

# **City of South Gate**

## **Sewer System Management Plan**



### **Final Report**

City of South Gate  
8650 California Avenue  
South Gate, CA 90280

**Prepared By:**  
SA Associates

1661 N. Raymond Avenue, Suite 100  
Anaheim, California 92801

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## ACKNOWLEDGEMENT

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This Sewer System Management Plan has been drafted and assembled using material and information gathered from the City of South Gate. SA Associates would like to extend their deepest gratitude to the Public Work's staff who were involved with its preparation.

## ACRONYMS

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<b>AIMS</b>	Activity Information Management System
<b>BMP</b>	Best management practice
<b>Cal OES</b>	California Governor’s Office of Emergency Services Operations
<b>CWEA</b>	California Water Environment Association
<b>CIP</b>	Capital Improvement Program
<b>COD</b>	Chemical oxygen demand
<b>CCTV</b>	Closed Circuit Television
<b>FOG</b>	Fats, oils, and grease
<b>FSE</b>	Food Service Establishment
<b>GIS</b>	Geographical Information System
<b>GRD</b>	Grease removal devices
<b>I/I</b>	Inflow and infiltration
<b>LACDPW</b>	Los Angeles County Department of Public Works
<b>M</b>	Million
<b>MRP</b>	Monitoring and Reporting Program
<b>O&amp;M</b>	Operations and Maintenance
<b>OERP</b>	Overflow Emergency Response Plan
<b>PPE</b>	Personal protective equipment
<b>PM</b>	Preventative Maintenance
<b>RWQCB</b>	Regional Water Quality Control Board
<b>SSO</b>	Sanitary sewer overflow
<b>SSS WDR</b>	Sanitary Sewer System Waste Discharge Requirement
<b>SSMP</b>	Sewer System Management Plan
<b>SWRCB</b>	State Water Resources Control Board

<b>LRO</b>	Legally Responsible Official
<b>EPA</b>	U.S. Environmental Protection Agency
<b>VCP</b>	Vitrified clay pipe
<b>WDR</b>	Wastewater Discharge Requirements

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## **EXECUTIVE SUMMARY**

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted Order Number 2006-0003-DWQ, the Sanitary Sewer System Waste Discharge Requirements (SSS WDRs), which requires all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate a wastewater collection system greater than one mile in length to develop and implement a system specific Sewer System Management Plan (SSMP). An SSMP must document how the agency manages its wastewater collection system. The SSMP must be adopted and certified (or re-certified) by the agency's governing body at a public meeting. In order to complete certification (or re-certification), the Legally Response Officer (LRO) must complete the certification portion in the Online Sanitary Sewer Overflow (SSO) Database Questionnaire.

During a public meeting, the City's governing body adopted this SSMP on February 14<sup>th</sup>, 2023. This adoption date shall be used to determine when self-audits, updates, and recertification shall take place.

The City has prepared and drafted this SSMP to meet and/or exceed the requirements of the SSS WDRs. Under these requirements, the City is subject to mandatory deadlines for certain SSMP elements. These deadlines are based on the population served by the federal and state agencies, municipalities, counties, districts, and/or other public entities which own or operate a wastewater collection system. Based on an estimated population of approximately 99,000 people, the City must comply with the schedule provided for agencies which serve a population greater than 10,000, but less than 100,000. During all self-audits and/or updates, these dates should be referred to and adhered to.

The goal of any SSMP document is to provide a comprehensive plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This is done in order to limit and/or eliminate the occurrence of SSOs, and mitigate those which do occur.

Additionally, the City wishes to achieve the following goals:

- Collection system facilities are properly managed, operated, and maintained to eliminate preventable sanitary system overflows (SSOs);
- Reporting procedures are in place to notify the appropriate regulatory and health authorities of SSOs within the required time frames; and
- SSO events, mitigation measures, and corrective actions are documented; and
- City sewer system operators, employees, contractors, responders, or other agents are adequately trained and equipped to address an SSO event; and,
- City sewer system is properly designed, constructed and funded to provide sufficient capacity to convey base flows and peak flows while meeting or exceeding applicable regulations, laws and generally acceptable practices relative to sanitary sewer system operations and maintenance.

On the following page, Table ES-1 includes a summary of the mandatory components required by the SSS WDRs. These components are referred to as elements, and in the corresponding chapters of this SSMP, the City has described, in detail, how they have met each requirement.

**Table ES-1 SSS WDR Element and Corresponding SSMP Section Location**

<b>SSS WDR Element</b>	<b>Element Description</b>	<b>Section</b>
<b>1</b>	<b>Goals</b>	<b>2</b>
<b>2</b>	<b>Organization</b>	<b>3</b>
<b>3</b>	<b>Legal Authority</b>	<b>4</b>
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## **CHANGE LOG**

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SWRCB Order Number 2006-0003- DWQ, the SSS WDRs, requires SSMPs to be updated and re-certified every five (5) years, and be self-audited every two (2) years.

All SSMPs are considered “living documents” and may be changed at any time. However, in the event a significant change is made to this document, it must be re-certified. Please note, the phrase “significant” can vary amongst agencies; therefore, the agency retains the right to define what a “significant change” is.

A Change Log is a required part of the SSMP, under SWRCB Order No. WQ 2013-0058-Exec. (MRP). Section E.3. of the MRP states:

“Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.”

The Enrollee must retain these records for a minimum of five (5) years and during an onsite inspection or information request, these records shall be made available for review by the Water Boards.

An entry into the Change Log should include a brief description of the change, the date the entry was made, and the name and title of person who made the change.

*Be aware, the SWRCB and Regional Water Quality Control Board (RWQCB) have the authority to issue various levels of enforcement for failure to comply with the provisions of the SSS WDR and failure to conduct the required audits. Enforcement actions are clearly explained in the SWRCB’s Enforcement Policy and the Enrollee’s Guide to the SSO Database: Sanitary Sewer Overflow Reduction Program (also referred to as Discharger’s User Guide.).*

The Change Log is provided on the following page.

**Table 1: Change Log**

<b>Description of Change</b>	<b>Name/Title of Person Responsible for Change</b>	<b>Date</b>

## **CERTIFICATION & RECERTIFICATION**

SWRCB Order Number 2006-0003- DWQ, the SSS WDRs, requires SSMPs to be updated and re-certified every five (5) years, and be self-audited every two (2) years. During the certification or re-certification process, the governing body must approve and adopt the SSMP upon original completion of the document. Furthermore, in order to complete the certification, the Legally Responsible Officer (LRO) must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

State Water Resources Control Board  
Division of Water Quality  
Attn: SSO Program Manager  
P.O. Box 100  
Sacramento, CA 95812

The SSMP is considered a “living document” and may be changed at any time. If at any time a “significant change” is made to the document, it must be recertified. The phrase “significant” may vary amongst agencies; therefore, the agency may define what a “significant change” is. In order to complete the recertification process, the agency must enter their data in the Online SSO Database and mail the form to the State Water Board, as described above.

# 1. INTRODUCTION

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On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted Order Number 2006-0003-DWQ, the Sanitary Sewer System Waste Discharge Requirements (SSS WDRs), which requires all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate a wastewater collection system greater than one mile in length to develop and implement a system specific Sewer System Management Plan (SSMP). Any public entity that owns or operates a sanitary sewer system and has submitted a complete and approved application for coverage under the SSS WDR is referred to as an Enrollee.

The City, which may also be referred to as the Enrollee, has prepared their SSMP with the intent to meet and/or exceed the requirements of the SSS WDRs. Also, the Enrollee wishes to illustrate their ability to provide a comprehensive plan to properly manage, operate, and maintain all parts of the sanitary sewer system. This SSMP includes measure and plans which can help limit or eliminate the occurrence of SSOs, as well as efforts to minimize water quality impacts, environmental impacts, and other potentially harmful conditions of the SSOs which do occur. To achieve the utmost effectiveness, this SSMP document includes provisions on risk-management and cost-benefit analysis.

## 1.1. Regulatory Requirements

*Be aware, the SWRCB and RWQCB have the authority to issue various levels of enforcement for failure to comply with the provisions of the SSS WDR and failure to conduct the required audits. Enforcement actions are clearly explained in the SWRCB's Enforcement Policy and the Enrollee's Guide to the SSO Database: Sanitary Sewer Overflow Reduction Program (also referred to as Discharger's User Guide.).*

As of May 2, 2006, SWRCB Order No. 2006-0003 has served as general WDRs for sanitary sewer systems. On July 30, 2013, Attachment A to the Order was promulgated and became effective on September 9, 2013 and is known as Attachment A, SWRCB Order No. WQO 2013-0058-EXEC. This amended the Monitoring and Reporting Program (MRP) SSS WDRs. Together, these documents constitute the SSS WDR.

All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one (1) mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to comply with the terms of this Order and potentially others.

Agencies of that category are required to develop a SSMP. Following the original adoption date of the SSMP, the agencies are required to self-audit their SSMP at least every two (2) years, and update and re-certify their SSMP every five (5) years. In order to re-certify the SSMP, it must be adopted by the agency's governing board during a public meeting. To complete re-certification, the agency must enter their data in the Online SSO Database and mail the form to the State Water Board, as described above.

A Change Log is a required part of the SSMP under SWRCB Order No. WQ 2013-0058-Exec. (MRP). Section E.3. of the MRP states:

“Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who



authorized the change or update. These records shall be attached to the SSMP.”

Any change(s) made to Goals or the System Evaluation and Capacity Assurance Plan, must be recorded.

Agencies do not send their SSMP to the State or Regional Water Boards for review or approval, but the SSMP must be publicly available. Also, they must upload an electronic copy to the SSO database or provide a link to the Enrollees’ website where the SSMP is posted.

## 1.2. Additional Regulatory Considerations

The Enrollee may be subject to additional laws, acts, codes, and/or other regulatory considerations enacted by a legislative, governmental, and/or other authoritative organization which was not mentioned, discussed, and/or summarized herein this section and/or the SSMP as a whole. Therefore, the Enrollee should be familiarized with and have full-understanding of all laws, codes, and/or other regulatory considerations which may apply.

The following consists of summaries and/or direct phrasing from “REGULATORY CONSIDERATIONS” which can be found in SWRCB Order No. 2006-0003-DWQ.

“The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. In addition, many Basin Plans adopted by the Regional Water Boards contain discharge prohibitions that apply to the discharge of untreated or partially treated wastewater. Finally, the California Water Code generally prohibits the discharge of waste to land prior to the filing of any required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs.

California Water Code section 13263 requires a water board to, after any necessary hearing, prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The requirements shall, among other things, take into consideration the need to prevent nuisance.

California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:

Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

Occurs during, or as a result of, the treatment or disposal of wastes.

This Order [SWRCB Order No. 2006-0003] is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality

of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.

The action to adopt this General Order [SWRCB Order No. 2006-0003] is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute “existing facilities” as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

The Fact Sheet, which is incorporated by reference in the Order [SWRCB Order No. 2006-0003], contains supplemental information that was also considered in establishing these requirements.”

*Be aware, any noncompliance to SWRCB Order No. 2006-000 constitutes a violation of the California Water Code and is grounds for enforcement action.*

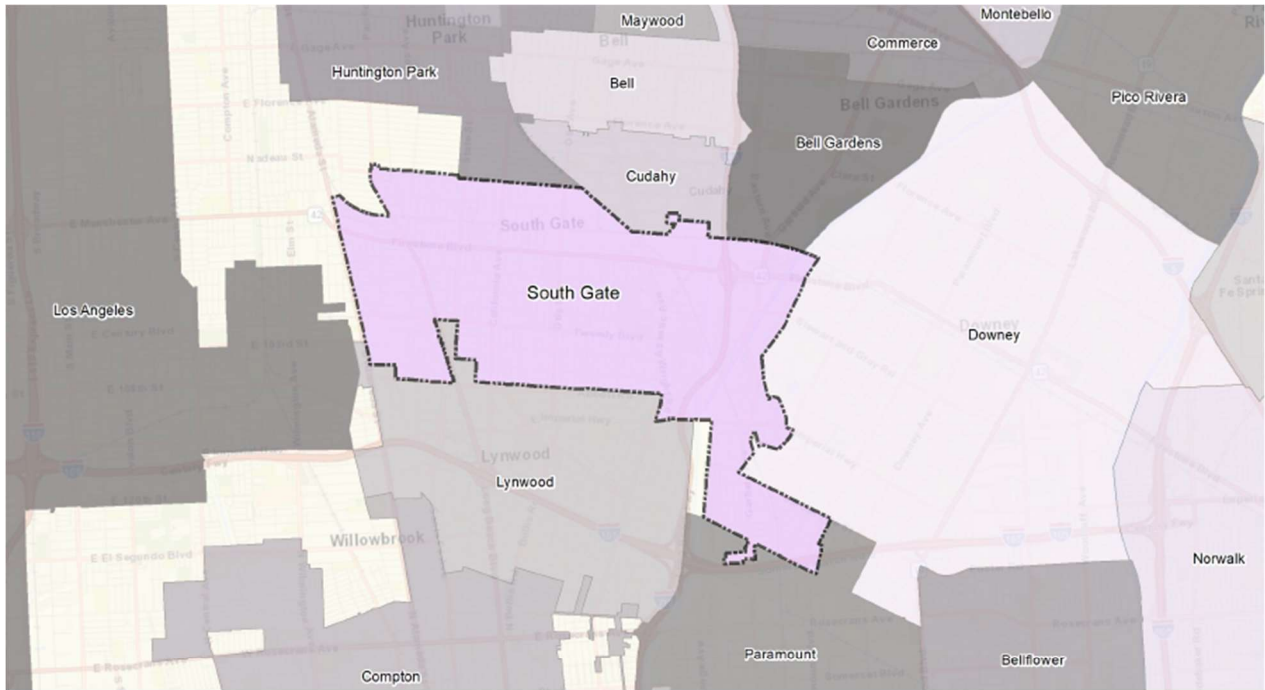
### **1.3. Service Area & Sewer System**

The City is located in Los Angeles County, approximately seven (7) miles south of the downtown area of the City of Los Angeles. It was incorporated in 1923, and encompasses approximately 7.5 square miles. The City is boarded by several cities, to the north are the cities of Huntington Park, Cudahy, Bell, and Bell Gardens; to the east is the City of Downey; to the south is the City of Lynwood, and to the southeast is the City of Paramount. Below, Below, **Figure 1-1** illustrates this.

