Waste	City Engineers
Rolling Hills Estates	X	X			X	
Rosemead	X	X			X	
San Dimas	X	X			X	
Santa Clarita	X	X			X	
Santa Fe Springs	X	X		X		
South El Monte	X	X				
Temple City	X	X		X	X	
Walnut	X	X			X	
Westlake Village	X	X		X	X	
West Hollywood			X		X	
TOTALS						

¹Through the General Services Agreement, a city can request LACPW resources upon specific request. LACDPW currently provides at least some degree of service to all 88 cities in the County of Los Angeles.

1.2 SSMP Goal and System Management Objectives

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the collection system. This will help reduce and prevent spills, as well as mitigate any spills that do occur. The City and LACPW has adopted and is dedicated to achieving the following collection system management objectives:

- Proper operation, maintenance, and management of the Districts' sanitary sewer collection system facilities to reduce the frequency and severity of sewer spills and their potential impacts on public health, safety, and the environment.
- Prompt action when sewer spills occur to identify, contain, and remove the cause, promptly report the event to appropriate regulatory authorities, and ensure the public is adequately and timely notified.
- Document all sewer spills and system deficiencies and the remedial actions taken.
- Adequately train and equip the Districts' sewer system operators, employees, contractors, responders, or other agents to address a sewer spill event.
- Maintain and repair the Districts' sewer system to provide adequate capacity to convey base flows and peak flows while meeting or exceeding applicable regulations, laws, and generally accepted practices relative to sanitary sewer system operations and maintenance.

This SSMP documents how the City and LACPW's collection system practices are integrated toward the achievement of the City's and LACPW's objectives. The City's and

LACPW have identified the following actions to be taken under this SSMP to ensure the accomplishment of these goals:

- Conduct a planned and scheduled maintenance program that will minimize the risk and occurrence of sewer spills, in support of the SSMP goals.
- When sewer spills do occur, respond to the reported site in a timely manner and undertake feasible remedial actions to contain the spill to minimize impacts, including stopping the flow from reaching the storm drain, if possible.
- Stop the spill as soon as possible and limit public access to the spill area to prevent public contact with any wastewater contamination.
- Recover the spill to the extent feasible and return it to the sewer system and then clean up the contaminated area.
- Gather and compile all pertinent information regarding the spill event, investigate as necessary to determine probable cause, document findings, report to the appropriate regulatory agencies in a timely manner, and file the completed report.

1.3 SSMP Update Schedule

Pursuant to the General Order, CSMD conducts program monitoring and triennial audits of its SSMP, prepares SSMP updates, and implements planned activities to achieve Carson and LACPW's collection system program objectives. Carson's SSMP update was prepared upon completion of the most recent SSMP Program Audit, dated February 5, 2025, and LACPW's SSMP update.

The schedule for auditing and updating this SSMP is provided in Table 1-3. Element 10 of the SSMP includes a longer-term schedule for SSMP audits and updates.

Table 1-3: SSMP Audit and Update Schedule			
Activity	Collection System Name	SSMP Audit Due Date	SSMP Update Due Date
CSMD – City	Agoura Hills City	2/2/2025	8/2/2025
CSMD – City	Artesia City	2/2/2025	8/2/2025
CSMD – City	Baldwin Park City	2/2/2025	8/2/2025
CSMD – City	Bell Gardens City	2/2/2025	8/2/2025
CSMD – City	Bellflower City	2/2/2025	8/2/2025
CSMD – City	Bradbury City	2/2/2026	8/2/2026
CSMD – City	Calabasas City	2/2/2025	8/2/2025
CSMD – City	Carson City	2/2/2025	8/2/2025
CSMD – City	City of Industry	2/2/2026	8/2/2026
CSMD – City	Commerce City	2/2/2025	8/2/2025
CSMD – City	Cudahy City	2/2/2025	8/2/2025

Table 1-3: SSMP Audit and Update Schedule

Activity	Collection System Name	SSMP Audit Due Date	SSMP Update Due Date
CSMD – City	Diamond Bar City	2/2/2025	8/2/2025
CSMD – City	Duarte City	2/2/2025	8/2/2025
CSMD – City	Glendora City	2/2/2025	8/2/2025
CSMD – City	Hawaiian Gardens City	2/2/2025	8/2/2025
CSMD – City	Hidden Hills City	2/2/2026	8/2/2026
CSMD – City	La Cañada Flintridge City	2/2/2025	8/2/2025
CSMD – City	La Habra Heights City	11/2/2025	5/2/2026
CSMD – City	La Mirada City	2/2/2025	8/2/2025
CSMD – City	Lakewood City	2/2/2025	8/2/2025
CSMD – City	Lawndale City	2/2/2025	8/2/2025
CSMD – City	Lomita City	2/2/2025	8/2/2025
CSMD – City	Maywood City	2/2/2025	8/2/2025
CSMD – City	Palos Verdes Estates City	2/2/2025	8/2/2025
CSMD – City	Paramount City	2/2/2025	8/2/2025
CSMD – City	Pico Rivera City	2/2/2025	8/2/2025
CSMD – City	Rancho Palos Verdes City	2/2/2025	8/2/2025
CSMD – City	Rancho Palos Verdes City	2/2/2026	8/2/2026
CSMD – City	Rolling Hills Estates City	11/2/2025	5/2/2026
CSMD – City	Rosemead City	2/2/2025	8/2/2025
CSMD – City	San Dimas City	2/2/2025	8/2/2025
CSMD – City	Santa Clarita City	11/2/2024	5/2/2025
CSMD – City	Santa Fe Springs City	2/2/2025	8/2/2025
CSMD – City	South El Monte City	2/2/2025	8/2/2025
CSMD – City	Temple City	2/2/2025	8/2/2025
CSMD – City	Walnut City	2/2/2025	8/2/2025
CSMD – City	Westlake Village City	11/2/2025	5/2/2026
CSMD – County Zone	Malibu Mesa Zone of the CSMD CS	11/2/2025	5/2/2026
CSMD – County Zone	Trancas Zone of the CSMD CS	2/2/2026	8/2/2026
CSMD – County Zone	Unincorporated County Area CSMD South/County Sanitation District CS	11/2/2024	5/2/2025
CSMD – County Zone	Unincorporated County Area CSMD North/County Sanitation District CS	11/2/2025	5/2/2026
CSMD – County Zone	Unincorporated County Area CSMD/Las Virgenes Tapia CS	11/2/2025	5/2/2026

Table 1-3: SSMP Audit and Update Schedule

Activity	Collection System Name	SSMP Audit Due Date	SSMP Update Due Date
CSMD – County Zone	Unincorporated County Area CSMD-NW/County Sanitation District CS	2/2/2025	8/2/2025
CSMD – County Zone	Unincorporated County Area Lake Hughes Zone of the CSMD CS	2/2/2026	8/2/2026
CSMD – County Zone	Unincorporated County Area Marina/Aneta Zone of the CSMD/City Hyperion CS	2/2/2026	8/2/2026
SMA	Montebello CS	2/2/2025	8/2/2025
SMA	Irwindale City CS	2/2/2026	8/2/2026
SMA	West Hollywood CS	2/2/2025	8/2/2025

LACPW plans to complete implementation of several significant initiatives addressing the prevention of sewer spills. Table 1-4 provides a schedule for incorporation of these activities into the Districts' SSMP program implementation.

Table 1-4: Planned SSMP Implementation Milestones Addressing Prevention of Sewer Spills

Element	Milestone	Milestone Due Date	Relevance to Spill Prevention
4 – Operations and Maintenance Program	Implementation of Cityworks asset management system	June 2026 ¹	Improve tracking of system issues and planning and scheduling of maintenance activities
4 – Operations and Maintenance Program	Implementation of GraniteNet cloud-based CCTV software ²	November 2027	Improve sharing of condition assessment data for streamline decision-making and communication
Specification 5.7 – Allocation of Resources	Approval of sewer fee increase	July 2025	Collect revenue needed to sustain operations and maintenance service delivery
8 – System Evaluation	Initiate Condition Assessment Program for remaining pump stations ³	November 2027	Collect information to identify system condition deficiencies
8 – System Evaluation	Initiate next cycle of Condition Assessment Program for sewer pipelines	July 2025 ⁴	Collect information to identify system condition deficiencies

¹Currently anticipated, subject to change

²Software development began in May 2025 for the implementation of the GraniteNet Cloud-based CCTV Software

³Began with the Condition Assessment for pump stations for the City of Diamond Bar. Report was completed in June 2019

⁴New CCTV contract to begin in July 2025 and continue the 2nd phase of the Condition Assessment project

1.4 Sewer System Asset Overview

Carson's Public Works Department manages the sanitary sewer collection system, which serves a population of approximately 96, 901 residents and consists of 182.23 miles of sewer lines (181.87 miles of gravity sewer lines and .36 miles of force main sewer lines) and 3 pump stations. The City's local sewers discharge into the Sanitation Districts of Los Angeles County facilities for conveyance, treatment, and disposal.

The City has three budgeted management positions directly involved in sewer system responsibilities. The field operation and maintenance services are fulfilled by utilizing the services provided by LACPW.

These personnel, in collaboration with LACPW personnel, administer the City's sewer collection system operation, provide engineering evaluation of proposed and existing sewer facilities, administer preventive maintenance and sewer construction programs, and oversee the maintenance of sewer collection system facilities and related records and plans. Appendix A3 provides a summary of assets for all collection systems.

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

- **Location:** Collection systems are located in Los Angeles County.
- **Service Area Boundary:**
-
-

- a and 1-1b shows the geographic service area boundary in the City and Districts.
- **Community Served:** Carson covers 14.13 square miles including both residential and commercial areas.
- **Data Management Systems:** Districts use the following data management systems.
 - **Maximo:** LACPW's legacy Maintenance Management System (MMS) used for managing maintenance activities. Field crew activities are recorded in various forms such as service requests, cleaning reports, sewer maintenance daily reports, manhole adjustments, overflow report forms, etc., and are stored in the MMS. The LACPW is in the process of implementing Cityworks Maintenance Management System to schedule and track maintenance activities.
 - **Cityworks:** LACPW is implementing Cityworks Maintenance Management System to schedule and track maintenance activities. The condition assessment schedule and eventually closed-circuit television (CCTV) is planned to be added to Cityworks. Cityworks will be used to record what sections have been inspected, the schedule of activities, and whether work has been completed or not. It will also be used to schedule and track fats, oils, and grease (FOG) source control inspections of industrial and commercial establishments.

- **HMS:** LACPW utilizes the HMS database to maintain records of all sites and their locations under the FOG program. Inspectors document their findings and enter data into the HMS database, which automates the inspection process and is used to track and manage permit inspection and source control data.
- **PowerBI:** PowerBI is utilized to display spill trends and analysis, as well as city profiles, which include detailed information on manholes, pipes, pump stations, and properties. Additionally, Power BI is used to display productivity reports, detailing maintenance activities for each City.
- **CCTV Database:** Wincan and GraniteNet are used to document inspection events, inspection observations and associated videos. These systems serve as the repository for historical CCTV inspection data. LACPW is in the process of linking GraniteNet with Cityworks to maintain CCTV records.
- **CADD:** As-built plans of the Districts' facilities are maintained by LACPW for unincorporated Los Angeles County areas and by each city within the CSMD for their own jurisdiction, with LACPW maintaining a copy for maintenance operations. Data gathered from the plans, such as system locations and alignment, pipe material, size, etc., are stored in the SMD's Computer-Aided Design and Drafting (CADD) System and Geographical Information System (GIS).
- **GIS:** LACPW utilizes GIS to generate a mapping system that includes sewer features and map base layers such as aerial images, streets, parcels, and storm drain systems also available from other divisions within LACPW, County Departments and other governmental agencies.
- **SCADA:** Supervisory Control and Data Acquisition system used to collect and store pump station alarm and instrumentation data.
- **Microsoft Office:** Various collection system programs are managed using Microsoft Office applications as an electronic database. Currently, Office is used to store the schedule for FOG program activities, but this will eventually be performed using Cityworks.
- **Lateral Ownership and Operational Responsibilities:** LACPW and city do not own any portion of the service lateral. Private service laterals are the responsibility of the property owner and must be maintained by the property owner. Operation and maintenance of the local main sewer lines are the responsibility of LACPW. Regional trunk sewer lines are the responsibility of the publicly owned treatment works, such as the Los Angeles County Sanitation Districts (LACSD), for operation and maintenance.
- **Breakdown of Service Connections:** Carson's breakdown of services connections is roughly 93 percent residential, 2 percent commercial, 4 percent industrial, and the remainder 1 percent are combination of institutional and miscellaneous use.
- **Unique Service Boundary Conditions and Challenges:** The service area faces issues with conflicts involving local lines and jurisdictional determinations between

agencies like the LACSD and the City of Los Angeles, impacting operations and maintenance.

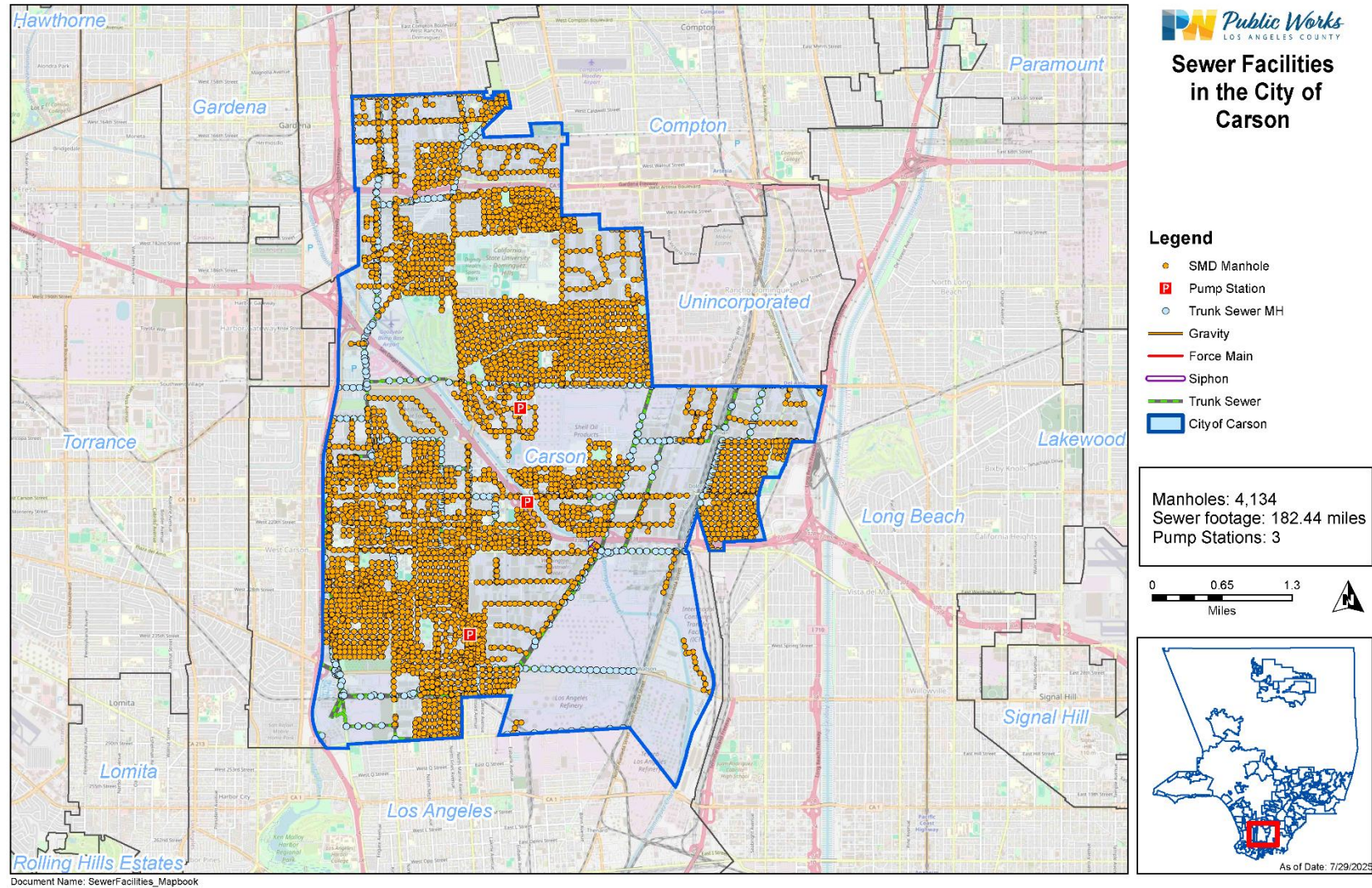
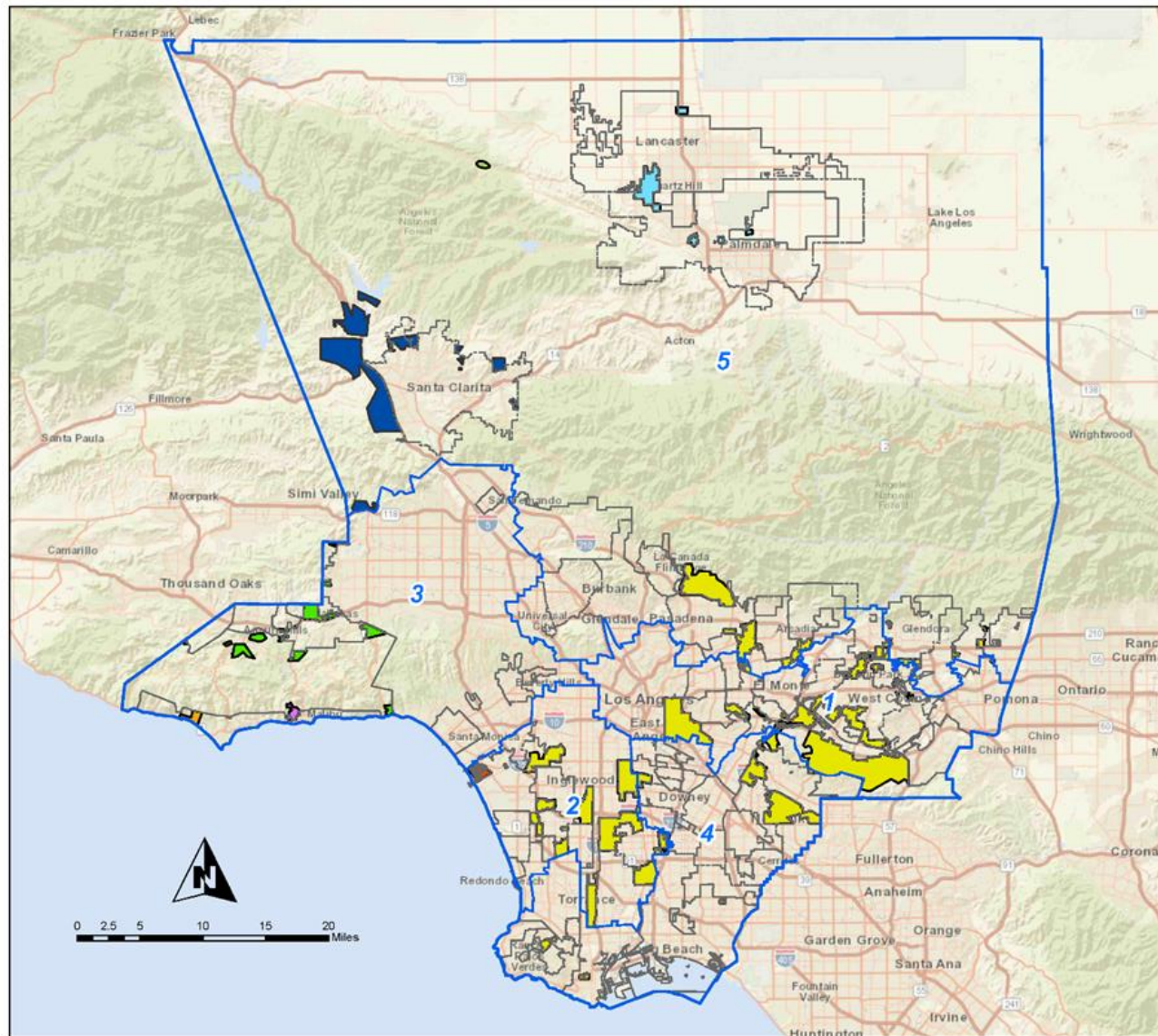


Figure 1-1a: Carson's Service Area Map



Los Angeles County
Public Works

Sewer Maintenance Districts

Service Areas
- SSMP Applications

Legend

- Uninc. County Area CSMD South/County Sanitation District
- Uninc. County Area CSMD North/County Sanitation District
- Uninc. County Area Aneta Zone of the CSMD/City Hyperion
- Uninc. County Area Lake Hughes Zone of the CSMD
- Trancas Zone of the CSMD
- Malibu Mesa Zone of the CSMD
- Malibu Zone of the CSMD
- Uninc. County Area CSMD/ Las Virgenes Tapia
- Uninc. County Area CSMD-NW/County Sanitation District
- City
- Supervisorial District

S:\san\districts\Unincorporated Services Area_2025

Figure 1-2b: CSMD Service Area Map

1.4.1 Access to Up-to-Date Mapping

LACPW provides public access to up-to-date sewer mapping through their website.

LA County Sanitary Sewer Network GIS Map:

- <https://pw.lacounty.gov/smd/sewernetwork/>

Operation Maps:

- https://dpw.lacounty.gov/sewer/Page_15

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.

The City together with LACPW achieves these objectives by implementing a comprehensive sewer infrastructure asset management program that is documented in the following 11 SSMP elements:

1. Goal and Introduction
2. Organization
3. Legal Authority
4. Operation and Maintenance Program
5. Design and Performance Provisions
6. Spill Emergency Response Plan
7. Sewer Pipe Blockage Control Program
8. System Evaluation, Capacity Assurance and Capital Improvements
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

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

2 Organization

2.1 Overview

LACPW are governed by the Board of Supervisors, who establish laws and approve all LACPW's contracts and agreements. LACPW is led by the Director, who sets policies and oversees their implementation. Supporting the Director are the Chief Deputy Director, Assistant Director, Deputy Director, and Assistant Deputy Director, who help manage daily operations and special projects.

The Sewer Maintenance Division (SMD) has 213 budgeted positions. The distribution of the SMD personnel is depicted in the organizational chart presented in Section 2.3.2 of this chapter. These personnel provide engineering evaluations of proposed and existing sewer facilities, administer LACPW's sewer service charge ordinance, carry out annexation proceedings for new territories, form and dissolve service zones, maintain facility record plans, and administer preventive maintenance and sewer construction programs.

Key roles include the Principal Engineer and the Senior Civil Engineers, who manage engineering and field staff. There is a Senior Civil Engineer designated for office engineering and budget, field operations team for pump stations, and field operations team for the gravity system. The gravity system unit includes the Regional Sewer Maintenance Superintendent and Sewer Maintenance Supervisor, who assists the Senior Civil Engineer and oversee sewer maintenance activities, with field crews performing the actual maintenance work. For the pump station unit, the Electro-Mechanic Supervisors and their teams handle pump station operations. Office Administrative and clerical assistants are part of all units and assist in the preparation of the SMD budget, Board letters, and other correspondence, and are responsible for the sewer service charge direct assessments.

Other divisions within the LACPW are currently and will continue to be responsible for carrying out some of the compliance actions called for by the Wastewater Discharge Requirements (WDRs) for the LACPW. The key support divisions and their responsibilities are described below:

- **Workforce Support Division:** Responsible for procuring equipment, materials, and supplies needed for day-to-day operations and maintenance activities; printing and mailing public education outreach program materials.
- **Business Relations and Contracts Division:** Responsible for procuring contract services for engineering, emergency sewer repair projects, and closed-circuit televising of sewer lines.
- **Building and Safety Division (BSD):** Responsible for issuing permits for sewer connections. May also enforce Plumbing Codes involving proper connections, maintenance of sewer house laterals, and preventing illegal discharges into public sewers upon City contract.

- **Sewer Maintenance Division (SMD):** Responsible for administering the Districts including operation and maintenance of the sewer systems, repairs and rehabilitation, and providing regulatory compliance.
- **Environmental Programs Division (EPD):** Responsible for enforcing the Districts' Fats, Oils, and Grease (FOG) program, including point source control, inspection of industrial waste and grease-generating facilities, investigation of illicit discharges of chemicals, debris, etc., into the public sewer, and conducting water quality monitoring for spills of 50,000 gallons or more to surface water.
- **Stormwater Maintenance Division:** Assists the Districts' crew in tracing, containing, and cleaning up spills that reach a storm drain system.
- **Emergency Management Group:** Responsible for operating the Emergency Operation Center for the entire Department, including handling service calls, spills, and pump station malfunction calls for the Districts.
- **Human Resources Division:** Responsible for staffing the Districts and training personnel.
- **Design Division:** Responsible for developing design standards and criteria for capital improvements.
- **Project Management Division III (PMD III):** Responsible for providing project management services for the construction of capital improvements.
- **Land Development Division (LDD):** Responsible for subdivision plan checks to ensure compliance with County standards for the construction of new sewer collection systems. Reviews sewer capacity studies for proposed lines and sets requirements to ensure adequate capacity in existing systems.
- **Survey/Mapping and Property Management Division:** Responsible for processing access easement documents and procuring easements for public sewer facilities located on private properties. Also responsible for investigating spill-related claims and litigations against the SMD.

City of Carson is governed by the City Council, who establishes new and amending existing ordinances and policies governing the municipal operations and the operation of the City's sanitary sewer system, including the approvals of all SO&M contracts and agreements, to protect the community's interest. The City Manager for the City is responsible for the overall management and application of all legal and policy directives that relate to the City's activities, including the operation and maintenance of the City's sanitary sewer system. Supporting the City Manager are General Manager/City Engineer, Principal Civil Engineer, Senior Civil Engineer, Public Works Superintendent and Office Administration and Clerical Assistants.

Their responsibilities include:

- General Manager/City Engineer – Directs the accomplishment of statutory and policy criteria within the scope of the City Council's policy and legal requirements. Direct its execution and evaluates work accomplished within his areas of responsibility, including the SO&M Program. Also directs the planning, budgeting, design for the construction of a new sewer collection system, and rehabilitation of existing sewer collection system. Facilitates all sewer collection

system operation and maintenance activities through the contract with LACDPW, as the City's representative on the CSMD. Responsible for the day-to-day management and operation oversight of the City's sewer collection system, including the three sewer pump stations.

- Principal Civil Engineer – Directs engineering and management activities relating to studies, design, investigations, and the preparation of reports, budget, and contractual agreements with private firms for technical service projects. Performs special studies, investigations, and reports concerning sewer infrastructure. Reports to the General Manager/City Engineer.
- Senior Civil Engineer – Performs a wide range of professional and complex civil engineering work in redesign, construction, management, and maintenance of public works projects; acts as the City Engineer in his/her absence; and performs other duties as assigned.
- Public Works Superintendent – Has oversight of all contracted maintenance and repair services for City facilities, excluding the relatively new gravity sewer systems operation and maintenance.
- Office Administration and Clerical Assistants - Assists in the preparation of reports, budgets, and other correspondence; and coordinates and facilitates City and contract personnel in addressing local citizen issues relative to sewer service.

The distribution of the city personnel is depicted in the organizational chart presented in Section 2.3.2 of this chapter.

2.2 Authorized Representatives

General Manager/City Engineer of Carson and the Assistant Deputy Director for the SMD is responsible for the execution of the compliance actions required under the WDRs. This includes, but is not limited to, signing and certification of all reports and correspondence as required under this order. The Principal Engineer and Senior Civil Engineers in the SMD may also perform these duties on behalf of the SMD's Assistant Deputy Director or General Manager/City Engineer for Carson.

The Sewer Maintenance Districts has following staff authorized to serve as Onsite Managers for the collection systems managed by LACPW:

- Andrew Ngumba, Assistant Deputy Director (**Primary LRO for LACPW**)
- Alex Villarama, Principal Civil Engineer (**Secondary LRO for LACPW**)
- Jeffrey Bouse, Senior Civil Engineer
- Voltaire Llana, Senior Civil Engineer
- May Hong, Civil Engineer
- Eric Liu, Civil Engineer

Each of these staff members are authorized to act on behalf of each of LACPW's collection system to serve as Legally Responsible Officials for each of the collection systems listed in Table 2-1. District LROs coordinate to ensure one of the designated LROs is available

for required reporting certification in CIWQS. In addition, each collection system in the County owned by a city also has at least one Legally Responsible Official from that city's staff.

Carson's Legally Responsible Official:

Roland Jen, Stormwater Engineer, Primary LRO

Gilbert Marquez, Principal Engineer, Secondary LRO

Table 2-1: Collection Systems Operated, Maintained and Managed by Los Angeles County Public Works

WDID Type ²	CIWQS WDID	CIWQS Collection System Name
CSMD – City	4SSO11366	Agoura Hills City
CSMD – City	4SSO10364	Artesia City
CSMD – City	4SSO10366	Baldwin Park City
CSMD – City	4SSO10368	Bell Gardens City
CSMD – City	4SSO10369	Bellflower City
CSMD – City	4SSO10371	Bradbury City
CSMD – City	4SSO11447	Calabasas City
CSMD – City	4SSO10374	Carson City
CSMD – City	4SSO10394	City of Industry
CSMD – City	4SSO10377	Commerce City
CSMD – City	4SSO10380	Cudahy City
CSMD – City	4SSO10382	Diamond Bar City
CSMD – City	4SSO10384	Duarte City
CSMD – City	4SSO10389	Glendora City
CSMD – City	4SSO10390	Hawaiian Gardens City
CSMD – City	4SSO11439	Hidden Hills City
CSMD – City	4SSO10397	La Cañada Flintridge City
CSMD – City	4SSO10398	La Habra Heights City
CSMD – City	4SSO10399	La Mirada City
CSMD – City	4SSO10402	Lakewood City

² CSMD – Consolidated Sewer Maintenance District
MSMD – Marina Sewer Maintenance District
SMA – Sewer Maintenance Agreement

Table 2-1: Collection Systems Operated, Maintained and Managed by Los Angeles County Public Works

WDID Type ²	CIWQS WDID	CIWQS Collection System Name
CSMD – City	4SSO10403	Lawndale City
CSMD – City	4SSO10404	Lomita City
CSMD – City	4SSO10409	Maywood City
CSMD – City	4SSO10414	Palos Verdes Estates City
CSMD – City	4SSO10415	Paramount City
CSMD – City	4SSO10417	Pico Rivera City
CSMD – City	4SSO10420	Rancho Palos Verdes City
CSMD – City	4SSO18098	Rancho Palos Verdes City
CSMD – City	4SSO10423	Rolling Hills Estates City
CSMD – City	4SSO10424	Rosemead City
CSMD – City	4SSO10425	San Dimas City
CSMD – City	4SSO10429	Santa Clarita City
CSMD – City	4SSO10430	Santa Fe Springs City
CSMD – City	4SSO10434	South El Monte City
CSMD – City	4SSO10437	Temple City
CSMD – City	4SSO10441	Walnut City
CSMD – City	4SSO11407	Westlake Village City
CSMD – County Zone	4SSO10465	Malibu Mesa Zone of the CSMD CS
CSMD – County Zone	4SSO10496	Trancas Zone of the CSMD CS
CSMD – County Zone	4SSO11365	Unincorporated County Area CSMD South/County Sanitation District CS
CSMD – County Zone	4SSO11370	Unincorporated County Area CSMD North/County Sanitation District CS
CSMD – County Zone	4SSO11372	Unincorporated County Area CSMD/Las Virgenes Tapia CS
CSMD – County Zone	4SSO11374	Unincorporated County Area CSMD-NW/County Sanitation District CS
CSMD – County Zone	6SSO10459	Unincorporated County Area Lake Hughes Zone of the CSMD CS

Table 2-1: Collection Systems Operated, Maintained and Managed by Los Angeles County Public Works

WDID Type ²	CIWQS WDID	CIWQS Collection System Name
CSMD – County Zone	4SSO11373	Unincorporated County Area Marina/Aneta Zone of the CSMD/City Hyperion CS
SMA	4SSO10411	Montebello CS
SMA	4SSO10396	Irwindale City CS
SMA	4SSO11368	West Hollywood CS

2.3 Positions Responsible for Implementing Specific SSMP Elements

2.3.1 Positions Responsible

A list of positions responsible for implementing specific SSMP elements is provided in Table 2-2. Additionally, Appendix B1 contains a list of staff responsible for implementing specific SSMP elements, including position, telephone number and email address.