The City has a population of 99,578 with a customer based comprised of residential and commercial users. The City’s Public Works Department is responsible for the management and operation of the sewer collection system. Their system consists of approximately 120 miles of gravity sewer pipelines with varying diameters ranging from four (4) to 27 inches, no pump/lift stations, and about 100 sewer siphons. There are approximately 2,400 maintenance holes and 19,500 service laterals within the City. The sewer collection system primarily discharges into County Sanitation Districts of Los Angeles County (LACSD) facilities for transportation, treatment, and disposal. A small percentage of waste, collected by the City, joins the City of Paramount system and is then discharged into LACSD facilities.

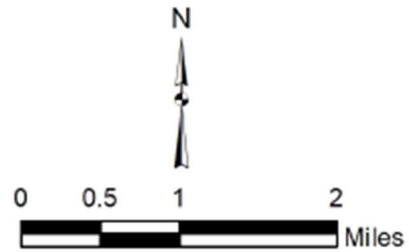
The customer is responsible for the main line lateral connection up to the property line, and the City is responsible for the main line lateral connection after the property line.

**Figure 1-1. City Boundaries**



**Legend**

 **South Gate City Boundary**



## 2. GOALS

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### 2.1. Requirements

D.13.(i) **Goals:** The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent sanitary SSOs, as well as mitigate any SSOs that do occur.

### 2.2. Overview

This section will discuss the Enrollee’s goals for their sanitary sewer system. The Enrollee has developed realistic, attainable, and effective goals which are unique to the infrastructure and performance of their sewer system. The development of appropriate goals helps ensure the proper management, operation, and maintenance of all parts of the sanitary sewer system.

### 2.3. Sewer System Goals

The City has developed goals which showcase their aspirations to maintain their performance and operations standards; properly document and report any SSOs which may occur, and the overall protection of public health, waters of the state, and the environment from the hazards of SSOs.

The City’s goals for their sanitary sewer collection system are:

- Collection system facilities are properly managed, operated, and maintained to eliminate preventable SSOs.
- Response measures are in place and that all feasible steps are taken to mitigate the impacts of SSOs to public health and the environment when they occur.
- Reporting procedures are in place to notify the appropriate regulatory and health authorities of SSOs within the required time frames.
- SSO events, mitigation measures, and corrective actions are documented.
- City sewer system operators, employees, contractors, responders, or other agents are adequately trained and equipped to address an SSO event
- City sewer system is properly designed, constructed, and funded to provide sufficient capacity to convey base flows and peak flows while meeting or exceeding applicable regulations, laws, and generally acceptable practices relative to sanitary sewer system operation and maintenance.

### 2.4. Monitoring & Reporting Plan Requirements

It is important to keep goals relevant and obtainable. To ensure this, goals should be reevaluated during self-audits and updates. Under the Monitoring and Reporting Program (MRP), all changes made to the SSMP since its last certification shall be recorded; however, other documents have emphasized the importance of recording the changes made to the Goals section.

## 3. ORGANIZATION

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### 3.1. Requirements

D.13.(ii) **Organization:** The SSMP must identify:

- (a) The name of the responsible or authorized representative as described in Section J of this Order (SSS WDR).
- (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
- (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (Cal OES)).

### 3.2. Overview

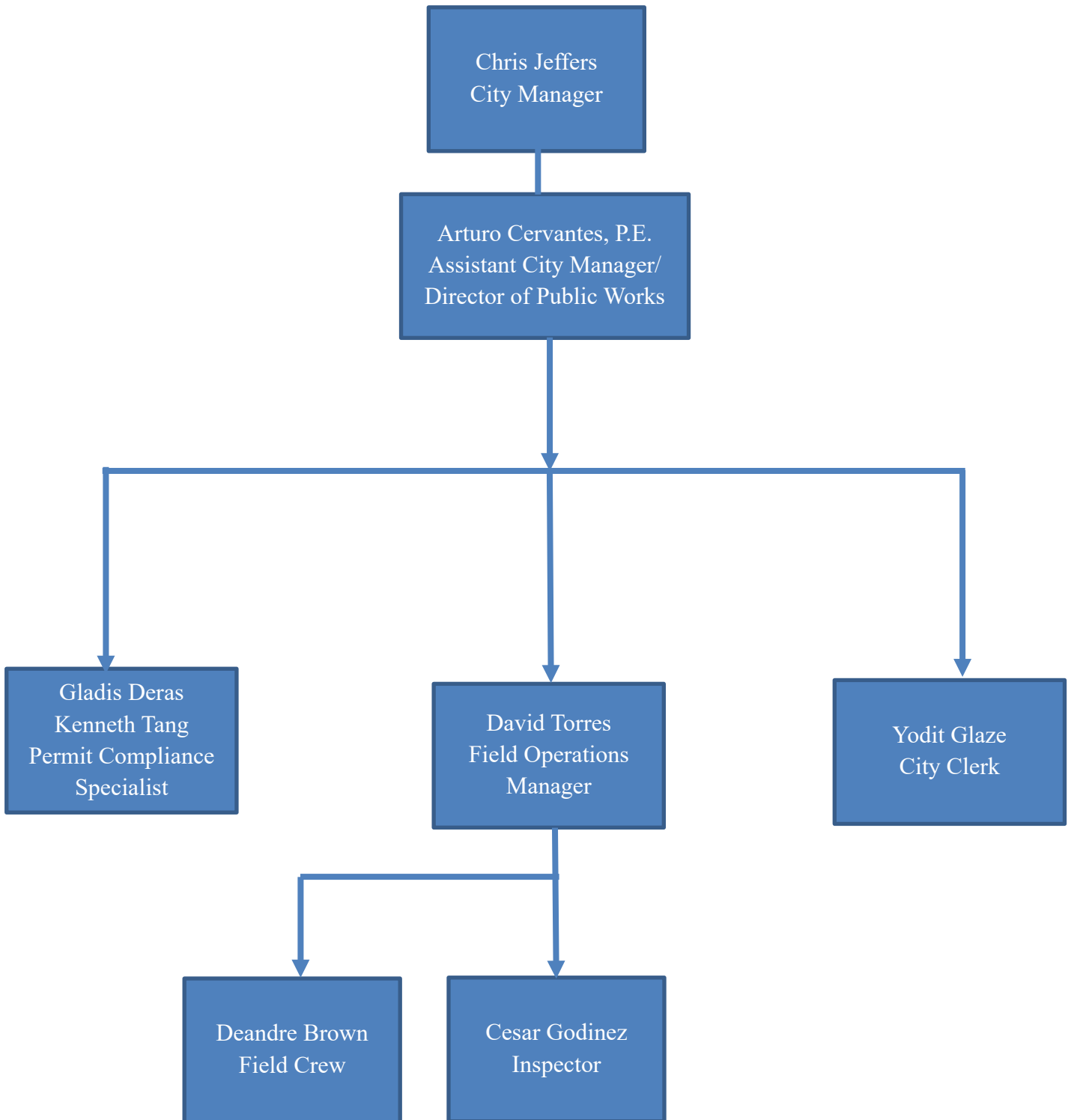
This section will identify the Enrollee's organization and communication structures in regards to implementing SSMP elements, responding to SSOs, and reporting and documenting SSOs. Exhibits and tables are provided to better illustrate the structure and explain the positions involved. As required, the names and telephone numbers of positions responsible for implementing specific measures of the SSMP program are shown herein. Additionally, the name of the Legally Responsible Official (LRO) will be given.

### 3.3. Sewer System Organization

Shown below, **Figure 3-1** illustrates how the sanitary sewer system command hierarchy is organized. **Table 2** provide a brief description and general duties of the positions shown in **Figure 3-1**.

If an agency or contractor implements a SSMP element, or has with a long-term contract with the City, they may be included in **Figure 3-1**. These types of services include, but are not limited fats, oils, and grease (FOG) control, sewer cleaning, root control, CCTV assistance, etc.

**Figure 3-1 Organizational Chart**



**Table 2: Position Description**

<b>Title</b>	<b>Description</b>
City Manager	Establishes policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, and may serve as public information officer.
City Engineer	Prepares wastewater collection system planning documents, manages capital improvement delivery system, documents new and rehabilitated assets, and coordinates development and implementation of SSMP.
Inspector	Ensures that new and rehabilitated assets meet the Enrollee's standards, works with field crews to handle emergencies when contractors are involved, and provides verbal reports to City Engineer.
Permit Compliance Specialist	Works as needed on applicable permits, laws, and regulations; provides support to all parts of operation.
Collection System Manager	Manages field operations and maintenance activities, provides relevant information to Enrollee management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.
Field Crew	Undertakes preventive maintenance activities, mobilizes and responds to notification of stoppages and SSOs, mobilizes sewer cleaning equipment, by-pass pumping equipment, and portable generators.

**Table 3: Hierarchy and Contact Directory for SSO Response**

Title	Name	Telephone	After Hours or Cell Phone
City Manager	Chris Jeffas	323-562-9503	
Director of Public Works, Assistant City Manager & City Engineer	Arturo Cervantes	323-563-9512	323-351-4777
Building Official	William Campana	323-563-9515	323-816-8230
Field Operations Manager	David Torres	323-563-5785	323-216-9524
Street & Sewer Supernatant	Juan Precindo	323-563-5790	323-204-2942
Duty Person (After Hours)	David Torres	323-563-5784	323-216-9524
Public Works Services Yard	Receptionist	323-563-5790	
Police Department	Watch Commander	323-563-5457	323-563-5457
Fire Department	Battalion Commander	323-890-4045	323-890-4045
	Station 54	323-567-8580	323-567-8580
	Station 57	562-531-9700	562-531-9700

### 3.4. Legally Responsible Official

Section J of the SSS WDR outlines the requirements for the responsible authorized representative, also known as the legally responsible official (LRO).

The LRO is responsible for certifying data entered into the California Integrated Water Quality System (CIWQS) Online SSO Database. If the LRO requires assistance, they may authorize a Data Submitter (DS). A DS may only be authorized by the LRO and must be registered with the State Water Board. A DS may only assist with data entry, they cannot certify data. Only the LRO may certify the data entered into CIWQS Online SSO Database.

At this time, the Enrollee’s LRO is Arturo Cervantes, P.E.

In order to maintain continuous coverage, the Enrollee may and should have more than one LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO’s or DS’s contact information, shall be submitted by the Enrollee to the State Water Board within 30 days of the change by calling (866)-792-4977 or e-mailing [help@ciwqs.waterboards.ca.gov](mailto:help@ciwqs.waterboards.ca.gov).



## 4. LEGAL AUTHORITY

### 4.1. Requirements

- D.13.(iii) **Legal Authority:** Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
- (a) Prevent illicit discharges into its sanitary sewer system (examples may include infiltration and inflow (I/I), storm water, chemical dumping, unauthorized debris and cut roots, etc.);
  - (b) Require that sewers and connections be properly designed and constructed;
  - (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
  - (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and
  - (e) Enforce any violation of its sewer ordinances.

### 4.2. Overview

This section is intended to identify and describe the legal authority the Enrollee must possess in order to enforce various elements of the SSMP. The Enrollee is granted powers in relation to the services provided through legal authority outlined in statutes. The Enrollee implements these granted powers through sewer use ordinances, service agreements, or other legally binding procedures or mechanisms. The Enrollee may use regulatory mechanisms including, but not limited to, Ordinances, Codes and Resolutions, State and Federal Laws, Licensing and Permitting Processes, Memorandum of Agreements, Contractual Agreements, Service Agreements, Discharge permits, as well as other programmatic and legally binding procedures and mechanisms. These regulatory mechanisms can include the proper authority and power to require wastewater collection system users to comply with applicable design, construction, use, and maintenance standards and regulations. The Enrollee can use its applicable legal authority to require system users and customers to meet performance standards, maintain user-owned assets such as laterals, and pay penalties for non-compliance with regulations.

**Table 4: City’s Legal Authority Checklist**

SSMP Required Functions	City’s Legal Authority
Prevent illicit discharges into its sanitary sewer system	- LACC:20.36.010 - LACC:20.36.400 - Plumbing Code: Chapter 8
Require that sewers and connections be properly designed and constructed	- LACC:20.32. Part 3
Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;	- LACC:20.24.070 - LACC:20.24.080 - LACC:20.24.090 - LACC:20.24.140 - LACC:20.24.150
Limit the discharge of fats, oils, and grease and other debris that may cause blockages	- Plumbing Code: Chapter 10
Enforce any violation of its sewer ordinances.	- LACC:20.24.100

## 5. OPERATIONS & MAINTENANCE PROGRAM

### 5.1. Requirements

- D.13.(iv) **Operation and Maintenance Program.** The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:
- (a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;
  - (b) Describe routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
  - (c) Develop rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
  - (d) Provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained; and
  - (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

### 5.2. Overview

The section will identify and discuss the Enrollee's Operations and Maintenance (O&M) program, rehabilitation and replacement programs, employee training programs, equipment and replacement parts inventory, and other programs.

### 5.3. Sewer System Mapping

To the best of their ability, the Enrollee maintains up-to-date records and maps of the sewer facilities. Additional information such as location, alignment, pipe material, size, etc., has been attached using their Geographic Information System (GIS). All necessary staff have access to the GIS, and sewer maps have been printed and distributed to the Public Works Department Street and Sewer field crews.

### 5.4. Routine Preventative Operations & Maintenance Activities

The City utilizes contract services to clean and inspect their sewer lines on a regular basis. During inspections, closed circuit television (CCTV) is used to note any deficiencies in the pipes. The City cleans and inspects 100,000 linear feet (LF) per year. As a result, the City's entire sewer system is cleaned and inspected approximately every ten (10) years.

Cleaning is typically done using high-pressure water jetting nozzles (hydro jet) or mechanical root cutting (rodding). Hydro jets are inserted into the pipes and the expelled debris are manually removed from the downstream maintenance hole using purchased equipment or staff-made appurtenances. Pipe segments prone to root growth are periodically cleared using a chemical herbicide or root cutter. Those prone to accumulate FOG are periodically cleaned using caustics, surfactants, enzymes, microbes or high-pressure jetting. For CCTV inspection, cameras are inserted into the sewer maintenance hole and dispatched up the sewer. Video recordings are then analyzed to identify cracks, dislodged pipe joints, locations of lateral connections, flow conditions, and other sewer characteristics.

Sewers infested by insects are chemically treated, and baited if infested by rodents.

Cleaning and maintenance work orders are generated and tracked using a system called CitiTech CMMS. This database is backed up to the Enrollee's server located City Yard, 4244 Santa Ana Street.

#### SO&M Mapping System

The City maintains "as-built" plans for majority of their sewer facilities. The plans are stored in a file system at City Hall. Data shown includes: location, alignment, pipe material, size, etc. A portion of this system-wide information is currently stored on a geographic information system (GIS) reference base and can be printed to map sheets. The map sheets are distributed to the DPW street and sewer field crew, for reference work scheduling, and for response to emergencies or assisting agencies. Periodic updates of these maps will be distributed as they become available.

As adequate funding and resources become available, the DPW plans to convert the remaining data files developed for the sewer system evaluation into the existing GIS database. Further updates to the GIS system include additional layers such as storm drain system, trunk sewer lines, video inspections data, etc.

#### Drop Maintenance Holes, Gas Trap Maintenance Holes, and Siphons

These facilities are inspected and cleared of stoppages and flow restrictions on variable frequencies based on prior inspection records. Siphons are inspected on an as needed basis.

#### Flow Monitoring

Visual checks for comparison with prior records are conducted during scheduled inspection of maintenance holes and pipelines. Unusual or unexplained changes in flow receive more thorough evaluation and as deemed necessary a flow monitoring device is placed to validate flow patterns over time for the affected sewer drainage area(s).

#### Vermin and Rodent Control

Sewers infested by insects are chemically treated, and those infested by rodents are baited.

#### Work Scheduling and Documentation

Most work orders are tracked using a computer-based maintenance management system. Maintenance activities are recorded as service requests, cleaning reports, sewer maintenance daily reports, maintenance hole adjustments, overflow reports, etc., are filed at the City Yard.

## **5.5. Rehabilitation & Replacement Plans**

Between 2002 to 2019, 81 percent of all sewer pipelines have been lined using cure-in-place piping (CIPP) or replaced with new pipe. Pipes selected were done using condition-based assessment.

unlined portions are shown on the figure given on page 39 of the Enrollee’s Sewer Master Plan (SMP).

It has been recommended that the City continue using condition-based assessment for future rehabilitation and replacement plans. However, due to their limited budget (\$200,000) they are limited on their short- and long-term Capital Improvement Projects (CIP).

The City’s five (5) year CIP includes three (3) pipeline replacement projects based on recent condition evaluations. The Imperial Highway project cost estimate is based on a unit cost of \$240 per linear foot for 12-inch piping plus 20% markup for design, construction management, administrative, and legal costs, and 25% contingency. The Sequoia Drive and Seminole Avenue project cost estimates are based on a unit cost of \$310 per linear foot and the same 20% markup and 25% contingency. Please note, due to the unexpected high inflation rates and supply chain issues, these estimations may no longer be accurate.

## **5.6. Staff Training**

Public Works personnel and inspectors attend structured collection system training classes or seminars given by other agencies including: California Occupational, Safety and Health Administration (CALOSHA), California Water Environment Association (CWEA), County Sanitation Districts’ (CSD), etc. This ensures staff are familiar with the latest industry standards & technology, and can safely & efficiently carry out their tasks. The City also utilizes informal training approaches, such as tailgate meetings, monthly safety meetings, and apprenticeship training program from higher level staff. Additionally, the City only hires companies with well trained and experienced personnel for emergency SSO mitigation or sewer construction & rehabilitation work.

Staff training certificates can be found in the **Appendix A**

## **5.7. Equipment & Replacement Part Inventories**

The City has a comprehensive equipment maintenance program. Equipment is regularly checked, adjusted, repaired, or replaced as necessary. However, major fixed assets are replaced when they meet or exceed the City’s established fixed assets replacement criteria based on equipment age, mileage, hours or use, repair history, safety, etc. Replacement of or additions to major assets are funded through the City’s annual budget process.

**Figure 5-1 Sewer Division Equipment Inventory and Cost**

<b>No.</b>	<b>Unit:</b>	<b>Description:</b>	<b>Sub total cost:</b>	<b>Total:</b>
1.	209	Gap Vax Combination Truck	\$220,000.00	\$600,000.00
2.	208	Jetter Truck	\$400,000.00	\$400,000.00
3.	230	CCTV Van	\$60,000.00	\$350,000.00
4.	212	Emergency Response Trailer	\$20,000.00	\$30,000.00
5.	233	Emergency Response Vacuum Trailer	\$62,500.00	\$62,500.00
6.	232	Emergency Response Truck	\$40,000.00	\$40,000.00
7.				
8.	-	8-gallon air compressor each	\$1130.99 x2	\$2,261.98
9.	-	Sewer line plugs with airline connections, of different sizes.	\$234.74 x5	\$1,173.70
10.	-	Tripods with exergues	\$2,248.31	\$2,248.31
11.	-	Emergency Response Tots	\$425.61	\$425.61
12.	-	Flood Lights	\$188.87 x4	\$755.48
13.	-	Extension Ladders	\$479.62 x3	\$1,438.86
14.	-	Electrical Extension Cord	\$49.99 x4	\$199.96
15.	-	Toolboxes	\$916.97 x2	\$1,833.94
16.	-	Leader Hose with attachments	\$988.00 x2	\$1,976.00
17.	-	600 feet reel hoses	\$1,150.00 x4	\$4,600.00
18.	-	Sewer nozzles sets	\$462.00 x2	\$924.00
19.	-	Clamps	\$290.00	\$290.00
20.	-	Pipes and connections	\$129.00	129
21.	-	Trash Honda pumps 2 inch	\$594.00	\$594.00
22.	-	Trash Honda Pumps 3 inch	\$736.00	\$736.00
23.	-	Submersible pump	\$205.99	\$205.99
24.	-	300 feet hoses 2inch	\$205.99 x8	\$1,640.00
25.	-	Blowers	\$479.00 x4	\$1,916
26.	-	2 inch hose for trash pump	\$53.89	\$53.89
27.	-	3 inch hose for trash pump	\$112.48	\$112.48
28.	-	Honda Portable generator 3500W	\$1,310.00	\$1,310.00
29.	-	Stationary generator 4000W	\$1,952.23	\$1,952.23
30.	-	Spartan or Gorlitz Sewer Lateral Machine	\$3,500.00	\$3,500.00
31		Portable Sewer Inspection/Push Camera	\$ 10,500.00	\$ 10,500.00
		CCTV Camera with 1,800 feet of wire on reel.		
32		CCTV CUES Software, PC Computer, 2 Computer Monitors,	\$175,000.00	\$175,000.00
33		Large Toolbox with accessories for CCTV Camera.	\$5,500.00	\$5,500.00
34		Recalibration Equipment for Oxygen Sensors	\$15,000.00	\$15,000.00
35		4 Oxygen Sensors	\$2,000.00 X4	\$8,000.00
36		Trash Pump Hose's different sizes	\$10,000.00	\$10,000.00

## 6. DESIGN AND PERFORMANCE PROVISIONS

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### 6.1. Requirements

#### D.13.(v) Design and Performance Provisions:

- (a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- (b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

### 6.2. Overview

This section will discuss the Enrollee's adopted standards for design, construction, inspection, and testing. These standards apply to all new or rehabilitated sewer systems or sewer projects. These standards ensure the sanitary sewer system is safe, reliable, and built as intended.

### 6.3. Design & Construction Standards & Specifications

The City has adopted, by reference, Title 20 of the Los Angeles County Code. Part 3 of Section 20-32 in County's Code includes the general design and construction requirements for the City's wastewater collection system. The sections include the requirements for sewer pipe size, minimum grades, manholes, and construction requirements.

Additionally, the City has also prepared their own Standard Drawings and Standard Specifications for their sewer systems. The [Standard Drawings](#) and [Standard Specifications](#) for 2021 have been hyperlinked herein, in the event the link becomes broken, they are publicly available at <https://www.cityofsouthgate.org/Government/Departments/Public-Works>.

Since they have adopted Los Angeles Code and prepared their own, the City may use Los Angeles standards and specifications or their own standards and specifications.

### 6.4. Procedures & Standards for Inspection and Testing

Within their jurisdiction, the City will inspect new installations and rehabilitation of deteriorated public sewer facilities. Inspectors are well trained in pipeline and pumping station construction, and they attend training classes and educational seminars to stay familiar with advancements in the industry. Inspectors are provided with adequate tools and materials to perform their jobs, including the project specific Construction Plans & Specifications, the Standard Specifications & Standard Plans for Public Works Construction, and the Public Works Inspector's Manual and reporting forms. The City also requires the preparation and submittal of "Record Drawings" of each as-constructed and completed project prior to final approval and acceptance of the project as public infrastructure.

## 7. OVERFLOW EMERGENCY RESPONSE PLAN

### 7.1. Requirements

- D.13.(vi) **Overflow Emergency Response Plan** - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:
- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
  - (b) A program to ensure appropriate response to all overflows;
  - (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;
  - (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
  - (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
  - (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

### 7.2. Overview

This section will discuss the necessary components of the Enrollee's Overflow Emergency Response Plan (OERP). The OERP is intended to be a comprehensive document that includes components for minimizing the effects of SSOs on the environment, while protecting the public's health and safety. Components discussed are notification, response activities, reporting, and training. Additionally, the OERP includes a strategy for the Public Works Maintenance Section to mobilize labor, material, tools, and equipment to contain, mitigate, and clean up residuals from an SSO and correct or repair any condition which may cause or contribute to an unpermitted sewage discharge. The OERP helps ensure all reasonable steps are taken to contain and prevent discharge of untreated and/or partially treated wastewater into the waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs.

### 7.3. Notification

24-hours per day, 365-days per year, emergency service personnel are available to investigate and respond to reports, complaints, automated alarms, etc., related to the sewer system. During regular business hours calls are dispatched to the nearest or most available sewer maintenance crew. During after hours, the Police Department will contact the on-call sewer maintenance worker. If additional personnel are needed during after hours, these on-call personnel will dispatch additional

standby crews.