Table 2-2: Positions Responsible for SSMP

SSMP Element	Responsible Org. Unit	Responsible Position
1. Introduction and Goal	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer
2. Organization	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer
3. Legal Authorities	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer
4. Operation and Maintenance Program - Pipelines	Sewer Maintenance Division	Principal Civil Engineer, Pipelines
4. Operation and Maintenance Program – Pump Stations	Sewer Maintenance Division	Senior Civil Engineer, Treatment Plants and Pump Stations
5. Design and Performance Provisions - Design	City of Carson Public Works	Stormwater Engineer
5. Design and Performance Provisions – Design - Construction	City of Carson Public Works	Stormwater Engineer
6. Spill Emergency Response Plan	Sewer Maintenance Division	Principal Civil Engineer, Pipelines
7. Sewer Pipe Blockage Control Program	Environmental Programs Division	Division Manager

Table 2-2: Positions Responsible for SSMP

SSMP Element	Responsible Org. Unit	Responsible Position
8. System Evaluation, Capacity Assurance and Capital Improvements – Condition Assessment and Prioritization of Corrective Actions	Sewer Maintenance Division	Senior Civil Engineer, Technical Services
8. System Evaluation, Capacity Assurance and Capital Improvements – Capacity Assurance	City of Carson Public Works	Stormwater Engineer
8. System Evaluation, Capacity Assurance and Capital Improvements – Capital Improvement Plan	City of Carson Public Works	Stormwater Engineer
9. Monitoring, Measurement and Program Modifications	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer
10. Internal Audit	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer
11. Communication Program	Sewer Maintenance Division/ City of Carson Public Works	Division Manager and Stormwater Engineer

2.3.2 Lines of Authority

Figure 2-1, Figure 2-2a, and Figure 2-2b includes an SSMP Program Implementation organization chart showing the lines of authority for the positions responsible for the management of the collection system and implementation of the SSMP. The contact information for the Sewer Maintenance Division staff and City's staff listed in Figure 2-2 can be found in Appendix B2.

Figure 2-1: LACPW Organizational Chart

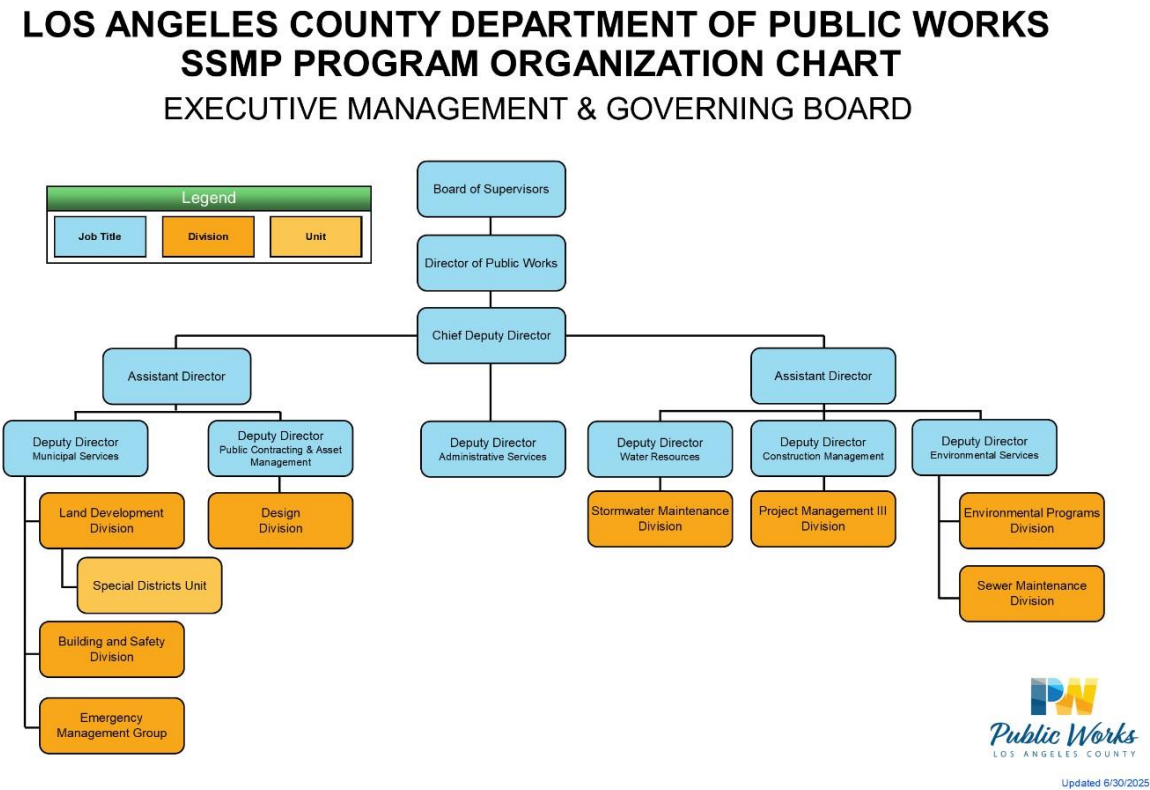


Figure 2-2a: SMD Organizational Chart

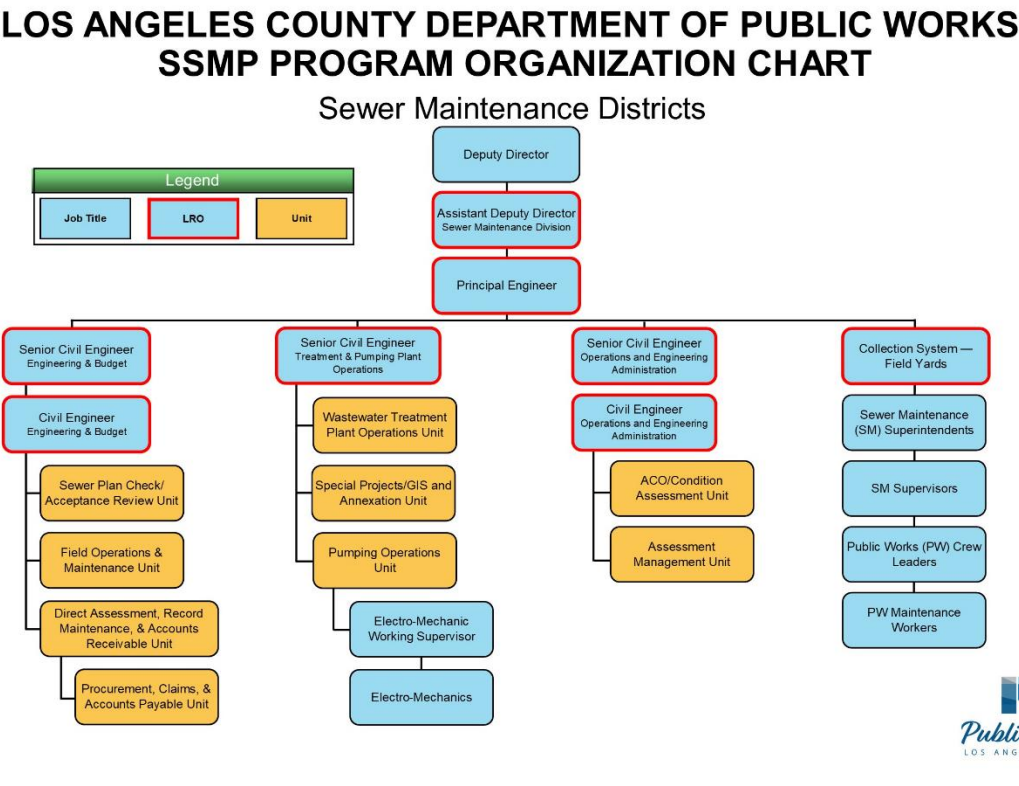
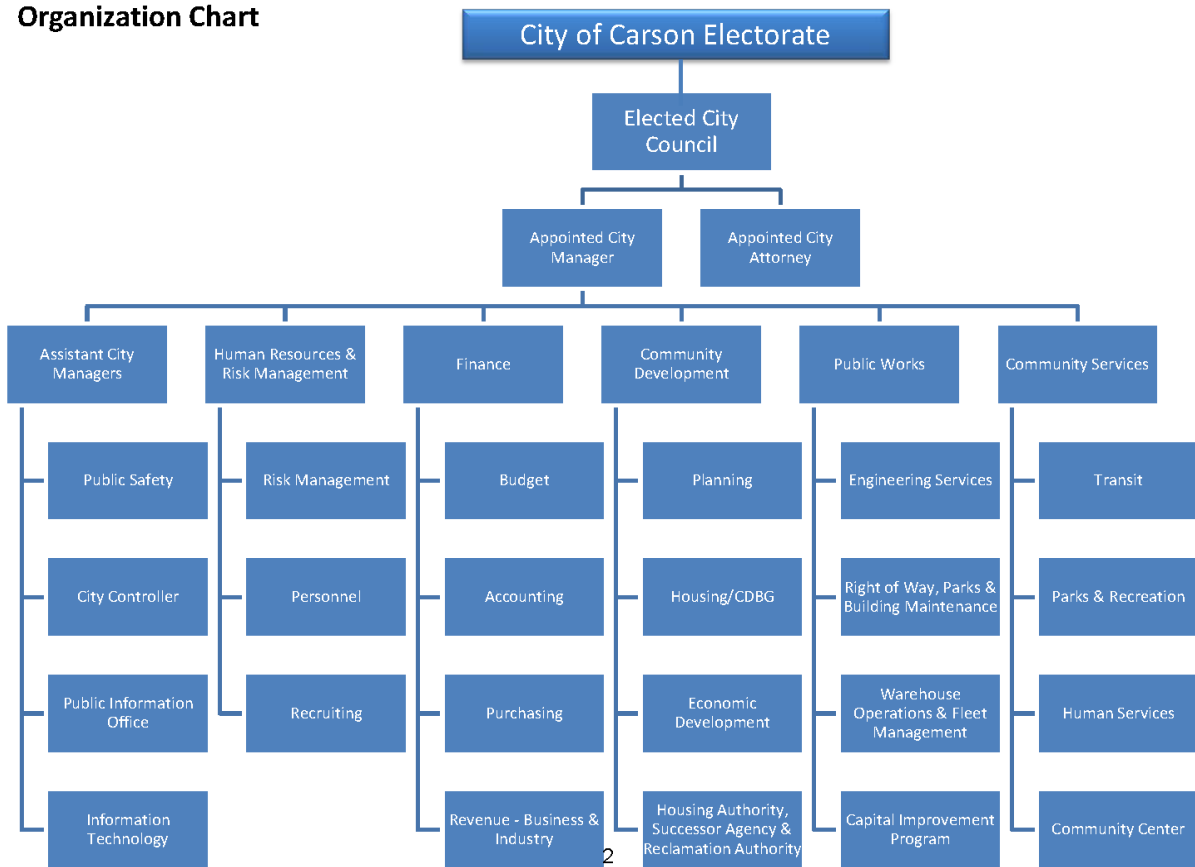


Figure 2-2b: City Organizational Chart

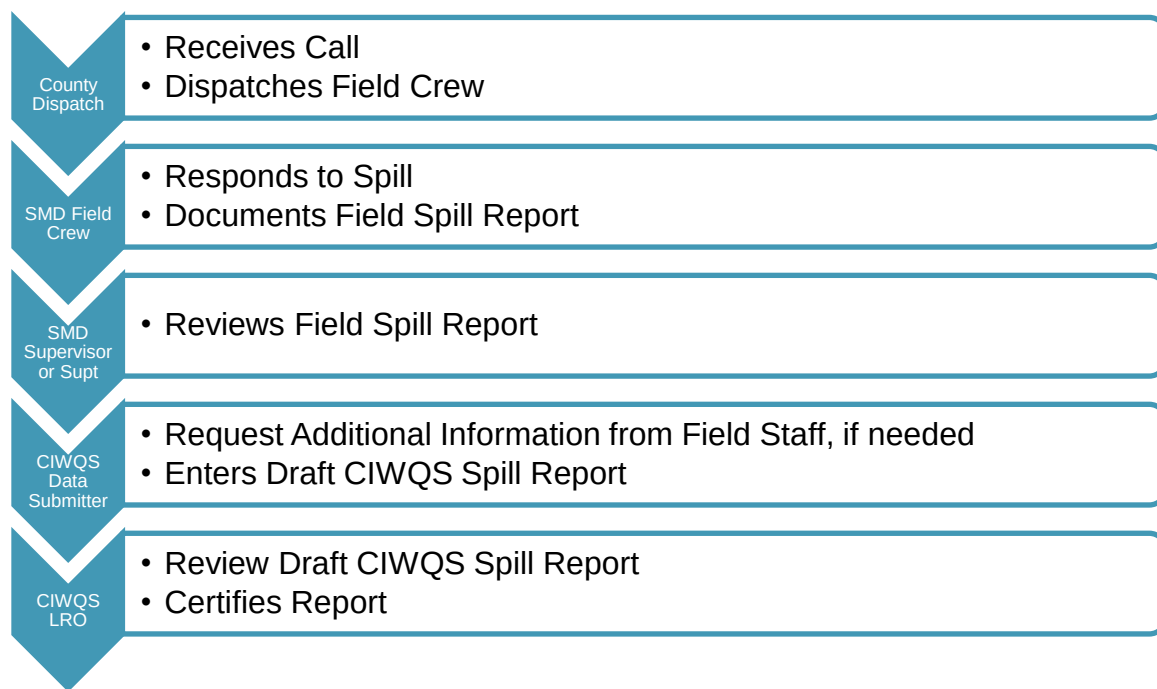
Organization Chart



2.4 Spill Reporting Chain of Communication

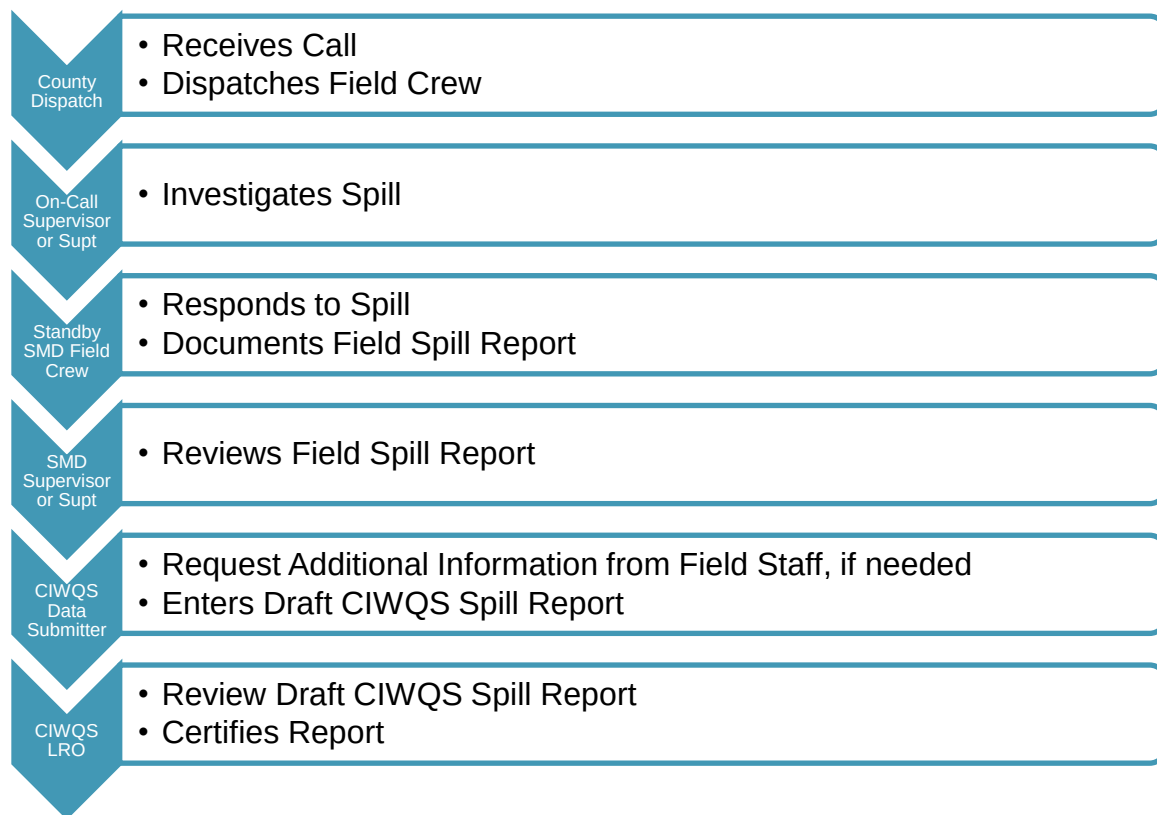
LACPW’s Spill Emergency Response Plan, described in Element 6 and included in Appendix F1, includes procedures for effective communication and reporting of spills from receipt of complaint, including the person responsible for reporting spills into the State Water Board’s CIWQS database. The Spill Emergency Response Plan includes a flowchart and notification table providing clear step-by-step procedures for communication and reporting. Figure 2-3 summarizes the spill reporting chain of communication during normal business hours. Normal Business hours are Monday through Friday from 6:30 a.m. to 5:00 p.m. Figure 2-4 summarizes the spill reporting chain of communication during afterhours.