**Table 5: Regulatory Agency Notification**

SSO Category	Description	If	Notify Agency	At
1	Any volume	Discharge reaches surface waters or tributary to surface water	LA County Health Department	Bus. Hrs. (626) 430-5420 After Hrs. (213) 974-1234
			Flood Maintenance Division	Bus. Hrs. (562) 861-0316
			State Office of Emergency Services	[24/7] (800) 852-7550 *Notify within 2 hours of SSO
			LA County Sanitation Districts	All hours (562) 437-6520
			Regional Water Quality Control Board	Bus. Hrs. (213) 576-6657 After Hrs. (213) 305-2253
Once aware of the SSO, submit a draft report within 3 business and certify with 15 calendar days				
2	≥1,000 gal.	Discharge does not reach surface water, drainage channel, or if SSO is fully recovered	LA County Health Department	Bus. Hrs. (626) 430-5420 After Hrs. (213) 974-1234
			State Water Resources Control Board	N/A
Once aware of the SSO, submit a draft report within 3 business and certify with 15 calendar days				
3	All other discharges			
Submit a certified report within 30 calendar days of the end of month in which the SSO occurred				
Private Lateral Spill	Discharge from a privately owned lateral		LA County Health Department	Bus. Hrs. (626) 430-5420 After Hrs. (213) 974-1234
			State Water Resources Control Board	N/A
Submit to online database at the Enrollee's discretion				
N/A	No SSO in a calendar month		State Water Resources Control Board	N/A
Certify on the online database within 30 days after a calendar month end, file statement that no SSO occurred				

**Recommendation:** It is recommended that public outreach be used to educate the public on who to notify and what to look for, in the event of a SSO or other related incident.



## 7.4. Response Activities

When responding to an SSO or other related emergency event, responding crews are required to stop the overflow, contain it as much as possible, limit access to the contaminated area, and ensure that the facility or area is cleaned up and returned to normal operation. If there are residents or businesses in the immediate vicinity of the overflow, they are to be informed of the cause of the problem and the remedial action to be taken.

When responding to SSO related emergencies, the City has set a response time goal of 60 minutes

## 7.5. Reporting

The County Health Department is to be notified of any and all overflows. If the overflow exceeds 1,000 gallons and/or reaches the storm drain system, the RWQCB and the State Office of Emergency Services is to be notified. The Flood Maintenance District (FMD) shall be notified of any and all overflows which discharge into the storm drain system. The FMD's role is to assist with the tracing and capturing of the spill, to the best of their ability, before it reaches the Waters of the United States.

Relevant data such as location, volume, agencies notified, etc., is to be recorded in field report forms and later uploaded into the database. Sample field reports have been provided in **Appendix B**.

## 7.6. Training

City personnel and emergency contractors are properly trained on methods and procedures to prevent or limit the amount of SSO into Waters of the United States and how to mitigate their impacts. Some of these methods include the use of sand bags to contain SSO's; absorbent tube socks, to prevent SSO discharge into storm drain catch basins; and the use vacuum trucks, to suck up contained spills and dump the effluent back into the collection system at a safe location.

Additionally, OERP staff and contractors are well trained in traffic and crowd control. City vehicles are well equipped with traffic and crowd control tools, including orange traffic control cones, yellow tape, flashing lights, orange uniforms, first-aid supplies, etc.

To help staff remain familiar with the OERP, copies are available at the office for personnel responsible for managing, responding to, and/or reporting SSOs.

**Recommendation:** The following has been recommended:

1. Conduct tabletop exercises to allow staff to train in a real situation, if possible, involve emergency responders, so they are prepared for emergency situations as well. Tabletop exercises should be as real as possible and should involve reporting as well.
2. Clear City staff and vehicles with the Police Department, so they are quickly let onto emergency scenes.

## 8. FATS, OILS, & GREASE CONTROL PROGRAM

### 8.1. Requirements

D.13.(vii) **Fats, Oils, and Grease (FOG) Control Program:** Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install grease removal devices (such as traps or interceptors) design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures, for all sources of FOG discharged to the sanitary sewer system, for each section identified in (f) above.

### 8.2. Overview

The Enrollee has evaluated their system and determined that a FOG Control Program is necessary. This section will discuss the Enrollee's FOG Control Program and how it has been implemented to effectively control the quantity of FOG that is discharged into the sanitary sewer system.

### 8.3. Public Education Outreach Program

The City is undergoing efforts to better their public education outreach program. It has been recommended for the City to collect data on the which languages are spoken throughout their City. This should be done to allow their outreach education program to reach as many people as possible. Additionally, the City should prepare doorhangers, which can be distributed around the holidays and other times when FOGs may be higher than normal.

Current outreach involves descriptions of grease controls efforts distributed through the City's quarterly newsletter articles, and notices during business license renewals.

## **8.4. Disposal of FOG from the Sewer Collection System**

FOG which has been recovered from the wastewater system cleanings is collected and taken to an available local rendering company, qualifying dump bin (site), or to the Joint Water Pollution Control Plant (JWPCP), in the City of Carson, operated by CSD. The solid debris (FOG, roots, grit, etc.) collected from the system are taken to permitted FOG disposal facilities such as a land fill or the JWPCP. FOG in liquid form is flushed down by hydro jetting to receiving treatment facilities for disposal.

During the holidays, the City experiences additional FOG in their system. To mitigate this, the City is looking into having FOG disposal containers delivered around the holidays. [Dar Pro Solutions](https://www.darpro-solutions.com/automated-used-cooking-oil-systems) is able to deliver various sized containers. They are available at <https://www.darpro-solutions.com/automated-used-cooking-oil-systems> or at 1-855-327-7761.

## **8.5. Legal Authority to Prohibit FOG Discharges**

The City's legal authority to prevent illicit discharges of FOG and other contaminants into their sewer system have been discussed in Section 4. The City has the authority to require the installation of grease interceptors at appropriate location in order to protect their sewer system. If a facility generates an amount of FOG which may damage or increase maintenance costs of the sewer collection system, they are required to install interceptors. Additionally, the City 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."

## **8.6. Requirements to Install Grease Removal Devices**

As stated above, facilities which produce level of FOG which may cause harm or increase maintenance costs to the sewer system are required to install a grease removal device (interceptor). These facilities include industrial waste generating facilities, restaurants, and other Food Service Establishments (FSEs).

Grease removal devices are required to meet Plumbing Code, Chapter 10. The effectiveness of any grease removal devices is dependent upon their routine maintenance and monitoring/inspection for conformance with its intended purpose. Regular inspection and maintenance activity logging with quarterly reporting are required and are verified by City staff as part of the Industrial /Non-Domestic Waste Permit inspections.

## **8.7. Inspection & Enforcement Authority**

The City Building Official is authorized to monitor and enforce the regulations of the California Plumbing Code and the Public Health Code for both residential and commercial facilities. The Public Works Department is responsible for reviewing, permitting, and inspecting the existing 200+/- waste facilities which discharge into the City's wastewater collection system. If during an inspection, it is determined that a FOG related issue is traceable to a domestic source, under the City Code, pretreatment could be required or the discharge required to be eliminated.

## **8.8. Sanitary Sewer Sections Subject to FOG Blockages**

As discussed in Section 5 of this document, areas with frequent buildups of FOG and/or blockages (hot spots) are identified during routine maintenance operations. Also, in the event of an SSO, the cause will be investigated and traced to the source. As discussed in Section 5, hot spots are

typically cleaned using hydro jetting or rodding when dealing with root intrusion. Additionally, these hot spots are inspected and cleaned on a more frequently.

## 8.9. Source Control Measures

If a facility is contributing excess amount of FOG and they do not have a grease removal device in place, they will be notified by the Public Works Director to install a pretreatment system. If the facility does not take further action to correct this, Public Works can issue fines or close off their sewer line.

The City also allows Best management practices (BMPs) to be used as a source control measure for FOG. Some BMPs have been published below:

### Bulk or Dry Clean-Up

- Practice bulk and dry materials clean-up before using wet methods that use water
- Remove bulk or other solid food and grease laden substances into a suitable container before rinsing or washing the initial containers or surfaces that will drain into the plumbing system.
- Keep drain screens in place and fully serviceable to avoid clogging drains or accumulating FOG or grit on the interiors of pipes.
- Do not pour grease, fats, or oils down the drain nor place food scraps in the drain.
- Use food grade paper to soak up oils and grease and dispose of appropriately.
- Use paper towels to wipe down surfaces and work areas. Cloth towels require washing and thereby introducing FOG back into the drains.
- Success of bulk or dry clean-up is dependent upon the behavior of individuals and their access to tools and materials for use in removing bulk and dry materials before washing.

### Spill Prevention

- Preventing spills reduces the amount of waste that will require clean-up.
- A dry surface work place is safer for everyone in avoiding slips, trips and falls.
- Capture bulk or dryer materials and place them into an appropriate container.
- Empty containers before they are full to avoid spills.
- Cover any FOG container before transporting to the rendering storage container.
- Provide employees with proper tools to transport materials without spilling.

### Maintenance

- Whatever method(s) are being used to collect, filter and store FOG, ensure that equipment is regularly maintained.
- Employees should be aware of and trained to perform correct and scheduled cleaning procedures.
- A daily and weekly maintenance schedule is highly recommended.
- Contract with a responsible service company to regularly and thoroughly clean larger components and spaces requiring specialized equipment and skills (e.g., large hood

filters, hot tanks, floor drain pipes, specialty tools).

- Smaller and less complex elements can be cleaned by hand by the user (e.g., small hood filters, counter/bench tops, sinks, storage areas, daily tools).
- Skim/filter fryer grease daily and test the oil to determine when change is necessary. Build-up of carbon deposits on the bottom of the fryer acts as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner. This extends the life of both the fryer and the oil.
- Avoid discharging fryer oil into a drain or grease trap, but dispose into a rendering container for transport to a rendering company.
- Cleaning intervals depend upon the type of product being prepared and the typical deposition of materials experienced. The larger the volume produced and deposits incurred, the more frequent the cleaning. This may warrant setting up a system of high use, high deposition work to be done in certain equipment that is cleaned more frequently than others to confine maintenance efforts.

#### Grease Traps & Interceptors

- For grease traps and interceptors to be effective, the units must be properly sized, constructed and installed in a location to provide an adequate retention time for settling and accumulation of the FOG.
- For information on properly locating, constructing and sizing grease traps and interceptors, contact the local governmental agency and examine EPA guidance documents and UPC criteria.
- Ensure all grease-bearing drains discharge to the grease trap/interceptor.
- No toilet or shower waste should be plumbed to the trap/interceptor.

#### Oil & Grease Collection/Recycling & Food Donations

- FOG consists of commodities that if handled properly can be treated as a valuable resource.
- Some rendering companies will offer services free-of-charge and other will give a rebate on the materials collected. Contact local rendering representative for specific information and details.
- Use only covered rendering barrels and make sure all drain screens are installed.
- Use a 3-compartment sink for ware washing. Begin with a hot pre-wash, then a scouring detergent wash, then a hot rinse. Each step should be trapped to capture non-emulsified FOG.
- Donations can reduce disposal costs. Ensure that edible food is not washed or flushed down the drain. Edible food waste may be donated to a local food bank. Inedible food waste can be collected by a garbage feeder that will use discards for feeding livestock.

## 9. SYSTEM EVALUATION & CAPACITY ASSURANCE PLAN

### 9.1. Requirements

- D.13.(viii) **System Evaluation and Capacity Assurance Plan:** The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:
- (a) **Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;
  - (b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in “a” above to establish appropriate design criteria; and
  - (c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term capital improvement plan (CIP) to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
  - (d) **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a-c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

### 9.2. Overview

This section will identify and discuss the means and methods used to assure that the collection system has adequate hydraulic capacity to convey dry and peak wet weather flows through the system to the ultimate disposal point without upset or discharge to the environment or private property.

### 9.3. Evaluation

System evaluations have been calculated in the City’s most recent Sewer Master Plan (2019). Sewer flows for the City under existing conditions are developed based on existing water demands and sewer flow return ratios organized by land use categories. Existing average day potable water demands are developed as part of the 2018 Water Master Plan (WMP) project. Based on an analysis of demands over the past several years, 2016 is selected as the representative year to reflect existing water demands, which had a total demand of 6,756 acre-feet (AF).

For each customer account, a sewer flow is calculated based on land use and an associated sewer flow return flow ratio assigned for each land use category. The return ratios provide the percentage of potable water demand that is returned to the sewer system via drains, sinks, and other outlets. Typically, almost all indoor potable water demand is assumed to return to the sewer system.

Utilizing existing annual average potable water demands and the sewer return ratios, existing average sewer flows for each land use category are provided in Table 3-2 located in the SMP. The total sewer flow for the City is 3,461 gpm., which is approximately 66 percent of the total existing annual average potable water demand. Almost all outdoor water demand, such as landscape irrigation, is assumed to not return to the sewer system. Hence, users with intense outdoor water demands are assumed to have low sewer return ratios

## **9.4. Design Criteria**

South Gate Municipal Code, Section 6.62.010 forms the foundation upon which the City Engineer is given the legal responsibility for ensuring sound, logical, and functional design of the public sewer infrastructure. The Code defines terms, establishes fees, sets out provisions for enforcement & maintenance, and sets the basis of design standards for sewers. For specifics on design and performance provisions, refer to Section 6.

## **9.5. Capacity Enhancement Measures**

The City is essentially built-out, with approximately 60 acres of developable vacant land left. Future flows are not anticipated to be that much greater than existing flows. Existing average annual flows are calculated to be 3,560 gpm and peak wet weather flows are calculated to be 7,178 gpm. Future buildout average annual flows are calculated to be 3,768 gpm and peak wet weather flows are calculated to be 7,587 gpm.

## **9.6. Schedule**

The hydraulic capacity of the City's sewer system is sufficient for existing flows and will remain sufficient for future flows; because of this, there are no Capital Improvement Projects (CIP) scheduled to address any deficiencies. The 5-year CIP is mainly focused on the pipeline rehabilitation program.

## **10. MONITORING, MEASUREMENT, & PROGRAM MODIFICATIONS**

### **10.1. Requirements**

- D.13.(ix) Monitoring, Measurement, and Program Modifications: The Enrollee shall:
- (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
  - (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
  - (c) Assess the success of the preventative maintenance program;
  - (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
  - (e) Identify and illustrate SSO trends, including: frequency, location, and volume.

### **10.2. Overview**

This section will discuss how the Enrollee maintains relevant information and data related to SSMP activities, monitors the implementation of SSMP Elements, and measures the effectiveness of its SSMP Elements.

### **10.3. Relevant Information to Establish & Prioritize SSMP Activities**

The City maintains data on relevant data work performed to meet the goals of this SSMP. Work orders and Preventative Maintenance are stored on the CitiTech database. Sewer crews can refer to this data to plan future work and have the ability to track trends. Additionally, GIS stores information regarding pipe location, alignment, pipe material, size, etc.

### **10.4. SSMP Implementation & Effectiveness**

SSMP effectiveness is monitored through the City Performance Measure Indicators of key activities to minimize sewer overflows. These include:

- Total number of overflows
- Total number of SSOs greater than or equal to 1,000 gallons which were discharged or reached the Waters of the United States
- Overflow response time
- Reduction of repeated overflows at the same location
- Reduction in number of overflows caused by flows exceeding the capacity of the collection system.

### **10.5. Identify & Illustrate SSO Trends**

On an annual basis, the locations of SSO occurrences are plotted on a citywide map. The causes of the SSO are also recorded. These maps are used for establishing SSO patterns, identifying hot spots as indicated by clusters on the maps, and for scheduling work assignments and providing information on SSO activities. These data trends are also used as an indicator of infiltration/inflow problems that need to be corrected. The graphs are used to identify SSO trends and to evaluate overall SSMP program success especially by comparing the graphs to different years and with results from other sewer agencies.



The City has achieved a No Spill Certification, and has not had an SSO since 2007. The City's No Spill Certification has been provided in **Appendix C**.

## 11. SSMP PROGRAM AUDITS

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### 11.1. Requirements

D.13.(x) SSMP Program Audits - As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13.), including identification of any deficiencies in the SSMP and steps to correct them.

### 11.2. Overview

This section will discuss the self-audits that must be done every two (2)-years. Under the SSS WDR, the Enrollee is required to conduct periodic internal SSMP audits at least every two (2) years starting from the original date of adoption. The purpose of the audit is to evaluate the effectiveness of the SSMP and its Elements and to determine the compliance of the Enrollee with the SSMP requirements.

### 11.3. SSMP Program Audit

In accordance with the SSS WDR, the City will conduct an internal audit every two (2) years. The audit will use data collected as part of Chapter 9: Monitoring, Measurement, and Program Modifications and performance indicators to:

1. Evaluate the effectiveness of the City's SSMP;
2. Ensure compliance with SSS WDR requirements; and
3. Identify and correct any SSMP deficiencies. Key collection system performance indicators will include number and type of SSOs, completed line cleaning, SSO trends, and employee safety. The most recent report of the audit will be available electronically via the City's website and in hard copy (upon request).

An audit of the SSMP has been conducted by David Evans, and has been provided in **Appendix D**.

## 12. COMMUNICATION PROGRAM

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### 12.1. Requirements

D.13.(xi) **Communication Program.** The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented. The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

### 12.2. Overview

This section will discuss the methods the Enrollee uses to communicate with the public. The Enrollee has multiple programs set up to communicate with the public on a regular basis and in the event of an SSO.

### 12.3. Communication

The City will provide the general public and other agencies with status updates on the development and implementation of the SSMP, and consider comments made by them. The City may utilize various forms of media (e.g., letters, newsletters, brochures, annual reports, notices in newspapers, and the City website) as well as regional utility meetings, and FOG meetings with member agencies to convey this information.

# Appendix A



## Public Works Department

David E. Torres, Field Operations Manager

4244 Santa Ana Street, South Gate, CA 90280-3004

P: (323) 563-5785 F: (323) 582-3106

www.cityofsouthgate.org

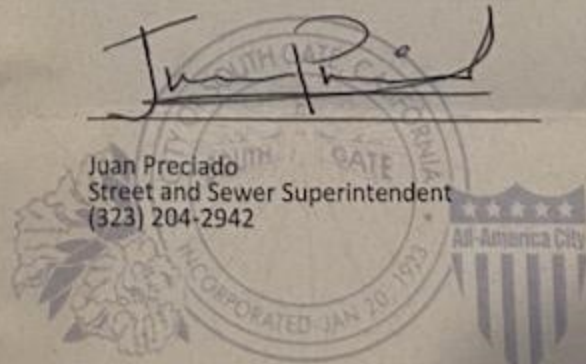
City of South Gate  
Sanitation Division  
In-House Training

Cesar Godinez (CWEA Certification #: 1308216228):

Course/training	Date Completed	Hours
How to properly prime track pumps. On field training.	02/10/2020	2.5
Defensive Driving.	02/24/2020	1
How to properly use heavy equipment (Units 203,209,208 and 284).	03/09/2020	1
How to loadout the transfer station and place recyclable in proper locations. TV, microwaves, etc. On field training and clean up.	03/29/2020	2.5
How to prevent injury when servicing private laterals.	04/13/2020	1
What to look for when inspecting sinkholes.	05/04/2020	1
How to properly prepare emergency equipment.	05/25/2020	1.5
Heat stroke properness.	06/22/2020	1
Street closer properness and place water barricades.	07/02/2020	1
Make sure all vehicles are locked and secured at end of shift due to theft of catalytic converters and private property.	07/27/2020	1
<b>TOTAL HOURS</b>		<b>13.5</b>

David Torres  
Field Operations Manager  
(323) 216-9524

Juan Preciado  
Street and Sewer Superintendent  
(323) 204-2942



*Certificate of Competence*

This is to certify

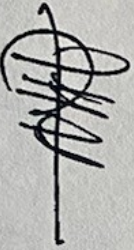
**Cesar Godinez**

Having submitted acceptable evidence of qualifications by education, training and experience, this individual is hereby granted this certification of competency in

**COLLECTION SYSTEM MAINTENANCE GRADE 4**

Certificate number: 1308216228

Expires: 6/30/2023



Jeff Tucker, President  
California Water Environment Association



Abigail Gomez, Chair  
Technical Certification Program



**Public Works Department**

David E. Torres, Field Operations Manager  
4244 Santa Ana Street, South Gate, CA 90280-3004  
P: (323) 563-5785 F: (323) 582-3106  
www.cityofsouthgate.org

**City of South Gate**  
Sanitation Division  
In-House Training

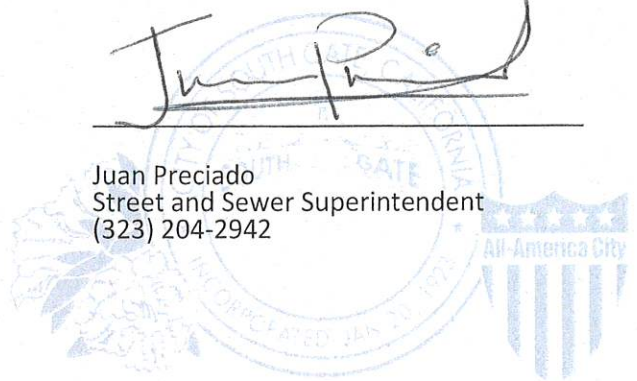
**Cesar Godinez (CWEA Certification #: 1308216228):**

Course/training	Date Completed	Hours
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Defensive Driving.	02/24/2020	1
How to properly use heavy equipment (Units 203,209,208 and 284).	03/09/2020	1
How to loadout the transfer station and place recyclable in proper locations. TV, microwaves, etc. On field training and clean up.	03/29/2020	2.5
How to prevent injury when servicing private laterals.	04/13/2020	1
What to look for when inspecting sinkholes.	05/04/2020	1
How to properly prepare emergency equipment.	05/25/2020	1.5
Heat stroke properness.	06/22/2020	1
Street closer properness and place water barricades.	07/02/2020	1
Make sure all vehicles are locked and secured at end of shift due to theft of catalytic converters and private property.	07/27/2020	1
<b>TOTAL HOURS</b>		<b>13.5</b>

---

David Torres  
Field Operations Manager  
(323) 216-9524

Juan Preciado  
Street and Sewer Superintendent  
(323) 204-2942





# CERTIFICATE OF COMPLETION

PROUDLY PRESENTED TO

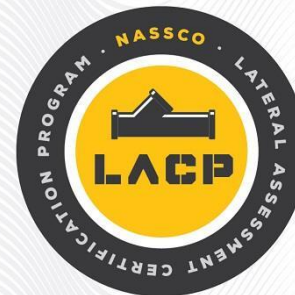
**Cesar Godinez**

Certification Number: U-412-14899

Expiration Date: 3/10/2024

*Sheila Joy*

Sheila Joy  
Executive Director



Note: The individual is not an employee or partner of NASSCO. The individual acknowledges and agrees that NASSCO does not supervise or control the individual and that NASSCO shall not be responsible for any acts or omissions of the individual.



# Appendix B

**2.6.7 Attachments**

**2.6.7.1 Sample Field Report**

**REPORTED BY**

Call Address:  
On Service Request \_\_\_\_\_ (SR # \_\_\_\_\_)

Caller Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Receipt of Call: Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Time: \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM Call Received By:  
\_\_\_\_\_

Call Dispatch: \_\_\_\_/\_\_\_\_/\_\_\_\_ Time: \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM Assigned To:  
\_\_\_\_\_

USD Arrival Time: Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Time: \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM

---

**SPILL START TIME NOTES**

**Caller Interview:** Where did you see sewage spill from? From: Manhole  Inside Building  C/O   
 Wet well/Lift station  Other \_\_\_\_\_

Time Caller noticed spill: \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Comments:

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Last time Caller observed **NO Spill** occurring: \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Comments:

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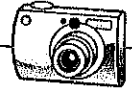
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SSO End Time \_\_\_\_:\_\_\_\_:\_\_\_\_  AM  PM Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Other Comments regarding spill start time:



**SPILL LOCATION**

Observed: Spill from:  Manhole ID \_\_\_\_\_  Lift Station ID \_\_\_\_\_

Clean Out Address

Comments:

Building Address

Comments:

Spill Destination:  Building  Paved Surface  Storm Sys  Curb/Gutter  Unpaved  Surface

Answer these questions:

#1 - Was there a discharge to surface water or a drainage channel that is tributary to surface water? \_\_\_\_ Yes \_\_\_\_ No

#2 - Was there a discharge to a storm drain pipe that was "NOT" fully captured & returned to the sanitary sewer system? \_\_\_\_ Yes \_\_\_\_ No

Water

If you answered no to both questions above, was it ≥ 1,000 gallons? \_\_\_\_ Yes \_\_\_\_ No

If yes, the SSO is a Category 2. If NO, the SSO is a Category 3.



## SPILL VOLUME WORKSHEET

The purpose of this worksheet is to capture the data and method(s) used in estimating the volume of an SSO. Since there are many variables and often unknown values involved, this calculation is just an estimate. Additionally, it is useful to use more than one method, if possible, to validate your estimate.

The following methods and tools are the approved methods in the SOP CS-103 SSO Response. Check all methods and tools that you used:

- Eyeball Estimate Method
- Measured Volume Method
- Duration and Flow Rate Method (Account for diurnal flow pattern for long duration)
- USD SSO Flow Rate Estimating Tool
- Other (explain) i.e.; estimated daily use per capita upstream or meter @ Pump Station.