Figure 2-3: Spill Reporting Chain of Communication – Normal Business Hours



*Normal Business hours are Monday through Friday from 6:30 a.m. to 5:00 p.m.

Figure 2-4: Spill Reporting Chain of Communication – After Hours



*After Hours are any hours that are not Normal Business Hours.

3 Legal Authority

3.1 Overview

The City's legal authority to own and operate a sanitary sewer system is derived from its incorporation as a city. The City on October 6, 1975, granted the LACPW the consent and jurisdiction to annex portions of the City's sewer system into the CSMD. By that action, the City has entrusted the management, operation, and maintenance of its local sanitary sewer system to the CSMD. The City, however, still maintains ownership of the sewer system.

The legal authorities for the specific areas stipulated in the General Order are covered in various sections of the City Municipal Codes (CMCs). The City has adopted Los Angeles County Title 28 – Plumbing Code and The Los Angeles County Title 20 – Utilities, which regulates sanitary sewers and industrial waste in in the County as its Sanitary Sewer and Industrial Waste Ordinance.

- Carson's Municipal Code

<https://www.codepublishing.com/CA/Carson/#:~:text=The%20Carson%20Municipal%20Code%20is%20current%20through%20Ordinance,ordinances%20passed%20subsequent%20to%20the%20ordinance%20cited%20above>

- Plumbing Code Chapter 7.20

<https://www.codepublishing.com/CA/Carson/#!/html/Carson08/Carson080300.html>

- Sanitary Sewers and Industrial Waste Chapter 9.16

<https://www.codepublishing.com/CA/Carson/#!/html/Carson08/Carson080500.html>

The Districts were formed pursuant to Chapter 4 of the State of California Health and Safety Code (Section H4870 – 8), with the County of Los Angeles Board of Supervisors acting as their governing body. By law, the Board of Supervisors may make and enforce all rules and regulations necessary for the administration of the Districts and for the cleaning, repair, construction, rehabilitation, renewal, replacement, operation, and maintenance of collection sewers within the Districts. Consistent with the law, several ordinances have been established by the Board of Supervisors to govern all aspects of the Districts' operations. The legal authorities for the specific areas stipulated in the WDRs are covered in various sections of the Los Angeles County Plumbing Code (LACO Plumbing Code) and Chapters 20.20, 20.24, 20.26, 20.32, 20.34, 20.36, and 20.40 of the Los Angeles County Code (LACO Code) Title 20 – Utilities, some of which are discussed below. Table 3-1 and Table 3-2 summarizes these authorities and relates them to elements of the SSMP that are impacted or utilize these authorities. Specific legal authorities are described in more detail in the elements that follow.

For the contracted cities that have service agreements with the Districts, the provision of services is dependent on the specific terms of the agreement. It is assumed that the legal authorities are extended to the Districts to provide services to these Cities.

The LACO Code, LACO Plumbing Codes, standard plans, specifications, and other materials cited in this Section are filed at the office of the Director of Public Works and can be found online in the links below:

- Los Angeles County Code
(https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances)
- Los Angeles County Plumbing Code
(https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT28PLCO)

Table 3-1: Summary of Legal Authorities Relating Legal Authority Element of General Order

Requirement	Reference
Prevent illicit discharges into the wastewater collection system	LACO 20.24.020 – Applicability of Division 2 provisions LACO 20.24.200 – Notification of uncontrolled discharges required LACO 20.32.080 – Excessive discharge of sewage – Conditional permit requirements LACO 20.32.650 – Dumping of effluent - Conditions LACO 20.36.010 – Discharge of offensive or damaging substances prohibited LACO 20.36.400 – Deposit of certain substances prohibited CPC 714.1 – Unlawful Practices CPC 714.2 – Prohibited Water Discharge
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	The City is part of Consolidated Sewer Maintenance District, which is managed by LACPW. All City spills will flow to City storm drainage system and then to the County flood control system. CSMD and the Flood Control District are both part of Los Angeles County Public Works and staff have direct contact with one another to coordinate and access additional resources and support, if needed
Require that sewers and connection be properly designed and constructed	LACO 20.32.010 – Sewer construction permit required when – Period of validity LACO 20.32.330 – New main sewer lines LACO 20.32.340 – Water pollution control and sewage pumping plants LACO 20.32.350 – New house laterals LACO 20.32.390 – Dedication of sewers LACO 20.32.580 – Materials and construction – Conformity with standard specifications LACO 20.30.590 – Inspection by county engineer
Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned or maintained by the Agency	LACO 20.20.130 – House lateral LACO 20.24.080 – Maintenance of sewer and laterals The City does not own or maintain any portion of the house lateral. The house lateral is the part of the sewer piping within the street or right-of-way extending from the property or sewer right-of-way line to point of connection with the main-line sewer
Enforce any violations of its sewer ordinances, service agreements, and/or other legally binding procedures	LACO 20.24.100 – Enforcement—County engineer powers LACO 20.24.110 – Delegation of powers LACO 20.24.160 – Violation – Penalty LACO 20.24.170 – Continued violations

Table 3-1: Summary of Legal Authorities Relating Legal Authority Element of General Order

Requirement	Reference
Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable	LACO 20.32.240 – Sewer easement processing fees LACO 20.32.430 – Sewer easement requirements

Table 3-2: Summary of Legal Authorities Relating Sewer Pipe Blockage Control Program Element of General Order

Requirement	Reference
Requirements to install grease removal devices (such as traps or interceptors)	LACO 20.36.560 – Installation – Required when
Design standards for the grease removal devices	LACO 20.36.570 – Pretreatment – Standards and criteria
Maintenance requirements, BMP requirements, record keeping and reporting requirements for grease removal devices	LACO 20.36.610 – Operation and maintenance Industrial Waste Permits – Authorities enable the inclusion of additional specific maintenance requirements on Industrial Waste Permits provided to food service establishments.
Authority to inspect grease producing facilities	LACO 20.24.090 – Inspection to ascertain compliance—Access required—Acceptance of permit conditions LACO 20.24.150 – Interference with inspectors prohibited when LACO 20.36.620 – Inspection and testing LACO 20.36.630 – Right of entry for inspection authorized when

3.2 Authority to Prevent Illicit Industrial Waste Discharges into the Collection System

The LACO Plumbing Code Title 28 (Sections 306.2, 714.2, and 1101.2) prohibits the unauthorized discharge of rain, surface, or subsurface water into the collection system. The illegal dumping of offensive or damaging substances such as chemicals and debris, which are considered inflows, is prohibited by LACO Code, Section 20.36.010.

3.2.1 Prevention of Illicit Discharge of FOG

Section 20.36.400 of the LACO Code prohibits the discharge of Fats, Oils, and Grease and other substances that may, among other things, clog, obstruct, fill, or necessitate frequent repairs, cleaning out, or flushing of sewer facilities in the sewer system.

3.2.2 Prevention of Illicit Discharge of Infiltration/Inflow

LACPW have an Inflow/Infiltration (I/I) control program as part of their ongoing sewer line cleaning and maintenance program, which includes closed-circuit television and other mechanisms to detect I/I. By ordinance, the Board of Supervisors has established a financial plan to ensure capital replacement or rehabilitation of sewer lines prone to I/I within the Consolidated Sewer Maintenance District (LACO Code, Section 20.40.045). The Marina Sewer Maintenance District provides adequate funding to eliminate I/I sources in the mainline sewers and manholes.

The LACO Code, Section 20.24.080, requires property owners to maintain their house laterals, including the elimination of cracks, tree roots, and other debris. A similar requirement is found in Section 101.3.2 of the LACO Plumbing Code Title 28.

3.3 Authority to Collaborate with Storm Sewer Agencies

Spills from the City collection systems flow into City storm drainage systems and Los Angeles County Flood Control drainage systems. When spills occur from collection systems in unincorporated areas, flow either goes directly into the County storm drain system or enters a local cities storm drain systems, eventually discharging into the Los Angeles County Flood Control's storm drain system. Los Angeles County Public Health requires all cities in the Districts to report sewer spills that reach a drainage system within 15 minutes of knowledge of the event. As a result, Los Angeles County Flood Control is notified and can provide support to provide information and access to County drainage system facilities, if needed. The Sewer Maintenance Division, being a sister division to Stormwater Maintenance Divisions that manages the Flood Control System, allows for direct collaboration, allowing for efficient management and resolution of spills and drainage issues.

With regards to preventing cross connections of sanitary sewer infrastructure to storm sewer infrastructure, cities are responsible for connections and either have their own permitting services or are under the services of the LACPW's Building and Safety Division (BSD). Unincorporated areas work directly with the BSD for permitting.

3.4 Authority to Require Proper Design and Construction of Sewers

The LACO Code Sections 20.32.330 and 20.32.340 require that the design of new mainline sewers and pumping plants, respectively, be in conformity with requirements of Part 3 of Chapter 20.32 of the LACO Code. Similarly, Section 20.32.350 of the LACO Code requires that the design of new house laterals conform to the requirements of Part 3, Chapter 20.32 of the LACO Code unless otherwise covered by the LACO Plumbing Code, Title 28. The construction of a collection sewer system, by law (LACO Code 20.32.580), is required to conform to all the requirements prescribed by Division 2 of the LACO Code, by the Standard Specifications for Public Works Construction (Green Book) and by the Special Provisions and Standard Plans, all on file in the office of the Director of Public Works (County Engineer). The inspection and construction of mainline sewers and pumping plants to ensure proper construction is covered under Section 20.32.590 of the LACO Code. The construction of house laterals is covered under the LACO Plumbing Code.

3.5 Authority to Ensure Access to Publicly Owned Portion of Lateral

The City and County do not own or maintain private lateral sewer lines. Property owners are responsible for proper installation, operation, and maintenance laterals (the pipe that connects from the building to the main) and clean-outs (which provide access to clean and

repair the pipe from the building to the main). This includes laterals on the County-owned easement.

3.6 Limit the Authority to Discharge of FOG and other Debris

The Director of Public Works under the LACO Plumbing Code, Title 28, has the legal authority to require the installation of grease interceptors at restaurants and other food establishments that generate grease. Section 20.36.560 of LACO Code also gives the Director of Public Works the authority to require the installation of treatment facilities, including grease interceptors, at any facility that generates FOG in the amount that will damage or increase the maintenance costs of the sewer collection system.

The LACO Code Section 20.24.090 gives the Director of Public Works the legal authority to inspect mainline sewers, sewage pumping plants, interceptors, etc., as often as he deems necessary, to ascertain whether such facilities are maintained and operated in accordance with the provisions of Division 2 of the LACO Code. Authority to Enforce Violations of Sewer Ordinances

Under Section 20.24.100 of the LACO Code, the Director of Public Works is empowered to enforce all of the requirements prescribed in Division 2 – Sanitary Sewers and Industrial Waste of the Code and in accordance with Section 20.24.110 may delegate this authority. LACO Code Section 20.24.160 allows criminal penalties for any violations of the Sewer and Industrial Waste Ordinances.

3.7 Authority to Obtain Easement Accessibility Agreements When Applicable

Title 20, Division 2 of the LACO Code gives the LACPW the legal right to set requirements that allow unrestricted maintenance access to the public sewer infrastructure. This access is secured through the LACPW unwavering enforcement of the requirement for sewer easements around all public sewer appurtenances located in private properties. These easements are detailed by the designer on the sewer construction plans and are reviewed through the iterative plan check process. Plan checkers take special care to ensure that maintenance crews will have room for access and equipment usage for both routine maintenance and replacement or repair construction as necessary. Title 20 requires easements to be free of obstruction, and this is reiterated on all sewer plans that contain easements. The potential for conflict or restriction of access is reviewed exhaustively during plan check.

4 Operation and Maintenance Program

4.1 Up-to-Date Map of the Collection System

LACPW gathers as-built plans and compiles into a central Document Management System, CADD System, and GIS system maintained by the Districts. For unincorporated areas, LACPW maintains the as-builts. For CSMD Cities, each City is responsible for maintaining as-built maps and the LACPW collects a copy for maintenance operations. Data gathered from the plans, such as system locations and alignment, pipe material, size, etc., are stored in LACPW's Computer-Aided Design and Drafting System and Geographical Information System.

4.1.1 Procedures for Maintaining and Providing Access to Water Boards Staff

LACPW provides access to up-to-date maps of the sewer system via:

- Interactive GIS-maps
- Electronically available as-builts
- Printed and electronically available Map Books

GIS Maps

The interactive GIS-based map of the sewer system is available online on the LACPW's website:

- <https://dpw.lacounty.gov/smd/sewernetwork/>

Within GIS, the Districts maintains a mapping system as seen in Figure 4-1 that includes sewer features such as pipe or manhole location, diameter, material, flow direction, etc. The system includes map base layers such as aerial images, streets, parcels, and storm drain systems also available from other Divisions within LACPW and other governmental agencies. The maps are regularly updated to reflect any changes in the system. Once Cityworks is implemented, valves will be included into the system map.