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**Eyeball Estimate Method**- Imagine a bucket(s) or barrel(s) of water tipped over.

Size of bucket(s) or barrel(s)	How many of this Size?	Multiplier	Total Volume Estimated
1 gal. water jug		X 1	
5 gal. bucket		X 5	
32 gal. trash can		X 32	
55 gal drum		X 55	
Total Volume Estimated Using Eyeball Method			

**Measured Volume Method** (this may take several calculation as may have to break down the odd shaped spill to rectangles, circles, and polygons) It is important when guessing depth to measure, if possible in several locations and use an average depth. Use the SSO Volume Estimate by Area Work Sheet , if necessary, to sketch the shapes and show your work.

1. Draw a sketch of the spill SSO Volume Estimate by Area Work Sheet, or use a photo copy of USD block book to draw on and attach it.
2. Draw shapes and dimensions used on your sketch
3. Use correct formula for various shapes

Rectangle	$L \times W \times D$
Circle	$3.14 \times R^2 \times D$
Polygons see reference chart	Show formula used

**Duration and Flow Rate Method worksheet:**

Start Date and Time	1.
End Date and time	2.
Total time elapsed of SSO event (subtract line 1 from line 2. Show time in minutes)	3.
Average flow rate GPM (account for diurnal pattern)	4.
Total volume estimate using duration and flow rate method (Line 3 x Line 4)	5.

---

**CAUSE OF SPILL**

Spill Cause:  Roots  Grease  Debris  Vandalism  Lift Station Fail  Other \_\_\_\_\_

Spill cause to be determined by CCTV inspection (Attach TV Report to this form)

Final Cause Determination:

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Follow-up or Corrective Action Taken:

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**SPILL CONTAINMENT**

Containment Implemented: \_\_\_\_\_: \_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_/\_\_\_\_



Containment Measures:  Plugged Storm Drain  Washed Down  Vacuum Up Water/Sewage

Other Measures: \_\_\_\_\_

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**CLEAN UP**



Clean Up Begin: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Clean Up Complete: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Describe Clean Up Operations:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Gallons – Estimate Volume of Spill Recovered (do not count wash down water)

---

**OTHER IMPORTANT MILESTONES**

Contacted Supervisor: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Requested Additional EE's/Equip: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Requested Additional EE's/Equip: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Requested Additional EE's/Equip: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Departure Time: \_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

\_\_\_\_\_:\_\_\_\_\_  AM  PM Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

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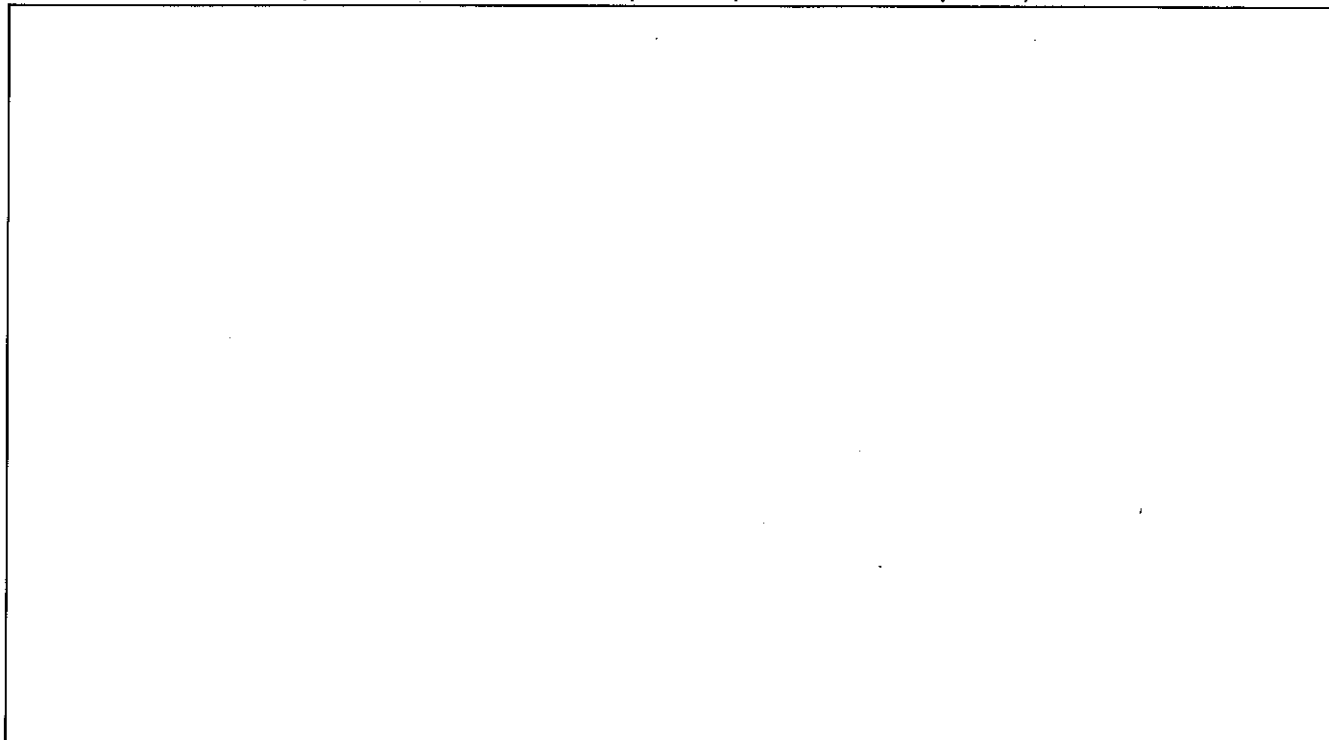
Response Crew: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
\_\_\_\_\_

# SSO Volume by Area Estimation Work Sheet

## 2.6.7.2 SSO Volume by Area Estimation Work Sheet

Surface:  Asphalt  Concrete  Dirt  Landscape  Inside Building Other \_\_\_\_\_

(Draw / Sketch outline of Spill 'Footprint' and attach photos)



~~ Breakdown the 'Footprint' into Recognizable Shapes and Determine Dimensions of Each Shape ~~

Area #1 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

Area #2 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

Area #3 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

Area #4 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

Area #5 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

SSO Volume by Area Estimation Work Sheet

Area #6 \_\_\_\_\_ % Wet \_\_\_\_\_

Stain. Depth1 \_\_\_\_\_ Depth2 \_\_\_\_\_ Depth3 \_\_\_\_\_ Depth4 \_\_\_\_\_ Depth5 \_\_\_\_\_ Depth6 \_\_\_\_\_

Area #1 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Area #2 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Area #3 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Area #4 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Area #5 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Area #6 Square Feet: \_\_\_\_\_ x % Wet \_\_\_\_\_ = \_\_\_\_\_ Sq/Ft

Ave Depth: \_\_\_\_\_  Concrete 0.0026'  Asphalt 0.0013'

Volume: \_\_\_\_\_ Cu/Ft

Total Volume:

#1 \_\_\_\_\_, #2 \_\_\_\_\_, #3 \_\_\_\_\_, #4 \_\_\_\_\_, #5 \_\_\_\_\_, #6 \_\_\_\_\_ = \_\_\_\_\_ \*cu ft

\_\_\_\_\_ \*cu ft x 7.48 gallons = \_\_\_\_\_ gallons Spilled.

# SSO Volume by Area Estimation Work Sheet

## CONVERSIONS

\*\* To convert inches into feet: Divide the inches by 12.

Example:  $27'' / 12 = 2.25'$

Or Use Chart A

Example:  $1 \frac{3}{4}'' = ?$

$1'' (0.08') + \frac{3}{4}'' (0.06') = \underline{0.14'}$

\*\* One Cubic Foot = 7.48 gallons of liquid.

Chart A		
Conversion:		
<u>Inches</u>	to	<u>Feet</u>
1/8''	=	0.01'
1/4''	=	0.02'
3/8''	=	0.03'
1/2''	=	0.04'
5/8''	=	0.05'
3/4''	=	0.06'
7/8''	=	0.07'
1''	=	0.08'
2''	=	0.17'
3''	=	0.25'
4''	=	0.33'
5''	=	0.42'
6''	=	0.50'
7''	=	0.58'
8''	=	0.67'
9''	=	0.75'
10''	=	0.83'
11''	=	0.92'
12''	=	1.00'

## SSO Volume by Area Estimation Work Sheet

Page 4

### GEOMETRY

For the purposes of this work sheet, the unit of measurement will be in feet for formula examples.

Area is two-dimensional - represented in square feet. (Length x Width)

Volume is three-dimensional - represented in cubic feet. (Length x Width x depth) or (Diameter Squared)  $D^2 \times 0.785 \times \text{depth}$ .

### A Note about Depth

Wet Stain on a Concrete Surface - For a stain on concrete, use 0.0026'. This number is 1/32" converted to feet. For a stain on asphalt use 0.0013' (1/64"). These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error by SPUD staff. A known amount of water (one gallon) was poured onto both asphalt and concrete surfaces. Once the Area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. 1/32" was the most consistently accurate depth on concrete and 1/64" for asphalt. This process was repeated several times.

Sewage "Ponding" or Contained - Measure actual depth of standing sewage whenever possible. When depth varies, measure several (representative) points, determine the average and use that number in your formula to determine volume.

### Area/Volume Formulas

Area is two dimensional and is represented as Square Feet (Sq. Ft.)

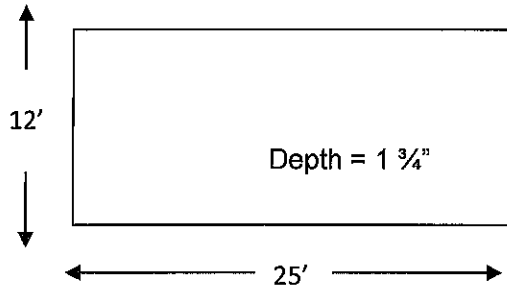
Volume is three dimensional and is represented as Cubic Feet (Cu. Ft.)

One Cubic Foot = 7.48 gallons

## SSO Volume by Area Estimation Work Sheet

### AREA/VOLUME OF A RECTANGLE OR SQUARE

Formula: **Length x Width x Depth = Volume in Cubic Feet**



Length (25') x Width (12') x Depth (0.14')

25' x 12' x 0.14' = 42 Cubic Feet.

Now the Volume in Cubic Feet is known.

There are 7.48 Gallons in one Cubic Foot

So, 42 Cubic Feet x 7.48 gallons/cubic feet = 314 Gallons

#### Chart A

Conversion:

Inches to Feet

1/8" = 0.01'

1/4" = 0.02'

3/8" = 0.03'

1/2" = 0.04'

5/8" = 0.05'

3/4" = 0.06'

7/8" = 0.07'

1" = 0.08'

2" = 0.17'

3" = 0.25'

4" = 0.33'

5" = 0.42'

6" = 0.50'

7" = 0.58'

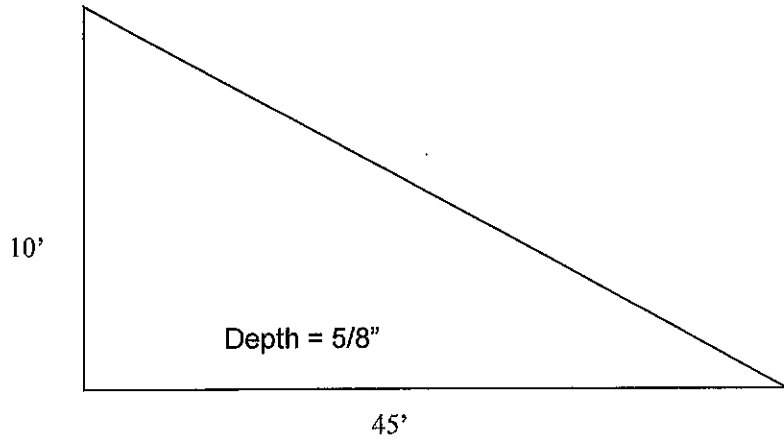
8" = 0.67'

9" = 0.75'

# SSO Volume by Area Estimation Work Sheet

## AREA/VOLUME OF A RIGHT TRIANGLE

Base x Height x 0.5 x Depth = Volume in Cubic Feet



Base (45') x Height (10') x 0.5 x Depth (.05') x 7.48 gallons/cubic foot = 84 gallons

For Isosceles Triangles (two sides are equal lengths),  
Break it down into two Right Triangles and compute area  
as you would for the Right Triangle above.