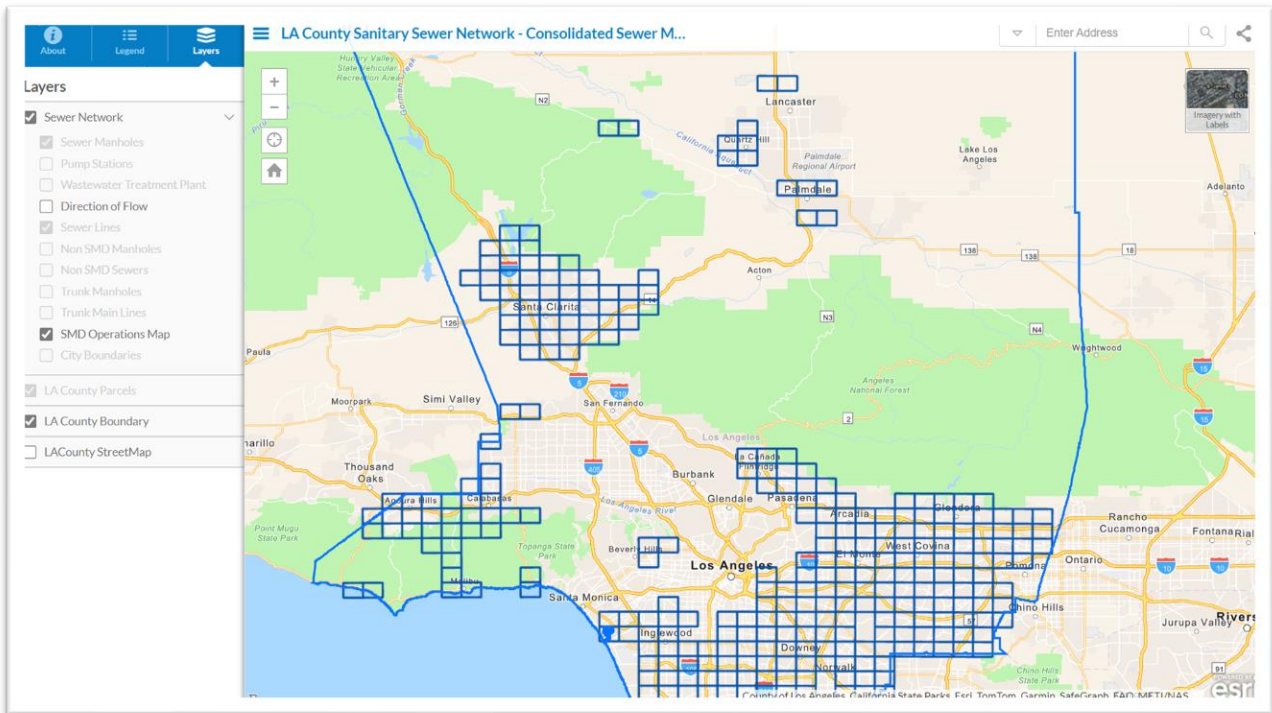


Figure 4-1: CSMD Sewer Network Map

Sewer As-Built

Sewer as-builts can be obtained from the City and/or LACPW. To retrieve the as-builts, LACPW has provided detailed instructions on how to locate the as-builts for a desired sewer line on the SMD webpage. Using the sewer network map to obtain the overlay operation map book, the map book lists the as-built sewer plan number that can be searched on LACPW's Land Record Site, see Figure 4-2.

The sewer as-builts are located on LACPW's Land Record site:

- <https://pw.lacounty.gov/smpm/landrecords/SewerPlans.aspx>

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Sewer Plans

The sewer plans below are available at this webpage and assistance may be obtained from the contacts below. View the [Sewer Operations Maps here](#) to get the sheet that covers your area. Open the overlay sheet for that page and locate the sewer number. Sewers are listed by the number given PC, CI, etc. If you do not find the sewer plan you are looking for, you may need to contact the city that the sewer and property is located within. County contract cities are Artesia, Carson, Commerce, La Mirada, Lakewood, Lomita, and Temple City.

PC	CI	ACOP	AI	JN	Spec	CC
Book		Book PC03000		Book PC06500		Book PC09500
Book PC00001		Book PC03500		Book PC07000		Book PC10000
Book PC00500		Book PC04000		Book PC07500		Book PC10500
Book PC01000		Book PC04500		Book PC08000		Book PC11000
Book PC01500		Book PC05000		Book PC08500		Book PC11500
Book PC02000		Book PC05500		Book PC09000		Book PC12000
Book PC02500		Book PC06000				

For issues, questions, or comments about this application, email the [administrator](#).

Figure 4-2: Sewer Plans Webpage

Map Books

Printed system maps are stored in the Mapping and Annexation Unit of the SMD located at 1000 South Fremont Avenue, Alhambra, California. These maps are also distributed to the SMD's field crew, for work scheduling and responding to emergencies, and to cities and other agencies. Individual map books can be found using the operation maps overview map as seen in Figure 4-3.

These map book pages are electronically available on the LACPW's website:

- https://dpw.lacounty.gov/sewer/Page_15

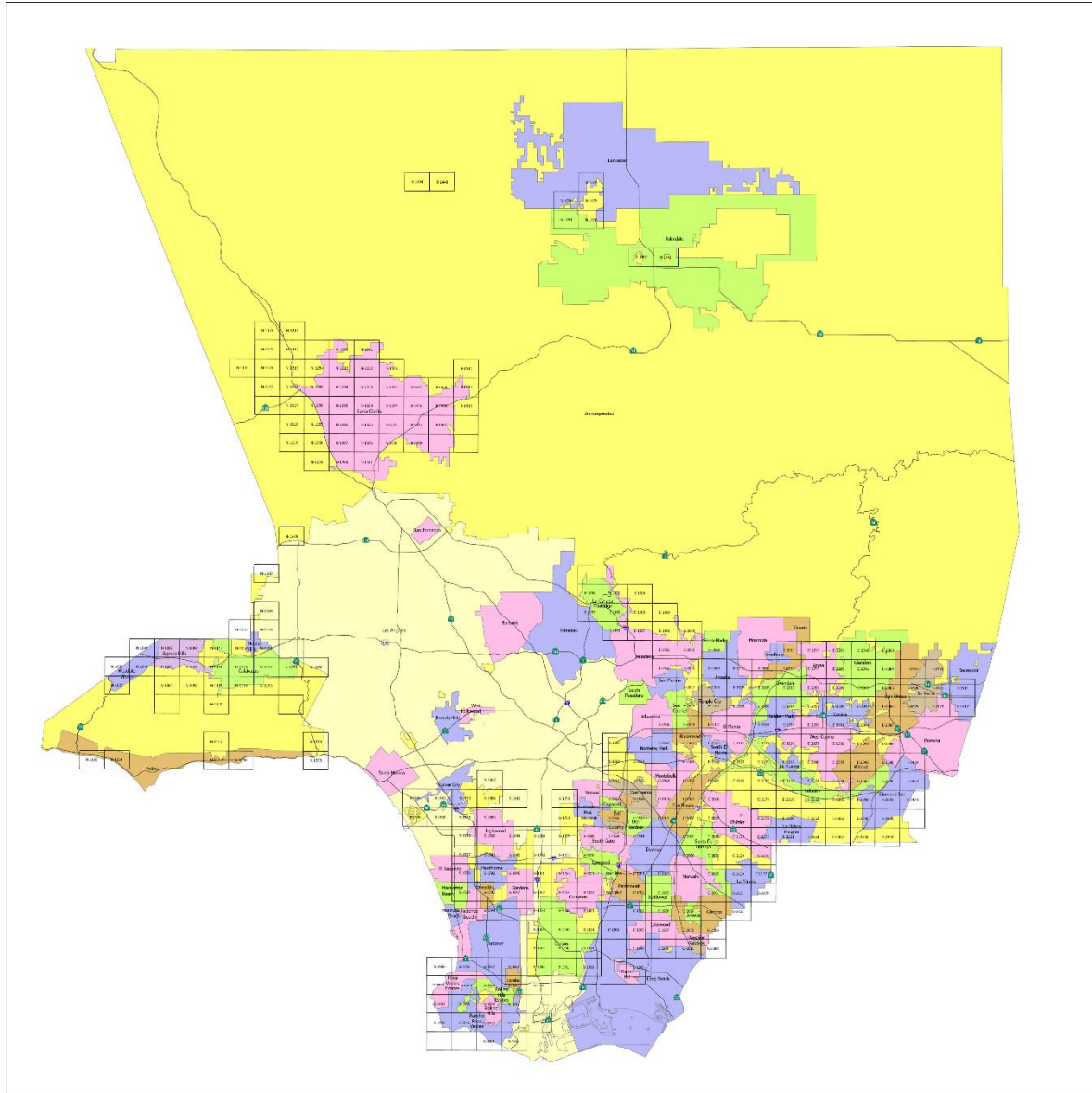


Figure 4-3: Operations Map Overview Map

4.1.2 Availability of Up-to-Date Mapping to Support Collection System Management

LACPW's print map books for sewer maintenance crews to use in the field for locating sewer infrastructure. When discrepancies are identified in sewer mapping, crews note them on printed map pages or through GIS on a phone and forward them to SMD GIS resources for updates. Field crews have access to both paper maps and the GIS phone application, depending on their preference.

Cityworks will eventually be downloaded onto cell phones and new LACPW's tablets, allowing crews to access facility information in real-time and log operation and maintenance activities directly into the system.

4.2 Preventive Maintenance Program

LACPW's maintenance services are provided from six maintenance yards strategically located within the County of Los Angeles for efficient management of maintenance activities including spills and other emergencies. A map showing locations of the field maintenance yards and pump stations in Appendix D.

The cornerstone of LACPW's maintenance operation is the Preventive Maintenance Program as described in LACPW's training guide maintained in each of the field maintenance yards. This program consists of regular inspection of the sewer system including manholes, pipes, siphons, pump stations, treatment plants, regular cleaning, repair, and related activities. This program is designed and carried out to detect and correct potential problems before they develop into major problems. The Preventative Maintenance Program is implemented through the following key activities:

- CCTV Inspection
- Sewer Line and Manhole Visual Inspection
- Gas Trap Manholes and Siphons
- Drop Manholes
- Sewer Line Cleaning
- Root Foaming
- Periodic Maintenance
- Vermin and Odor Control
- Sewage Pump Stations

The Preventive Maintenance Program utilizes LACPW's Sewer Maintenance Division Maintenance and Operations Manual, which describes these activities in detail. This manual is available on the SMD's webpage:

- <https://dpw.lacounty.gov/sewer/maintenanceandoperationmanual.pdf>

For each activity, the tasks and their frequency are determined either periodically, while others are determined based on inspection findings and yard determinations. The descriptions of inspection and maintenance activities and the frequencies for each activity are detailed below.

4.2.1 CCTV Inspection

Closed-circuit television (CCTV) inspections of sewer pipes are conducted to investigate and diagnose issues. Factors such as maintenance history, past overflow records, sewer line locations, and age are used to determine which pipes will be televised.

Additionally, LACPW implements CCTV inspections at a programmatic level through the Condition Assessment Program. This program aims to perform CCTV inspections and structurally rate approximately 500 miles of sewer infrastructure each year. Inspections are prioritized based on the number of spills per 100 miles for each jurisdiction.

4.2.2 Sewer Line and Manhole Visual Inspection

The interior and exterior of manholes are inspected twice a year for any structural defects, sewage flow condition, presence of vermin or rodents, deleterious industrial waste, odors, and any signs of unusual settlement around or evidence of debris within the manholes and along sewer alignments.

4.2.3 Gas Trap Manholes and Siphons

In the south area, gas traps are inspected and cleared of any stoppages or flow restrictions every 6 months. In other parts of the County, they are inspected and cleared of any blockages on a monthly basis. Siphons may differ in timeframe depending on the type of lines but are generally performed monthly.

4.2.4 Drop Manholes

These facilities are inspected and cleared of stoppages and flow restrictions on a variable frequency and are dependent on prior inspection. The inspection cycle of the drop manholes aligns with the manhole inspection cycle in Section 4.2.2.

4.2.5 Sewer Line Cleaning

Sewer lines are cleaned by hydro jet or rodding. Frequency of cleaning is based on inspection records. Sewer lines known to accumulate grease, garbage grinds, or sand are put on monthly, quarterly, or semi-annual cleaning schedule and those prone to root growth are periodically rodded or chemically treated.

4.2.6 Root Foaming

Root foaming is performed on main sewer lines based on root intrusion and need, usually associated with overflowing. The frequency of root foaming is initially 1 year, then increases to an 18-to-24-month frequency.

4.2.7 Periodic Maintenance

Periodic Maintenance (PMs) are sites that require higher-frequency cleanings due to maintenance issues. These "hot spots" are identified in the field during maintenance and inspections of sewer facilities and are often caused by debris, root intrusion, or other factors. Segments that experience spills are also added under periodic maintenance.

4.2.8 Vermin and Odor Control

When evidence of infestations are observed during an inspection or a service request or complaint is received, sewers and structures are dusted or baited. Sewers infested by insects are chemically treated.

4.2.9 Treatment Plants and Pumping Stations

The majority of the LACPW's pump stations are equipped with SCADA/alarm systems and are inspected at least once a week. Pumps and motors are lubricated, control mechanisms and valves are checked and adjusted as necessary, and equipment is repaired or modified as required.

Treatment Plants are inspected daily to comply with permit-required sampling and testing and perform routine maintenance. The equipment is cleaned and calibrated, and mechanical components and process units are checked.

4.3 Scheduling and Data Collection

Historically, LACPW generated and tracked work orders using the Maximo Maintenance Management System. The LACPW is in the process of implementing Cityworks Maintenance Management System to schedule and track maintenance activities. The activities the field crew performs are recorded in various forms such as service requests, cleaning reports, sewer maintenance daily reports, manhole adjustments, overflow report forms, etc., and are stored in the maintenance management system. All the asset inventory documenting maintenance activities and data collected are transferred over to the Cityworks Maintenance Management System to aid in the electronic filing and tracking.

4.4 Training

LACPW's staff responsible for the operation and maintenance of the sewer collection system attend formalized training classes or seminars provided by agencies such as California Occupational Safety and Health Administration (CALOSHA), California Water Environment Association (CWEA), and International Brotherhood of Electrical Workers (IBEW). Through this training, staff are well-versed in the latest industry, the best practices for safely and efficiently performing their tasks. Training is required for new staff and when new procedures are introduced.

LACPW also utilizes informal training approaches, including tailgate meetings, monthly safety meetings, and apprenticeship training programs led by higher-level staff. New Legally Responsible Officials and staff responsible for submitting data are informally instructed by an internal reporting expert. Additionally, only companies with well-trained and experienced staff are considered for either emergency spill mitigation or sewer construction and rehabilitation work.

The Sewer Operations Superintendents manage field operations and maintenance activities and are responsible for making sure all collection system field employees receive training in emergency response, spill investigation, and spill reporting duties. LACPW maintains records for all SERP-related training. The date, content, trainers, and attendees are recorded for all scheduled training courses.

With regards to spill response training and spill volume estimation training, the field crews operate a large system with enough spill events to provide opportunities for senior crew members to provide live-drill training to new and less experienced staff. When these events occur, new crew members are invited to observe until they can perform activities on their own. This on-the-job training involves shadowing experienced crew members and learning directly on site, rather than through drills.

To estimate spill volume, the LACPW uses three methods most regularly: eyeball, measure volume, duration and flowrate. The District Staff preparing the estimate employ the method most appropriate to the sewer spill in question and use the best information available.

Table 4-1: Summary of Training Program

Training Type	Description	Recurrence
General Order Requirements	Review of General Order Requirements performed throughout the year in morning briefings at each yard.	Monthly – One element discussed each month.
Spill Emergency Response and Drills and Spill Volume Estimation	Staff are trained in the field during live spill events. Staff being trained observe trained crew members perform activities to learn and then perform the activities under supervision to check the training was received.	Performed as-needed or at least once annually.
CIWQS Reporting	New Data Submitters are trained by experienced in-house Data Submitters. Staff also attend industry provided training by CWEA and CASA and utilize training videos from the State Water Board website.	Performed as-needed or at least once annually.

4.5 Equipment Inventory

The maintenance crews are equipped with standard industry technologies including radio equipped trucks for easy communication, cellular phones, heavy and light construction equipment, vacuum trucks, pumps, generators, trucks equipped with closed-circuit television units for interior inspection of sewer lines, and various types of safety equipment. Equipment is regularly checked, adjusted, repaired, or replaced as necessary. However, major fixed assets are replaced when they meet or exceed LACPW established fixed assets replacement criteria based on the age of the equipment, mileage, hours of use, repair history, etc.

Equipment categorized as Class 9 (less than 1/4 ton) or lower is automatically replaced by the Fleet Management Group when it meets the replacement criteria. The request to replace equipment higher than Class 9 is made as part of LACPW annual budget. In addition to the above replacement criteria, an analysis and recommendation by trained staff of LACPW and approval by LACPW's administration is required to replace equipment higher than Class 9.

Table 4-2: List of Major Equipment

Equipment Type	Count
Inspection	22
Rodder	12
Vacuum	7
Compressor	2
Jetter	10
Pickup	25
Utility	4
Pump	6
Masonry	4
Dump	4
Construction	2
Sedan	1
Van/Passenger	2
Crane	2
2Axle	3
Stake	5
Tractor	2
TOTAL	113

These criteria notwithstanding, a piece of equipment can also be replaced if its reliability or safety of operation becomes questionable. New and additional equipment are also acquired when fully justified based on increased workload, new activity, additional personnel, technological improvements, time and cost savings, employee or public safety requirements, etc. Each Collection System Yard maintains the spare equipment and parts needed by that yard to maintain the sewer pipelines and pump stations within the yard's service area and each is responsible for ordering replacements.

5 Design and Performance Provisions

5.1 Design and Construction Standards and Specifications

The city requires that all sewers be designed in accordance with LACPW's standards. The LACPW has standard plans and specifications for the construction of sanitary sewers and appurtenances to ensure that sewer lines and connections are properly designed and constructed. The LACPW specifications by reference incorporate the:

- Standard Plans for Public Works Construction;
- Standard Specifications for Public Works Construction ("Green Book");
- Standard Plans Public Works 2000 Edition;
- Special Provisions; and
- Standard Drawings.

In addition, LACPW has other publications such as the Private Contract Sanitary Sewer Procedural Manual, Guidelines for the Design of Pump Stations, etc., to maintain consistency in the design of collection systems within the unincorporated County areas and CSMD member cities.

The city requires that these publications also be followed in the design of sewer systems within the city. To further ensure that sewer facilities are properly designed, the city requires construction drawings to be prepared by licensed engineers. The construction drawings are thoroughly reviewed by the City and SMDs engineers prior to approval for construction and inspection of the actual construction work. SMD review plans to ensure that appropriate maintenance standards are integrated into the design from a maintenance standpoint only.

5.2 Procedures and Standards for Inspecting and Testing System Improvements

To further assure that sewer facilities are properly designed and constructed, the LACPW requires that sanitary sewer plans are designed by licensed engineers and provides thorough review of plans prior to approval for and conducting inspection of construction work. Each city within the CSMD has its own design and construction standards and requirements. Prior to accepting a newly completed sewer system for maintenance, each city is responsible for assuring sewers are designed and constructed to standard. The following procedures are used to ensure compliance with LACPW standards for portions of the system designed and constructed in unincorporated areas:

The following procedures are used to ensure compliance with LACPW standards for portions of the system designed and constructed within the city:

- The city provides inspection by outsourcing to qualified consultants for the inspection of new sewer construction projects. The City requires that as-built plans of the completed projects be submitted prior to final approval for acceptance of sewer facilities for public use.

- Within the City new sewers, as well as sewer lines rehabilitated by lining, be televised and the video reviewed by SMD's personnel prior to the acceptance of the completed project.
- In compliance with LACPW's policy, the City requires that all new or rehabilitated pumping stations be inspected by experienced SMD Electro-Mechanics prior to acceptance for maintenance by the SMD.
- LACPW's inspectors are well trained in pipeline and pump station construction. They attend training classes and educational seminars to stay familiar with advancements in the industry. The inspectors are also provided with adequate materials to perform their jobs, including the Standard Specification for Public Works Construction Inspection Manual, the Green Book, etc.

6 Spill Emergency Response Plan

The LACPW's Spill Emergency Response Plan (SERP), included in Appendix F provides guidelines for LACPW's maintenance crew to follow in responding to, cleaning up, and reporting sewer spills that may occur within the Districts' service area. The purpose of the SERP is to support an orderly and effective response to sewer spills that ensure all regulatory requirements are met. The LACPW's SERP comprehensively addresses notification, response, assessment, and recordkeeping requirements of the SWCRB General Order as summarized in Table 6-1.

Table 6-1: Spill Emergency Response Plan General Order Compliance

Order Requirement	SERP Section
Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;	2, 3.4
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;	2, 3.4, 3.7
Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;	4
Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;	6
Address emergency system operations, traffic control and other necessary response activities;	3
Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;	3.4
Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;	3.4, 3.6
Remove sewage from the drainage conveyance system;	3.6
Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;	3.6
Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;	3.6
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;	3.8, 4.5
Document and report spill events as required in this General Order; and	4
Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.	6.1

6.1.1 Pre-Planned Coordination with Other Agencies or Departments

Member cities hold periodic meetings to review roles and responsibilities. For example, the role of the city is to support securing the site and initial containment before SMD field crews arrive. When appropriate, LACPW invites LACSD staff to discuss any jurisdictional inquiries or investigations of spills.

7 Sewer Pipe Blockage Control Program

7.1 Program Overview

Analysis of sanitary sewer overflows over the last 3 years indicates an average of 88 percent of spills within the Districts collection system are linked to roots, debris, grease, pipe structural failure, and pump station failure either as a primary or secondary cause factor. Between 2021 and 2024, an average of 30 percent of spills were linked to grease accumulation and 18 percent linked to debris accumulation. To prevent the build-up of Fats, Oils, and Grease (FOG) that can cause blockages and restrictions in flow, the County has implemented a FOG program to prevent sewage overflows into the environment, as well as to reduce the discharge of FOG to the sewer system.

Carson experienced 4 sewer overflows between 2001 through 2024, 1 spill caused by FOG, 1 spill caused by Vandalism, 1 spill caused by FOG and Debris, and 1 spill caused by other.

To prevent the build-up of FOG that can cause blockages and restrictions in flow, LACPW has implemented a FOG program to prevent sewage overflows into the environment, as well as to reduce the discharge of FOG to the sewer system.

The Environmental Programs Division (EPD) is responsible for performing fats, oils, and grease source control inspections of food service establishments (FSEs). The EPD regulates industrial waste disposal for 36 cities by contract and all unincorporated areas. The number of FSEs per City and within the unincorporated areas are listed in Table 7-1.

Table 7-1: Number of FSEs per City/Area

City/Area	Number of Food Service Establishments
Unincorporated Area	1025
Lakewood	181
Artesia	118
Cerritos	144
Paramount	52
Bellflower	51
La Mirada	74
Hawaiian Gardens	21
Carson	169
Culver City	188
Rolling Hills Estate	20
Lawndale	46
Cudahy	12
Lomita	58
Rosemead	114
Duarte	53
Irwindale	39
Temple City	55
Commerce	102
Bell Gardens	91
La Cañada Flintridge	49
Beverly Hills	135
San Fernando	52
Westlake Village	50
Agoura Hills	65
West Hollywood	255
Calabasas	53
San Dimas	80
Walnut	52
Diamond Bar	75
Santa Clarita	376
Total	1324

A list of cities that EPD supports with industrial waste disposal, including FOG source control inspections, can also be found on the Los Angeles County official website:

- <https://cleanla.lacounty.gov/industrial-waste/#Jurisdictions>

For the other cities that are not on this list, the city handles all their own FOG-related source control activities.

The EPD's FOG program guidelines and procedures can be found on the Industrial Waste page on the LACPW's website:

- <https://cleanla.lacounty.gov/industrial-waste/#Obtaining-Clearance>

The website provides FOG guidelines, standard drawings for grease pretreatment devices, permit forms, and details on EPD's FOG program.

7.2 Implementation Plan and Schedule for Public Outreach

7.2.1 Summary of Outreach Activities

The LACPW conducts public outreach through various channels to educate the community about Fats, Oils, and Grease management:

- **Community Events:** LACPW participates in resource fairs, park events, and Earth Day- themed events, where staff distribute FOG brochures and answer questions from the community.
- **Website Resources:** The FOG page on LACPW's website provides a comprehensive list of FOG do's and don'ts: <https://pw.lacounty.gov/SMD/grease/Index.cfm>
- **Inspections:** During inspections of FSEs, FOG inspectors provide educational materials on best management practices (BMPs) for grease traps and interceptors. Newly permitted FSEs also receive BMP materials.

By engaging with the community and FSEs through these activities, LACPW aims to promote effective FOG management practices and prevent blockages in the sewer system.

To complement LACPW efforts, the City will initiate its own Public Education Outreach Program. This will consist of including SSO- and FOG-related articles from the LACPW and other sources, such as the City's newsletters and webpage (<https://www.carsonca.gov/index.php>), and by maintaining continuous communication with the LACPW, City residents, and other stakeholders on these and other issues. City personnel also disseminate information to residents during meetings or while conducting right-of-way lateral work inspections.

7.2.2 Plan and Schedule of Events

The schedule of outreach activities is based on opportunities for public engagement and the frequency of FSE inspections. When an opportunity arises for SMD to participate in a public event, the Community and Government Relations Group (CGRG) notifies them. Many of these events occur annually and SMD tries to be involved if notified by the CGRG

in time to coordinate. CGRG keeps track of all the events the LACPW participates in annually, providing a summary of events at the end of the year.

FSE Outreach is timed around FSE inspections. FSE owners are provided educational material when FOG inspectors visit to inspect grease traps and interceptors and check for any violations.

7.3 Plan and Schedule for Disposal of FOG

For the disposal of grease and other pipe-blocking substances, FSE's must obtain an Industrial Waste Disposal Permit from EPD that requires a schedule of frequent maintenance and documentation of maintenance and disposal of waste. Under the permit, grease traps are required to be maintained/pumped daily while grease traps/interceptors that can handle 750 gallons or greater require quarterly maintenance. FOG haulers have multiple options for grease disposal, including Baker Commodity in Vernon and designated disposal locations in Los Angeles and the County Sanitation Districts of Los Angeles County. These disposal sites are regulated and require a fee.

The solidified fats found in the City and LACPW collection system during cleaning operations are trapped, collected, and taken to the maintenance yard dump bins. Once the bins are full, these and other debris collected from the system are taken to the County Sanitation Districts of Los Angeles County facilities.

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

7.4.1 Authority

The city and LACPW legal authority to prevent illicit discharges into the sanitary sewer system and to limit the discharge of FOG and other debris that may cause blockages in the sewer lines is discussed in Chapter 3.

7.4.2 Preventative Measures

The LACPW utilize semiannual manhole inspection of all manholes and the scheduled and unscheduled sewer line cleaning and television inspection of the interior of sewer pipes to identify pipe segments experiencing heavy grease accumulation and in mitigating the problem. These legal mandates and maintenance practices are complemented by the LACPW's Public Education and Outreach Program discussed in Section 7.1 to minimize Spills and blockages caused by FOG.

7.5 FOG Program Requirements and Design Standards

A pretreatment system/device is required for any new and existing food service establishment or similar facility where FOG from food preparation is discharged into the sewer system in quantities that may cause blockages or interfere with sewage treatment or disposal. All pretreatment facilities, whether required by EPD or installed voluntarily, shall be maintained and operated under a valid Industrial Waste Disposal Permit (IWDP) for the operating life of the facility.

FOG program requirements are outlined in the IDWP Conditions and Limitations (Appendix G1) and are supported by the Pretreatment Guidelines for Restaurants and Food Service Operations.

7.5.1 Requirements to Install Grease Removal Devices

The LACPW's legal authorities to enforce the requirements stipulated in this section are discussed in Chapter 3. The Director of Public Works has enforcement authority for industrial waste permitting per Section 20.36.040 of the LACO Code and charged the EPD with permitting and inspecting more than 1,300 food service establishments that discharge into the sanitary sewer system in the unincorporated areas and 36 contract cities within the CSMD. New or remodeled FSEs and those under new ownership must also secure a permit from the Building and Safety Division (BSD). If there is a FOG-related problem associated with an industrial waste permit, PW will take enforcement action against the permittee, or where applicable, refer the problem to the contract city for enforcement action. The EPD requires that industrial waste generating facilities and any FSE with the potential to produce grease install a grease control device (GRD).

The LACPW does not issue permits or inspect domestic sewage disposal to the sanitary sewer system. However, the LACO Code prohibits the discharge of "any material, which may create a public nuisance, or menace to the public health or safety, or which may pollute underground or surface waters, or which may cause damage to any storm drain channel or public or private property" (Section 20.36.010). If during inspection of the sanitary sewer system LACPW's personnel determines that a FOG-related problem exists and is traceable to a domestic sewage source of such character that is not satisfactory, under the LACO Code (section 20.20.100), pretreatment could be required or the discharge required to be eliminated. Domestic waste containing FOG can lead to spills, which are public nuisances and is a violation of California Health and Safety Code Division 5, Part 3, Chapter 6, Article 2, which can also be used to impose appropriate domestic sewage discharge requirements.

7.5.2 Design Standards for Grease Removal Devices

FSEs are required to size, design and construct grease traps and interceptors according to the LACO Plumbing Code. Additionally, they are required to be approved, installed, and operated in a manner to control discharges of FOG into the sanitary sewer system and to ensure that the facilities do not create nuisances, menaces to the public peace, health or safety hazards, or adverse impacts to the public sewer system, soil, underground, and/or surface waters.

The Industrial Waste online page on the County's website provides standard drawings for grease pretreatment devices: <https://cleanla.lacounty.gov/industrial-waste/#Obtaining-Clearance>

7.5.3 Maintenance Requirements

The IWDP Conditions and Limitations has a minimum maintenance frequency condition and a requirement to maintain the GRD in proper working order. During inspections, inspectors physically examine the GRD. If a grease interceptor (GI) is used, FSEs are required to open and inspect it. If issues are identified, they are documented, and a job

order is created. The FSE signs off on the order and receives a receipt. If cleaning records are not provided, or if the GI cannot be accessed, the FSE must clean it.

Permit conditions require:

- GIs to be cleaned at least once every three months
- FSEs with grease traps are required to perform daily maintenance

7.5.4 Best Management Practices Requirements

7.5.5 The Pretreatment Guidelines for Restaurants and Food Service Operations provide guidelines and best management practices for selecting and installing pretreatment devices. These guidelines outline the installation requirements for grease interceptors and offer a list of alternative pretreatment devices that can be used in lieu of a grease interceptor.

During inspections, inspectors verify whether best management practices are being followed, such as maintaining proper documentation, using adequate devices, and employing appropriate disposal methods. In incorporated areas, inspectors distribute flyers outlining the dos and don'ts of fog management and request that these flyers be displayed at workstations for workers to see.

7.5.6 Record Keeping and Reporting Requirements

As a condition of the Industrial Waste Permit, FSEs must record the maintenance of grease trap/interceptors on a maintenance log report. The log records date of the service performed, types of services performed, and person/company providing service. Additionally, for any liquid or solid industrial wastes transported from the site, FSEs must obtain and keep copies of receipts for grease trap/interceptor maintenance and pumping for at least 180 days.

The maintenance log report and receipts shall be made available to LACPW and the City (if applicable) upon request.

7.5.7 Procedures

The LACPW implements the following procedure to identify and manage sections of the system impacted by FOG blockages:

- **Identification:** Sections impacted by FOG blockages are identified through regular inspections conducted by cleaning crews, CCTV inspections, and reports of spills.
- **Investigation:** Once identified, these sections are thoroughly investigated to assess the extent of the blockages and determine the appropriate actions needed to address them.
- **Maintenance:** Based on the investigation findings, a periodic cleaning schedule is defined and implemented for each affected section to ensure ongoing maintenance and prevent future blockages.

7.6 Inspection and Enforcement Program

7.6.1 Authority to Inspect Grease Producing Facilities

As discussed in Chapter 3 of this document, Section 20.36.400 of the LACO Code provides legal authority to inspect FOG-producing facilities, prohibiting the discharge of substances that may obstruct or require frequent maintenance of the sewer system.

The source control inspection process follows a standard workflow, including researching plans, preparing for the inspection, reviewing operations, and requesting GRD maintenance documentation. Inspectors may ask questions about waste oil management, changes in operations that affect the permit, and maintenance frequency. They also check for compliance with Best Management Practices such as ensuring BMP posters are visible in the kitchen. Inspectors document their findings and enter data into the HMS database.

When SMD encounters FOG issues in the collection system, whether from spills CCTV inspections, or sewer cleaning, the source of the problem is evaluated as either residential, commercial, or both. For residential spills, SMD may notify residents door-to-door, providing information on proper grease disposal practices. For recurring issues, the affected area is placed on a preventive maintenance schedule.

In the case of commercial spills, the incident is referred to EPD for investigation. EPD checks GRD maintenance and requires corrective actions when needed. If an FSE without a GRD is responsible for a spill, EPD mandates the installation of a GRD. If a GRD-equipped FSE causes a spill, more frequent maintenance may be required. All investigations are documented in the HMS database, and results are communicated to SMD as relevant.