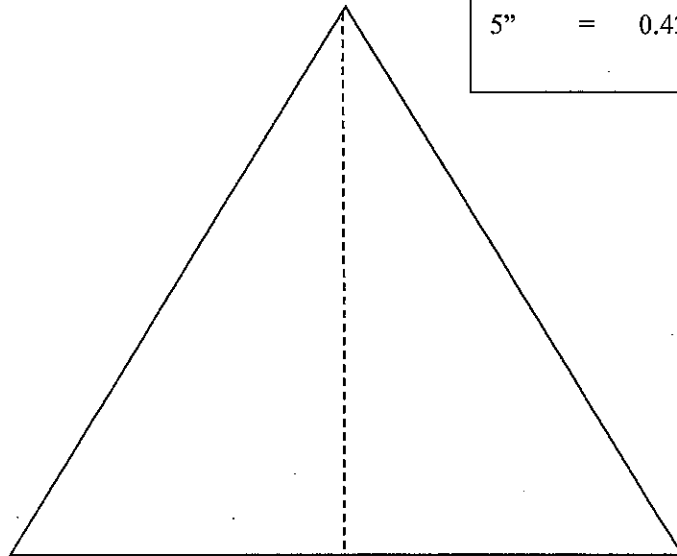


Chart A		
Conversion:		
Inches	to	Feet
1/8"	=	0.01'
1/4"	=	0.02'
3/8"	=	0.03'
1/2"	=	0.04'
5/8"	=	0.05'
3/4"	=	0.06'
7/8"	=	0.07'
1"	=	0.08'
2"	=	0.17'
3"	=	0.25'
4"	=	0.33'
5"	=	0.42'

## SSO Volume by Area Estimation Work Sheet

### AREA/VOLUME OF A CIRCLE/CYLINDER

$$D^2 \times 0.785 \times d$$

Diameter Squared x 0.785 x Depth = Volume in cubic feet.

Diameter = Any straight line segment that passes through the center of a circle.

For our purposes, it is the measurement across the widest part of a circle.

$$D^2 \times 0.785 \times \text{depth} = \text{Volume in cubic feet}$$

Example:

$$27' \times 27' \times 0.785 \times 0.03 = 17.17 \text{ cubic feet}$$

$$17.17 \text{ cubic feet} \times 7.48 \text{ gallons/cubic foot} = 128 \text{ gallons}$$

#### Chart - A

Conversion:

Inches to Feet

$$1/8'' = 0.01'$$

$$1/4'' = 0.02'$$

$$3/8'' = 0.03'$$

$$1/2'' = 0.04'$$

$$5/8'' = 0.05'$$

$$3/4'' = 0.06'$$

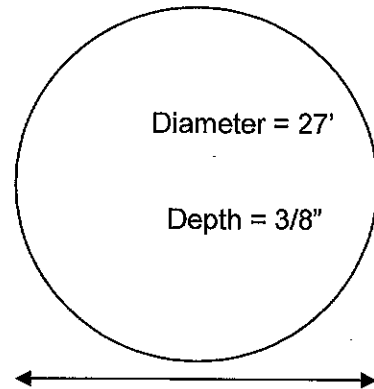
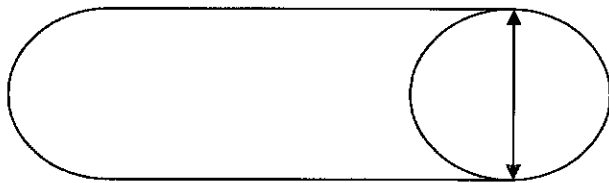
$$7/8'' = 0.07'$$

$$1'' = 0.08'$$

$$2'' = 0.17'$$

$$3'' = 0.25'$$

$$4'' = 0.33'$$

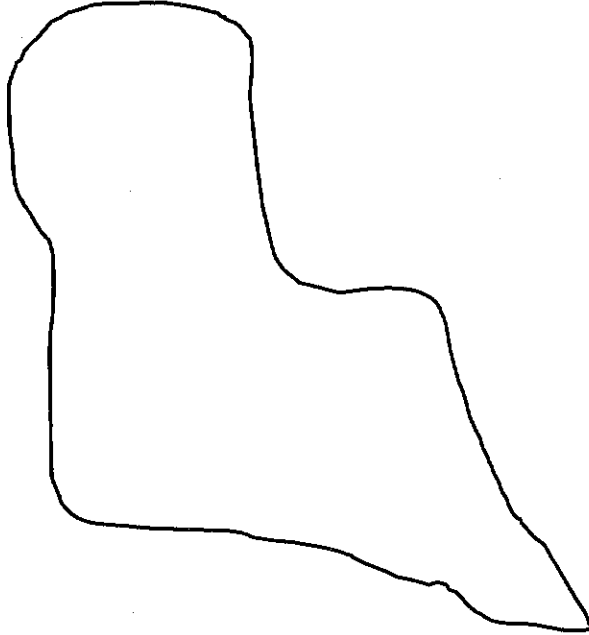




## SSO Volume by Area Estimation Work Sheet

Page 9

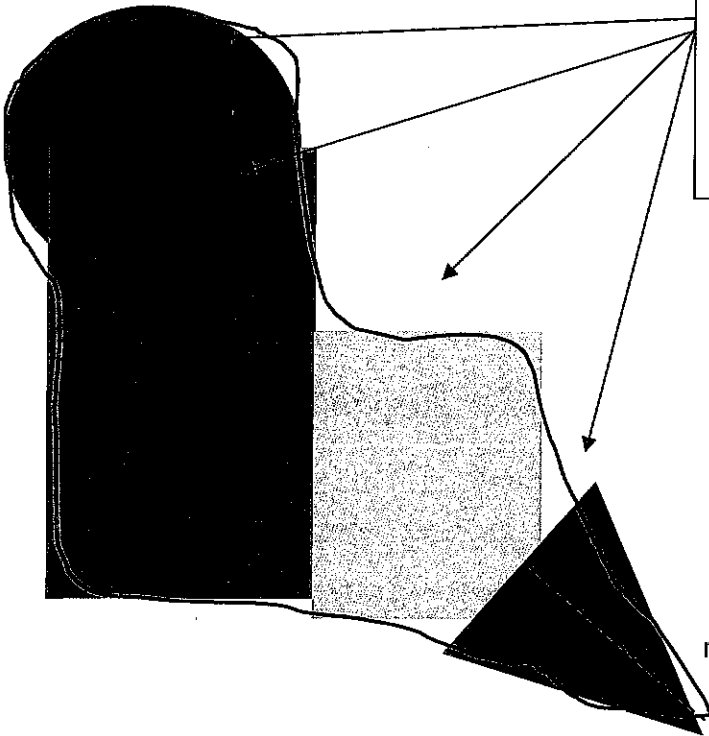
Find the geometric shapes within the shape. If this was the shape of your spill, break it down, as best you can, with the shapes we know.



1. Determine the volumes of each shape.

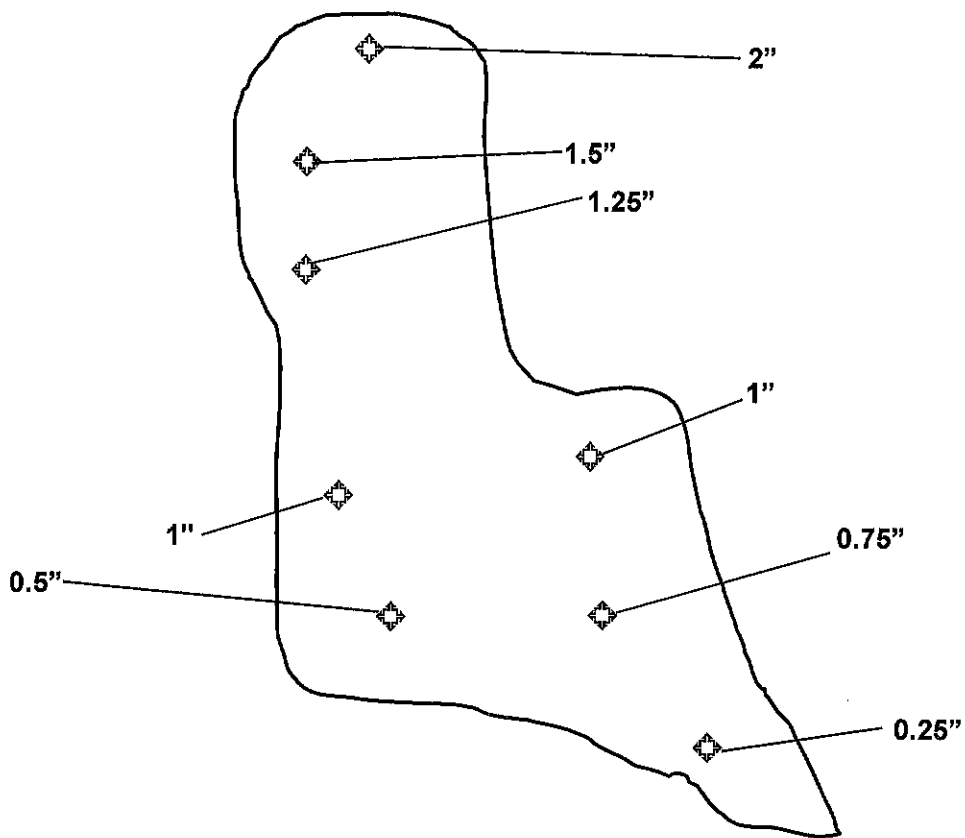
*In this example, after the volume of the circle is determined, multiply it by 55% (+/-) so that the overlap area won't be counted twice.*

2. Add all the volumes to determine total spill volume.



If the spill depth is of varying depths, take several measurements at different depths and find the average.

# SSO Volume by Area Estimation Work Sheet



$$2" + 1.5" + 1.25" + 1" + 1" + 0.75" + 0.5" + 0.25" = 8.25"$$

$$8.25" / 8 \text{ measurements} = 1.03"$$

Average Depth = 1.03"

## SSO Volume by Area Estimation Work Sheet

### Step 1

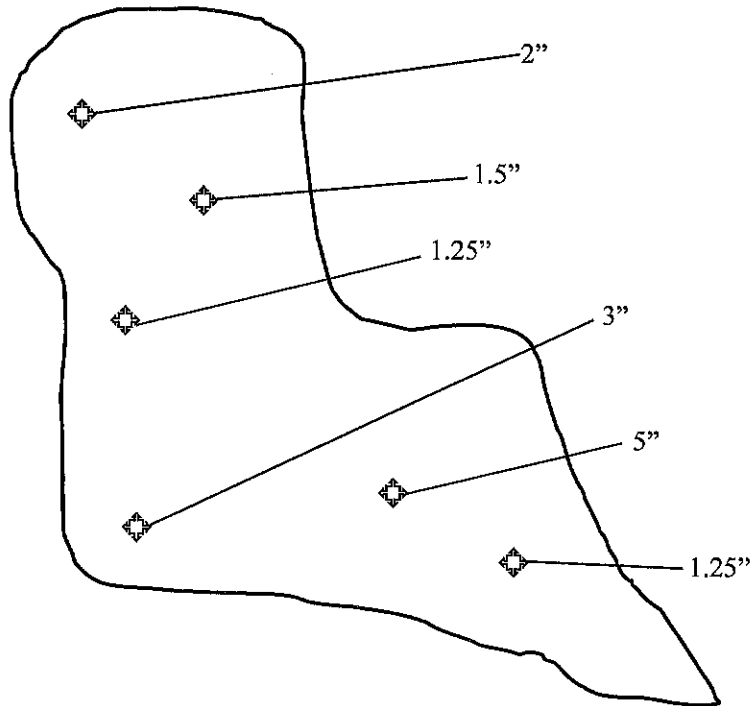
If the spill affects a dry, unimproved area such as a field or dirt parking lot, determine the Area of the wetted ground in the same manner as you would on a hard surface. Using a round-point shovel, dig down into the soil until you find dry soil. Do this in several locations within the wetted area and measure the depth of the wet soil. Average the measurement/thickness of the wet soil and determine the average depth of the wet soil.

**NOTE:** This can be used in a (Dry) dirt or grassy area that is not regularly irrigated like a field or a dirt parking lot.

Wet weather would make this method ineffective.

### Step 2

### Take a Test Sample



**EXAMPLE:**

If the Area of the spill was determined to be 128 Sq/Ft and the average depth of the wet soil is 2.33 inches:

$$128 \text{ Sq/Ft} \times 0.194' = 24.83 \text{ Cu/Ft}$$

$$24.83 \text{ Cu/Ft} \times 7.48 \text{ Gals/Cu/Ft} = 185.74 \text{ gallons}$$

$$185.74 \times 18\% = \underline{33 \text{ Gallons}} \text{ (water in soil)}$$

$$2'' + 1.5'' + 1.25'' + 3'' + 5'' + 1.25'' = 14.0''$$

$$14.0'' / 6 \text{ measurements} = 2.33''$$

Average Depth = 2.33" (0.194')

# Appendix C

CIWQS

**SSO - No Spill Certification**
[SSO Menu](#)

Regional Water Board: Region 4 - Los Angeles  
 Agency: South Gate City  
 Sanitary Sewer System: South Gate City CS  
 WDID: 4SSO10435

USER I.D = dtorres

Password = South Gate 1

**No Spill Certification:**

I certify under penalty of law that no spills occurred for the month specified below. Based on inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine or imprisonment, for knowing violations. Clicking "Certify" button below indicates my certification of this report and my understanding of the above conditions.