7.6.2 Authority to Enforce

The enforcement process for violations varies based on location. In unincorporated areas, inspectors issue a Notice of Violation or Order to Comply with a set deadline. Follow-up inspections verify compliance, and unresolved issues may be escalated to supervisors. In rare instances, compliance issues are referred to headquarters, possibly resulting in legal action with the District Attorney. In CSMD cities, violations are handled similarly, but escalation may involve the City's Code Enforcement and, if necessary, the City Attorney.

7.6.3 Resource Plan to Inspect and Enforce

The EPD has sufficient inspection and enforcement staffing to achieve an annual FSE inspection cycle and follow up on requirements and violations identified. LACPW's current funding allows for increases in permit and other services charges if necessary to hire additional staff.

7.7 Maintenance Program to Address FOG Issues

As described in Section 4, FOG prone sections of LACPW's collection system, referred to as "hot spots," are identified during routine maintenance operations and investigation of stoppages and spills. These portions of the system found to have persistent FOG problems are put on monthly, quarterly, or semi-annual periodic cleaning schedule, depending on the magnitude of the problem. Furthermore, segments of the collection system with persistent FOG problems are referred to the EPD for additional investigation and enforcement actions.

7.8 Implementation of Source Control Measures to Address FOG Issues

7.8.1 Summary of Source Control Measures

Pretreatment devices are used to remove grease from sewage to prevent the accumulation of FOG that can lead to blockages. The LACPW provides pretreatment guidelines to FSEs, offering guidance on how to adequately select, size, and install a pretreatment device based on the amount of grease produced. The maintenance of these devices is outlined in the IWDP to ensure proper operation and functionality. Under the IWDP, LACPW or City may require upgrades to grease interceptors if maintenance is inadequate or if the interceptor is too small to handle the waste stream.

7.8.2 Summary of Source Control Program Enforcement

The EPD conducts routine inspections of FSEs and inspects new establishments. Investigations are also performed when spills occur. When SMD receives complaints and determines that FOG may have caused a spill or has the potential to cause a spill (e.g., grease accumulation), they reach out to the EPD for further investigation. Upon investigation, the EPD may make adjustments to the permit and treatment requirements to prevent such incidents and/or place the impacted area under periodic maintenance as described in Section 4.2.7. Under the Industrial Waste Discharge Permit (IWDP), LACPW or City may modify the permit and its conditions and limitations as necessary to ensure proper waste disposal.

8 System Evaluation, Capacity Assurance and Capital Improvements

The LACPW has implemented procedures for system evaluation, capacity assurance, investment prioritization, and capital improvement planning. This section documents the procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Capacity assessment and design criteria;
- Prioritization of corrective actions; and
- Capital improvement planning.

8.1 System Evaluation and Condition Assessment

8.1.1 Best Practices and New Technology

LACPW uses CCTV as the primary tool for condition assessment of pipelines which is in accordance with industry standards for small diameter pipelines. Use of CCTV is the industry best practice for sewer pipeline condition assessment given the pipe size range (8-inch to 36-inch) the County owns and operates.

8.1.2 Amount of System Condition Assessment

Under the Condition Assessment Program (CAP), SMD plans to perform CCTV inspections at a rate of approximately 500 miles of sewer infrastructure each year starting in 2025. The complete cycle is scheduled to last a total of approximately 10 years, with the period between inspections dependent upon age and results from the last inspection. Newer pipe segments found to be in good condition in the prior inspection will have a low priority in the next inspection cycle. SMD inspects all manholes twice a year.

8.1.3 Inspection and Condition Assessment Prioritization

Historically, LACPW's CAP prioritized condition assessment projects based on jurisdiction/cities with ordering based on spill rate. The assessment prioritized sewer lines with the most potential for repair needs based on maintenance history, past overflow records, sewer line locations, and age. Based on the reissued General Order LACPW will incorporate additional factors into condition assessment prioritization. These include 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 receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;

The LACPW plans to develop and implement an approach to incorporate these factors into condition assessment prioritization by May 2027.

8.1.4 Inspection Methods

The LACPW uses CCTV inspection as the primary means for collecting visual observations of system conditions. This CCTV inspection program digitally records the condition of the pipe interior from manhole to manhole using a robotic camera tethered to a camera van.

While the video is being captured, a National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) certified crew member views and logs events such as defects and observations using the standardized NASSCO PACP observation codes. With GraniteNet, the digital video inspections files are transferred via cloud enabling access to anyone with credentials and password access using a laptop or mobile device.

In addition to CCTV inspection, visual inspection is conducted on sewer facilities during sewer system maintenance activities. In the past, a field crew would document visual observations and system issues on a form to trigger follow up inspections and repair actions. With the implementation of Cityworks, field crews now provide these observations electronically using mobile devices for immediate communication to SMD superintendents and supervisors to trigger follow-on actions to address issues.

8.1.5 Utilizing Observations for Condition Assessment

The LACPW utilizes the NASSCO rating system to identify defects and observations using PACP observation codes. The City plans to continue using the NASSCO PACP condition rating for sewer pipelines and is planning to incorporate the MACP for manhole condition assessments. The LACPW prioritizes repairs of critical structural defects. These include NASSCO PACP Structural Grade 5 defects with potential for soil migration and undermining of pipe bedding leading to pipe movement and having potential for accelerated deterioration (i.e., pipe collapse, broken void visible, broken soil visible, hole void visible, hole soil visible, missing wall, and severe offsets impeding flow). These types of defects also have potential for leakage. Other less severe NASSCO PACP Structural Grade 5 and NASSCO PACP Structural Grade 4 defects are not prone to leakage due to collimation and sealing of the defects with sedimentation and biological growth.

Throughout Los Angeles County, historical rivers and creeks have been concrete-lined or replaced with storm drainage piping. The LACPW is not aware of any locations in the CSMD service area where there is potential for subsurface leakage reaching a water of the State.

The LACPW also performs visual inspections weekly at pump stations to verify the pumps are performing well, are properly maintained, and are in compliance with standards. If issues are identified, they are addressed via a corrective maintenance work order or elevated to be included in a project.

8.1.6 Inspection and Assessment Recordkeeping

The LACPW documents and recordkeeping of system evaluation and condition assessment inspections and activities have historically been maintained using WinCan software with videos stored on LACPW servers. LACPW recently transitioned to using GraniteNet, a cloud-based CCTV software, which will enable access to CCTV data and videos to anyone with password access and credentials from mobile devices or laptops connected to the internet.

In the past, when field crews conduct visual inspections during maintenance activities, system deficiencies requiring action were recorded as footnotes on forms for replacements, repairs, and issue identification. Once the Cityworks is implemented, field crews can use mobile devices to document these issues in the Cityworks Maintenance Management System to better manage and keep record of findings and address issues.

Assessing assets vulnerable to Climate Change

The District's service area has sections of the system that are susceptible to climate change impacts from flooding, landslides, wildfires, and power disruptions that may cause service disruptions. LACPW plans to develop and implement procedures to identify and address system assets vulnerable to direct and indirect impacts of climate change by November 2027, including but not limited to:

- Sea level rise
- Flooding and/or erosion due to increased storm volumes, frequency, and/or intensity
- Wildfires
- Increased power disruptions

LACPW has an overarching Emergency Response Plan for addressing large-scale emergency events. These procedures provide comprehensive guidelines for personnel to effectively respond to various emergency situations including communication directives, preparatory assignments, and specific actions for different types of emergencies.

Specific Emergency Procedures related to climate change include:

- Earthquake Response Procedures
- Fire Response Procedures
- Storm Response Procedures
- Electrical Power and Telecommunication Outage
- Tsunami (Large Wave) and High Tide Procedures
- Sewage Leakage and Overflows
- Air Pollution Emergency Response Procedures
- Land Movement and Rockslide Response

8.2 Capacity Assessment and Design Criteria

8.2.1 Gravity Facilities

The City is responsible for confirming that newly constructed pipelines are constructed with adequate hydraulic capacity. A study is required for each development to analyze the capacity of the existing system and will set forth mitigation requirements for developers to ensure adequate capacity sizing of proposed sewer lines to accommodate the current design and future base, peak, and wet weather flows.

CSMD member cities are responsible for capacity assurance within their jurisdictional boundaries.

A preliminary assessment determines whether a sewer area study is required, based on zoning and acreage to estimate the load. If the estimated load exceeds thresholds, a sewer area study is triggered. Sewer load calculations are lot-based, determined using parcel size and zoning type. A standard measure, such as cubic feet per second (cfs) per acre, is used, with flow rates varying by zoning type. This methodology results in sewer lines are designed to handle the specific load for each parcel. Increased densification due to new zoning or development to full capacity may necessitate resizing existing sewer pipes.

For all new projects impacting the capacity of the public sewer system, the LACPW requires the submission of a sewer area study. The capacity assessment assumes an ideal system with no illegal connections and uses a design criterion of 1/2-full pipe capacity as adequate for lines smaller than 15-inch in diameter, and 3/4-full pipe for lines 15-inch and greater. Reports are submitted and reviewed through a plan check process.

The sewer area study procedure and support materials for the unincorporated areas of Los Angeles County can be found on the Land Development Division website:

- <https://pw.lacounty.gov/idd/iddservices/sewerAreaStudy/sewerAreaStudy.shtml>

The City is responsible for ensuring that the public sewer infrastructure is correctly designed, adequately sized, and easily maintained. LACPW provides a supporting role in reviewing all proposed sewer plans for new developments in the City to ensure that they conform to LACPW's design standards and to ensure that requirements for acceptability for maintenance are met.

The Director of Public Works/City Engineer or hired qualified private company provides thorough review of all sewer plans for proposed development projects in the City to ensure that (1) they are properly designed with sufficient capacity for current and future base, peak, and wet-weather flow demands; and (2) any impact of proposed project on existing sewer system is mitigated prior to being approved by the Director of Public Works/City Engineer. During construction, the projects are continuously inspected by the Director of Public Works/City Engineer or hired construction inspectors to ensure that sewer facilities are constructed in accordance with the approved plans and specifications.

8.2.2 Pressure Facilities

Pump stations within the City and LACPW are designed for full buildout and include redundancy in controls and pumping systems. If developers seek to connect additional

tracts, they must hire an engineer to evaluate the pump station's capacity needs. Flow studies are conducted on a case-by-case basis through the permitting process. Sewer line flow measurements are performed to assess the capacity of lines suspected of being surcharged. These measurements are straightforward for established sewer systems, though more remote systems require additional permissions for access.

8.2.3 Infiltration and Inflow

The assessment of increased infiltration and inflow (I/I) is conducted in collaboration with LACSD. LACSD performs studies to identify sources of I/I into their system, which may include LACPW's collection systems, potentially triggering an assessment of LACPW's system. Mitigation strategies include sealing manholes and sewer lining, LACPW with LACSD providing the sealant and lining materials. Additionally, LACSD and LACPW develop a list of manholes affected by I/I. LACSD typically requests that manholes be sealed and peepholes corked. Sampling and analysis are performed as needed.

8.2.4 Erosive Forces in Canyons and Streams

The LACPW mitigates erosive forces for pipelines crossing or near rivers and streams by requiring these pipelines to be concrete encased. The methods of encasement are defined in LACPW's Design Standards Manual.

8.2.5 Design Flow and Weather Events

The system is designed according to LACPW's Design Standards to accommodate dry weather peak flow conditions and design storm and wet weather events. Approximately 91 percent of pipelines in CSMD system are 8-inch vitrified clay pipes and approximately 8 percent are 10-inch to 15-inch diameter. The City has approximately 86 percent of pipes that are 8-inch vitrified clay pipes and approximately 13 percent are 10-inch to 18-inch diameter. These pipelines collect flows from small sewer catchment areas and convey the flows to the nearest LACSD trunk sewers for conveyance to an LACSD treatment plant for treatment and disposal.

8.2.6 Capacity Assessment Data

When performing sewer capacity studies within the City's boundary, developers can obtain reference data for the development of sewer studies and capacity assessments directly from the City. LACPW's Land Development Division (LDD) can assist upon request from the City.

When performing sewer capacity studies within the unincorporated areas of Los Angeles County, developers can obtain reference data for the development of sewer studies and capacity assessments on LDD's website. The website provides guidance on the approval process, links to information such as as-builts and sewer locators, and examples of required documents. If contractors need additional information, they may reach out to LDD directly to request any additional materials.

The LDD collects, maintains, and archives all sewer studies and flow data performed, and can provide this information upon request. Additionally, LDD has access to and can provide information as needed from sewer pipeline condition assessments, system

inspections, spill history, and other available data used to assess system deficiencies and identify necessary system repairs and rehabilitation.

8.2.7 Capacity Enhancement Plan

The Sewer Collection System Capacity Enhancement Program is a combined effort between the City and LACPW. LACPW's Capacity Enhancement Plan focuses on managing infiltration and inflow (I/I) by requiring proper system design through plan checks, careful inspection during construction, and the use of appropriate pipe materials.

After installation, multiple strategies are employed to identify and eliminate I/I sources where feasible. Detection strategies include visual inspections, CCTV, and smoke and dye testing.

- If the sources are due to illicit connections such as sump pumps, roof drainage, surface water diversion into a manhole, etc., applicable laws are enforced to eliminate them.
- Significant structural issues like collapses, breaks, holes, or severe offsets are corrected through repair, replacement, or lining.
- Maintenance issues such as grease accumulation and debris are addressed through regular sewer line cleaning, and flow measurements are used to assess the capacity of sewer lines suspected of surcharging.

8.3 Prioritization of Corrective Actions

LACPW prioritizes corrective action based on:

- Likelihood of failure which is determined from findings of condition assessment (e.g., prioritizing NASSCO PACP rating, 4 and 5) and;
- Consequence of failure (e.g., proximity to water body, railroad, road type, and easement)
- Areas with multiple priority segments to factor in areas to be repaired at a time

Based on the condition grading and observed defects, LACPW prioritizes sewer segments for remediation. NASSCO PACP Structural Grade 5 defects are significant structural deficiencies. Pipe segments with these defects are placed on a repair list with the highest priority focused on pipes with NASSCO PACP Structural Grade 5 defects prone to accelerated deterioration. Sewer repairs are also prioritized based on maintenance history, past overflow records, sewer line locations, and age as they contribute to the likelihood and severity of spills.

8.4 Capital Improvement Plan

Responsibility for capital improvements varies based on the type of improvement required. For new sewer installations, collection systems owned by the cities receive funding from the City. New connections and capacity-related improvements in unincorporated areas are funded and constructed by the developers, including construction contracting (refer to Section 8.2). The County provides oversight throughout the design and construction of the capacity related improvements, including review and acceptance during permitting,

design reviews, and construction. The Design Division is responsible for developing the design criteria for CIP projects, and PMD III manages the development, design and construction. The LDD manages the County Improvement Projects in unincorporated areas, including tracking budget, scope, and schedule.

The City manages their own CIP schedule, tracking budget, scope, design, and construction of new connections and capacity-related improvements within their boundary.

For rehabilitation and repair, the Districts manage and funds projects for both City systems and unincorporated areas. The Districts focuses on lining and emergency point repairs for damaged pipes to maintain operations and reduce the risk of sewer spills.

Most repairs are delivered through on-call contracts, including work on gravity mains, force mains, pump stations, and treatment plants. The Accumulative Capital Outlay Program (ACO) and special zones fund the repair and maintenance of SMD facilities.

8.4.1 Accumulative Capital Outlay Program

The Accumulative Capital Outlay (ACO) Program fund was established in 1987 as a mechanism to pay for sewer pipe replacements, relief sewer construction, and maintenance improvements to sewage pumping stations. The objectives of the fund are to establish a charge to be collected from each parcel of real property in the CSMD and utilize these monies for sewer line repair and rehabilitation projects (emergency or scheduled).

Additionally, some deteriorated lines are discovered during preventive maintenance of our sewer lines. These lines are either immediately repaired by force account, using emergency contractors, or added to the list of future ACO projects. Table 8-1 lists the contracts under the ACO program as of May 5, 2025.

All sewer pipe segments within the District's service areas found to have significant structural deficiencies will continue to be repaired or rehabilitated under the ACO program.

Table 8-1: ACO Program Contract List

Projects Name	Amount	Start Date	End Date
Fountain Springs Pump Station	1,214,199	Sept, 2026	Sept, 2028
San Dimas Pump Station	1,214,199	January, 2026	April, 2027
On-Call As-Needed Contract	62,202,057	Est. July 2025	Est. July 2030

8.4.2 Joint Coordination and Interagency Coordination

The majority of collection system improvements are managed by Sewer Maintenance Division staff using resources from on-call contracts for planning, design, and construction. In some cases, projects are managed by PMD III. In either case, coordination between operation and maintenance staff, County engineering staff, consultants and contractors occurs throughout the planning, design and construction phases of project delivery.

Project delivery incorporates coordination meetings and milestone deliverable reviews by all stakeholders.

Early in the project delivery process, impacted agencies and entities are identified to initiate communication and permitting to streamline project delivery. This includes communication and coordination with CSMD Cities if the work is being performed on their collection system. Another primary impacted agency is LACSD, since there are numerous connections between LACPW's collection systems and LACSD trunk sewers. LACPW also coordinates with the City of Los Angeles and Las Virgenes when necessary, when working in areas where their systems connect to LACPW's systems. Other impacted entities can include Army Corps of Engineers, Department of Fish and Wildlife, railroads, schools, neighboring cities, or CSMD member cities. Collaboration helps align project planning, and resource allocation for engineering, design, and construction. Regular communication, data sharing, and joint meetings support the coordination of timelines, permitting, and infrastructure improvements while reducing conflicts across jurisdictions. All coordination of stakeholders and community engagement is managed by LDD staff.

9 Monitoring, Measurement and Program Modifications

9.1 Maintenance of Information to Prioritize SSMP Activities

Relevant information for prioritization of SSMP activities is collected in an array of information systems, databases, and spreadsheets.

- WinCan and GraniteNet are used to video and log events from CCTV inspection. WinCan is the legacy repository. LACPW recently implemented GraniteNet and will be using GraniteNet for all future inspections.
- Historically, LACPW documented maintenance activities in the field using paper forms and work orders and later entered into Maximo. LACPW is transitioning from Maximo to Cityworks for management of maintenance activities. The implementation of Cityworks will streamline data collection and improve asset management efficiency.
- FOG inspection activities are recorded on paper and stored in the HMS database.
- Spill data is stored in the State Water Resources Control Board's CIWQS database and SMD internal PowerBI database. Productivity reports documenting and summarizing the work performed per City can be generated by PowerBI.
- Previous audits findings are documented in an Audit Progress Tracker updated by SMD staff.

Table 9-1: Information Systems Relevant to SSMP Implementation and Monitoring

System	Description of Primary Functions	Related SSMP Activities
Maximo	Maintenance management system for managing maintenance activities. Field crew activities are recorded in various forms and stored in the MMS. LACPW is transitioning to Cityworks	Managing and recording work orders and maintenance activities
Cityworks	Maintenance management system to schedule and track maintenance, condition assessment and FOG activities	- Used to plan, schedule, and track work orders and activities for maintenance - Recording CCTV videos and condition assessment findings - Managing FOG source control inspections
GIS Database	Asset database of record, including asset attribute information such as material type, diameter. Represents asset physical location spatially	Creating and maintaining maps of sewer features and related infrastructure
CADD Database	Database of as-built plans of the city's facilities	Storing and managing as-built plans and system data
Productivity Report (Power BI)	Maintains record of all spills that occur in the system. Display spill trends and analysis	- Generating spill analysis reports and figures - Analyzing and displaying spill trends - Documenting and summarizing the work performed per City
CCTV Log (database)	Videos and log CCTV events, serving as the repository for historical CCTV inspection data	Recording and maintaining CCTV inspection data
Community Profiles (Power BI)	city profiles with detailed information on population, manholes, pipes, pump stations, and properties	- Records detailed city profiles that summarizes the infrastructure within each city - Generating service area overview and breakdown
Supervisory Control and Data Acquisition (SCADA) system	Tracks pumping plants operating, alarm, and instrumentation data	- Monitoring real-time performance of pumping plants to trigger maintenance action - Collecting and storing pump station data
HMS Database	Maintain records of all sites and locations under the FOG program. Tracks permits, inspection, investigations, and records source control data	- Documenting past inspections and investigations - Records permits, and investigation and inspection findings - Creates notices for FSEs and inspections schedules
Microsoft Office	Used to manage various collection system programs as an electronic database. Currently stores the schedule for FOG program activities, transitioning to Cityworks.	Managing schedules and data for FOG program activities
Audit Progress Tracker	Spreadsheet listing past audit findings used to document corrective actions, task leads, deadlines, and progress.	- Document audit findings and corrective actions - Tracking implementation to address audit findings

9.2 Monitoring of Implementation and Effectiveness of the SSMP

The City and LACPW monitor the implementation and effectiveness of the SSMP through coordination of SMD staff and collection supervisors. The effectiveness of the program is primarily monitored and tracked by overall sewer overflow performance such as amount of sewer spills, spill response time, and reduction of repeated spills.

Monthly meetings between SMD Superintendents and Supervisors focus on discussing safety procedures, operational and personnel issues, and the status of spills. Additionally, productivity reports on Power BI are reviewed to track progress in meeting inspection and maintenance targets, which are set and monitored by the superintendents.

Collection supervisors meet bi-weekly to go over status and tracking of maintenance activities. These meetings serve as a forum to facilitate communication between SMD Management and SMD Superintendents and Supervisors.

9.3 Program Audits

Every three years, LACPW performs an internal audit of the SSMP and the SSMP program implementation. Every three years, the City will perform their own internal audit of the SSMP and the SSMP program implementation. The various LACPW and City's divisions and positions responsible for SSMP implementation, as identified in Table 2-2a and 2-2b, are involved in the audit. Each element of the SSMP is reviewed for effectiveness towards reducing the frequency and/or mitigating the impacts of spills and for compliance with the General Order requirements. Corrective actions to address identified deficiencies are prioritized, scheduled and incorporated into division plans.

9.4 Assessment of Preventative Maintenance Program

LACPW assesses the success of its Preventative Maintenance Programs by monitoring spill trends and spill events to identify improvements in their operation. By keeping track of sewer blockages and overflow, LACPW can respond with the appropriate corrective measure and program adjustments.

9.5 Identification and Illustration of Spill trends

Data acquisition, analysis, and management of sewer spills is supported by a dynamic information management system. Spill data is visualized in SMD's PowerBI database which allows for the identification and tracking of spill trends. PowerBI can generate spill analysis reports and figures, illustrating these trends and providing the metrics needed to identify spill trends and evaluate the overall success of the SSMP program.

This system enables LACPW to review spill performance based on frequency (seasonal variations, year-over-year comparisons), location (known problem areas, system characteristics such as pipe material and installation timeline), and volume (totals reaching surface waters, average volumes, and changes over time, which can indicate the effectiveness of response times).

9.6 Approach to Program Modifications and Plan Updates

The City and LACPW update the SSMP every six years. The update consists of:

- Reviewing the existing SSMP language and updating any outdated information. This includes updates to staff positions, names and organizational lines of authority that have changed, changes to system characteristics such as basin areas, etc.
- Incorporation of the adopted and implemented recommendations from previous SSMP program audits.

Upon completion of the six-year SSMP update, the SSMP is provided to the Board of Supervisors by LACPW and to the City Council by City with a request for approval. Upon acceptance by the Board for LACPW SSMP update and City Council for the City's SSMP update, the SSMP is uploaded to the State Water Board CIWQS database and certified. SMD also posts the SSMP on the LACPW webpage and City also posts their SSMP on City's webpage.

10 SSMP Program Audits

LACPW and City audits the SSMP and program implementation to identify actions for improving how it manages, operates, and maintains the collection system. This process identifies the tasks and actions that are required to meet SSMP goals and defines and prioritizes them. Cities are responsible for either performing their own SSMP development and audits on their collection systems or requesting support from CSMD to complete their audit through a City Service Request.

10.1 Schedule of Program Audits and Updates

LACPW and City perform an internal audit of its SSMP every three years in accordance with General Order requirements. Every six years, LACPW and City updates and recertifies the SSMP. Table 10-1 shows the anticipated schedule for SSMP audits and updates for the next six years.

While the various unincorporated areas have different audit and update cycles, LACPW completes one SSMP audit report covering all collection systems in unincorporated County areas according to the Group 1 schedule. The audit and SSMP update prepared for Group 1 is utilized for all other collection systems in unincorporated County areas.

LACPW provide operation and maintenance services for the City's sewer facilities; therefore, some components of the City's audit and SSMP may be similar to LACPW's audit and SSMP update prepared in group 1.

Table 10-1: SSMP Audit and Update Schedule

Collection System	Group	Audit Due	Audit Due	Update Due
Unincorporated County Area CSMD South/County Sanitation District CS	1	11/2/2027	11/2/2030	5/2/2031
Unincorporated County Area CSMD-NW/County Sanitation District CS	2	2/2/2028	2/2/2031	8/2/2031
Malibu Mesa Zone of the CSMD CS	3	11/2/2028	11/2/2031	5/2/2032
Unincorporated County Area CSMD North/County Sanitation District CS	3	11/2/2028	11/2/2031	5/2/2032
Unincorporated County Area CSMD/Las Virgenes Tapia CS	3	11/2/2028	11/2/2031	5/2/2032
Unincorporated County Area Marina/Aneta Zone of the CSMD/City Hyperion CS	3	11/2/2028	11/2/2031	5/2/2032
Trancas Zone of the CSMD CS	3	11/2/2028	11/2/2031	5/2/2032
Unincorporated County Area Lake Hughes Zone of the CSMD CS	4	2/2/2029	2/2/2032	8/2/2032
Unincorporated County Area CSMD South/County Sanitation District CS	4	2/2/2029	2/2/2032	8/2/2032

Collection System	Group	Audit Due	Audit Due	Update Due
CARSON, 4SSO10374	2	2/2/2028	2/2/2031	8/2/2031

10.2 SSMP Audit Process

The City's Director of Public Works and SMD Division Manager assembles division staff and field crew personnel to perform an internal audit in accordance with the General Order requirements for Sewer System Management Plan Audits. Over the course of approximately three months, the audit team, including representatives from the divisions responsible for each SSMP section, conducts a series of in-person meetings to evaluate the effectiveness of each SSMP Part and Sub-part, identify any deficiencies, and make recommendations for improvements and updates. This process involves reviewing the program documentation in the Sewer System Management Plan, assessing current procedures and practices employed by staff, and discussing potential program modifications to enhance program effectiveness.

10.3 SSMP Audit Report

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

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

Once the audit report is complete, a quality check review of the audit report is performed, with a focus on consistency and completeness. The final audit report is reviewed by the CSMD and City's LRO before final acceptance. Audit reports and related materials are maintained in a hard copy and an electronic document tracking and management system.

Copies of the SSMP will be maintained in the SMD's Alhambra Headquarters Office and all SMD Maintenance Yards and posted in the LACPW's internet site. A copy of the City's SSMP will be maintained by the Stormwater Engineer at 701 E Carson Street, Carson, CA 90745 and posted on City's webpage. The document shall also be made readily available to the State Water Resources Control Board or Regional Water Quality Control Board representatives upon request, to all CMSD cities, and to the operators of any collection system or treatment facility downstream of the LACPW's system.

10.4 Audit Implementation and Tracking of Results

The SSMP program audit recommended corrective actions are incorporated into the CIP development and budgeting process to provide the necessary resources to implement audit corrective actions and recommendations. Through that process, implementation progress is measured and reported on an ongoing basis to ensure timely completion of corrective actions. Deficiencies in meeting the schedule are identified or anticipated and mitigation measures developed and implemented to manage completion of the corrective actions from the audit. Each subsequent audit update begins with a review of the previous

audit to determine if the corrective action remains relevant and, if so, to reiterate the program deficiency and recommended corrective action in the current SSMP audit report.

11 Communication Program

LACPW 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 LACPW'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

LACPW's procedures for communication with the public for spills and discharges are included in the *Spill Emergency Response Plan* in Appendix F. Chapter 3 of these procedures provides instructions for communicating with the public when spills result in closure of public areas or entering a source of drinking water.

Within 15 minutes of receiving confirmation that a spill with the potential to reach a storm drain or public waterway has occurred, LACPW's Field Crew must contact Los Angeles County Department of Public Health through LACPW's Operator. The Department of Public Health will post and remove signage for waterways and beach closures as required and will not remove the signs until the effects of the spill have been mitigated. A public press release will be made of the temporary closure due to a spill.

11.2 Procedures for General Communication with Public on SSMP

LACPW provides operation and maintenance services for the City's collection system. The city also benefits from the educational and informational materials that LACPW provide to their service areas. The City provides the following information to the public on their webpage: [Provide website link](#)

- Current SSMP
- LACPW website
- LACPW Help line for sewer related issues
- Director of Public Works phone number and email address for inquiries

LACPW provides the public and residents in its service areas with educational and informational materials related to the sewer collection system and the sewer maintenance services the County provides. LACPW relies heavily on SMD's webpage on the LACPW's

webpage to provide the public with ample information regarding the SSMP and SSMP program implementation: <https://dpw.lacounty.gov/smd/smd/index.cfm>

The following information is publicly accessible on the LACPW's webpage:

- Current SSMP
- SSMP Audit Report
- Interactive sewer mapping provides the public with a means to find the sewer map and sewer pipeline servicing their property
- Annual performance reports
- Condition assessment reports
- FOG best management practices
- Homeowner responsibilities
- Outreach Brochures (in multiple languages)
- Answers to frequently asked questions (in multiple languages)
- LACPW's webpage provides a "Contact Us" link providing the public with a phone number for inquiries, an 800 number for emergencies and a mailing address for written inquiries.
- To report urgent problems, LACPW's webpage provides an emergency contact link:
 - <https://pw.lacounty.gov/Contact/#emergencyInfo>

The public can provide feedback on the SSMP and the performance of the Districts using the online survey located on the LACPW's Webpage:

- <https://ladpw.org/general/survey/index.cfm?pid=ISBQICAK>

11.3 Procedures to Communicate with Connecting Systems and Contract Agencies

LACPW is in constant communication with entities that are connected to the system for operations, maintenance, and spill response related activities including the City of Los Angeles, LACSD, and member cities. For all agencies, SMD communicates with the agency when capital improvement-related activities will impact each other's system. Email broadcasts are sent to member cities to provide updates and communicate deadlines such as audit due dates. The City of Los Angeles also exchange emails with LACPW monthly for mainly billing and flow metering. LACPW maintains constant communication with LACSD, ensuring that at least one of the Districts' staff serves as the main point of contact. Additionally, SMD staff also will communicate directly with District staff when necessary for coordination.

Appendix A1 - Governing Board Approval

Appendix A2 – State Water Resources Control Board - General Order for Sanitary Sewer Systems

Appendix A3 – Asset Summary Per Collection System

Appendix B1 – List of Staff Responsible for Implementing Specific Elements of the SSMP

Appendix B2 – City and Sewer Maintenance Division Staff Contact Sheet

Appendix C – Not Used

Reserved for future attachments associated with SSMP Element 3 – Legal Authorities.

Appendix D – Field Operations Yard and Pump Station Map

Appendix E – Not Used

Reserved for future attachments associated with SSMP Element 5 – Design and Performance Provisions.

Appendix F – Spill Emergency Response Plan

Appendix G – IDWP Conditions and Limitations

Appendix H – Not Used

Reserved for future attachments associated with SSMP Element 8 – System Evaluation, Capacity Assurance and Capital Improvements.

Appendix I – Not Used

Reserved for future attachments associated with SSMP Element 9 – Monitoring, Measurement and Program Modifications.

Appendix J – Not Used

Reserved for future attachments associated with SSMP Element 10 – Internal Audits.

Appendix K – Not Used

Reserved for future attachments associated with SSMP Element 11 – Communication Program.