New Password was created on 7-29-21

 Month/Year Without Spills:  - Select Month -  - Select Year -

 Certifier Name: 

 Certifier Title: 

 Executed On: 

 Executed At: 


CIWQS

USER I.D = dtorres

Password = South Gate 1

**Previously Submitted Months with "No Spill Certification"**

Confirmation Number	No Spill Certificate for the Month of	Entered Date/Time	Certified UserID	Certified Name
2603759	June 2021	2021-07-29 14:46:01	David Ernesto Torres	Cesar Godinez
2603758	May 2021	2021-07-29 14:45:27	David Ernesto Torres	Cesar Godinez
2603757	April 2021	2021-07-29 14:45:03	David Ernesto Torres	Cesar Godinez
2603756	March 2021	2021-07-29 14:44:31	David Ernesto Torres	Cesar Godinez
2603755	February 2021	2021-07-29 14:43:44	David Ernesto Torres	Cesar Godinez
2603753	January 2021	2021-07-29 14:42:59	David Ernesto Torres	Cesar Godinez
2603752	December 2020	2021-07-29 14:42:11	David Ernesto Torres	Cesar Godinez
2603751	November 2020	2021-07-29 14:40:30	David Ernesto Torres	Cesar Godinez
2603750	October 2020	2021-07-29 14:33:47	David Ernesto Torres	Cesar Godinez
2603749	September 2020	2021-07-29 14:33:21	David Ernesto Torres	Cesar Godinez
2603748	August 2020	2021-07-29 14:31:06	David Ernesto Torres	Cesar Godinez
2603747	July 2020	2021-07-29 14:28:56	David Ernesto Torres	Cesar Godinez
2603746	June 2020	2021-07-29 14:22:46	David Ernesto Torres	Cesar Godinez
2603744	May 2020	2021-07-29 14:19:04	David Ernesto Torres	Cesar Godinez
2603743	April 2020	2021-07-29 14:09:42	David Ernesto Torres	Cesar Godinez
2603742	March 2020	2021-07-29 14:09:12	David Ernesto Torres	Cesar Godinez
2603741	February 2020	2021-07-29 14:08:41	David Ernesto Torres	Cesar Godinez
2603740	January 2020	2021-07-29 14:07:38	David Ernesto Torres	Cesar Godinez
2562354	December 2019	2020-01-13 18:04:27	David Ernesto Torres	David E Torres
2562353	November 2019	2020-01-13 18:03:22	David Ernesto Torres	David E Torres
2562352	October 2019	2020-01-13	David Ernesto	David E Torres

New password was created on 7-29-21

Last updated report was 12-2019

Calif Integrated Water Quality Systems

		18:02:17	Torres	
2562351	September 2019	2020-01-13 17:59:42	David Ernesto Torres	David E Torres
2562350	August 2019	2020-01-13 17:58:06	David Ernesto Torres	David E Torres
2562349	July 2019	2020-01-13 17:56:14	David Ernesto Torres	David Ernesto Torres
2547753	June 2019	2019-07-17 13:41:14	David Ernesto Torres	David Torres
2547752	May 2019	2019-07-17 13:36:56	David Ernesto Torres	Dave Torres
2547751	April 2019	2019-07-17 13:30:50	David Ernesto Torres	Dave Torres
2547743	March 2019	2019-07-17 13:18:29	David Ernesto Torres	Dave Torres
2539477	February 2019	2019-03-14 16:34:21	David Ernesto Torres	Dave Torres
2539476	January 2019	2019-03-14 16:33:40	David Ernesto Torres	Dave Torres
2539475	December 2018	2019-03-14 16:32:25	David Ernesto Torres	Dave Torres
2539474	November 2018	2019-03-14 16:32:00	David Ernesto Torres	Dave Torres
2539473	October 2018	2019-03-14 16:31:31	David Ernesto Torres	Dave Torres
2539472	September 2018	2019-03-14 16:30:52	David Ernesto Torres	Dave Torres
2539471	August 2018	2019-03-14 16:30:20	David Ernesto Torres	Dave Torres
2539470	July 2018	2019-03-14 16:29:48	David Ernesto Torres	Dave Torres
2539469	June 2018	2019-03-14 16:29:15	David Ernesto Torres	Dave Torres
2539468	May 2018	2019-03-14 16:28:46	David Ernesto Torres	Dave Torres
2539467	April 2018	2019-03-14 16:28:16	David Ernesto Torres	Dave Torres
2539466	March 2018	2019-03-14 16:27:44	David Ernesto Torres	Dave Torres
2539465	February 2018	2019-03-14 16:27:04	David Ernesto Torres	Dave Torres
2539464	January 2018	2019-03-14 16:26:23	David Ernesto Torres	Dave Torres
2539463	December 2017	2019-03-14 16:24:44	David Ernesto Torres	Dave Torres
2539462	November 2017	2019-03-14 16:24:01	David Ernesto Torres	Dave Torres
2539461	October 2017	2019-03-14 16:23:20	David Ernesto Torres	Dave Torres
2539460	September 2017	2019-03-14 16:22:45	David Ernesto Torres	Dave Torres
2539459	August 2017	2019-03-14 16:21:23	David Ernesto Torres	DAVE TORRES
2492412	July 2017	2017-08-07 15:59:29	Ray Valenzuela	Ray Valenzuela
2490489	June 2017	2017-07-17 22:49:33	Ray Valenzuela	Ray Valenzuela
2489026	May 2017	2017-06-26 07:38:12	Ray Valenzuela	Ray Valenzuela
2489025	April 2017	2017-06-26 07:36:17	Ray Valenzuela	Ray Valenzuela
2489024	April 2017	2017-06-26 07:36:17	Ray Valenzuela	Ray Valenzuela
2481826	March 2017	2017-04-03 08:26:23	Ray Valenzuela	Ray Valenzuela
2481823	February 2017	2017-04-03 08:21:38	Ray Valenzuela	Ray Valenzuela
2478618	January 2017	2017-02-27 10:05:21	Ray Valenzuela	Ray Valenzuela
2478617	December 2016	2017-02-27	Ray Valenzuela	Ray Valenzuela

		10:04:54		
2478618	November 2016	2017-02-27 10:04:27	Ray Valenzuela	Ray Valenzuela
2468961	October 2016	2016-11-01 16:35:57	Ray Valenzuela	Ray Valenzuela
2466283	September 2016	2016-10-04 06:07:56	Ray Valenzuela	Ray Valenzuela
2466282	August 2016	2016-10-04 06:07:35	Ray Valenzuela	Ray Valenzuela
2466281	July 2016	2016-10-04 06:07:06	Ray Valenzuela	Ray Valenzuela
2460962	June 2016	2016-07-19 07:20:17	Ray Valenzuela	Ray Valenzuela
2460961	May 2016	2016-07-19 07:20:07	Ray Valenzuela	Ray Valenzuela
2456195	April 2016	2016-05-18 10:35:50	Ray Valenzuela	Ray Valenzuela
2456194	March 2016	2016-05-18 10:35:23	Ray Valenzuela	Ray Valenzuela
2451879	February 2016	2016-03-17 16:18:33	Ray Valenzuela	Ray Valenzuela
2451878	January 2016	2016-03-17 16:18:15	Ray Valenzuela	Ray Valenzuela
2451877	December 2015	2016-03-17 16:17:53	Ray Valenzuela	Ray Valenzuela
2451876	November 2015	2016-03-17 16:17:34	Ray Valenzuela	Ray Valenzuela
2451875	October 2015	2016-03-17 16:17:15	Ray Valenzuela	Ray Valenzuela
2451880	September 2015	2016-03-17 16:19:01	Ray Valenzuela	Ray Valenzuela
2438107	August 2015	2015-09-29 15:00:38	Ray Valenzuela	Ray Valenzuela
2434967	July 2015	2015-08-17 12:03:43	Ray Valenzuela	Ray Valenzuela
2432876	June 2015	2015-07-22 17:10:55	Ray Valenzuela	Ray Valenzuela
2430631	May 2015	2015-06-18 15:55:02	Ray Valenzuela	Ray Valenzuela
2428001	April 2015	2015-05-11 13:28:45	Ray Valenzuela	Ray Valenzuela
2421723	January 2015	2015-02-24 11:37:42	Ray Valenzuela	Ray Valenzuela
2418818	December 2014	2015-01-22 12:50:31	Ray Valenzuela	Ray Valenzuela
2416247	November 2014	2014-12-18 13:49:51	Ray Valenzuela	Ray Valenzuela
2412151	October 2014	2014-11-18 10:05:51	Ray Valenzuela	Ray Valenzuela
2407431	August 2014	2014-10-01 10:05:03	Ray Valenzuela	Ray Valenzuela
2403366	July 2014	2014-08-13 11:00:58	Ray Valenzuela	Ray Valenzuela
2401247	June 2014	2014-07-28 13:47:17	Ray Valenzuela	Ray Valenzuela
2396808	May 2014	2014-06-09 15:51:15	Ray Valenzuela	Ray Valenzuela
2396809	April 2014	2014-06-09 15:53:50	Ray Valenzuela	Ray Valenzuela
2391672	March 2014	2014-04-28 14:28:58	Ray Valenzuela	Ray Valenzuela
2390275	January 2014	2014-04-08 18:04:26	David Ernesto Torres	David E Torres
2390274	December 2013	2014-04-08 18:04:03	David Ernesto Torres	David E Torres
2390273	November 2013	2014-04-08 18:02:26	David Ernesto Torres	David E Torres
2390272	October 2013	2014-04-08 18:01:59	David Ernesto Torres	David E Torres
2390271	September 2013	2014-04-08	David Ernesto	David E Torres

		18:01:34	Torres	
2390270	August 2013	2014-04-08 18:01:02	David Ernesto Torres	David E Torres
2390269	July 2013	2014-04-08 18:00:41	David Ernesto Torres	David E Torres
2390268	June 2013	2014-04-08 18:00:11	David Ernesto Torres	David E Torres
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2390266	April 2013	2014-04-08 17:59:29	David Ernesto Torres	David E Torres
2390265	March 2013	2014-04-08 17:59:00	David Ernesto Torres	David E Torres
2355565	February 2013	2013-03-18 15:36:46	David Ernesto Torres	David E Torres
2355564	January 2013	2013-03-18 15:34:56	David Ernesto Torres	David E Torres
2355544	December 2012	2013-03-18 14:55:51	David Ernesto Torres	David E Torres
2355543	November 2012	2013-03-18 14:54:05	David Ernesto Torres	David E Torres
2355542	October 2012	2013-03-18 14:52:12	David Ernesto Torres	David E Torres
2355541	September 2012	2013-03-18 14:50:23	David Ernesto Torres	David E Torres
2355540	August 2012	2013-03-18 14:49:11	David Ernesto Torres	David E Torres
2355537	July 2012	2013-03-18 14:42:34	David Ernesto Torres	David E Torres
2355535	June 2012	2013-03-18 14:40:07	David Ernesto Torres	David E Torres
2329409	May 2012	2012-06-14 14:17:23	David Ernesto Torres	David E Torres
2329408	May 2012	2012-06-14 14:17:23	David Ernesto Torres	David E Torres
2326096	April 2012	2012-05-18 11:33:46	David Ernesto Torres	David E Torres
2326095	March 2012	2012-05-18 11:32:43	David Ernesto Torres	David E Torres
2326094	February 2012	2012-05-18 11:29:52	David Ernesto Torres	David E Torres
2326091	January 2012	2012-05-18 11:14:29	David Ernesto Torres	David E Torres
2326087	December 2011	2012-05-18 11:09:11	David Ernesto Torres	David E Torres
2326085	November 2011	2012-05-18 11:07:49	David Ernesto Torres	David E Torres
2326078	October 2011	2012-05-18 10:56:04	David Ernesto Torres	David E Torres
2326077	September 2011	2012-05-18 10:52:31	David Ernesto Torres	David E Torres
2326076	August 2011	2012-05-18 10:51:25	David Ernesto Torres	David E Torres
2326075	July 2011	2012-05-18 10:48:40	David Ernesto Torres	David E Torres
2295042	June 2011	2011-07-15 15:17:13	David Ernesto Torres	
2295041	May 2011	2011-07-15 15:15:19	David Ernesto Torres	
2295040	April 2011	2011-07-15 15:14:26	David Ernesto Torres	
2295039	March 2011	2011-07-15 15:13:59	David Ernesto Torres	
2295038	February 2011	2011-07-15 15:13:11	David Ernesto Torres	
2295037	January 2011	2011-07-15 15:12:00	David Ernesto Torres	
2295035	December 2010	2011-07-15 15:11:12	David Ernesto Torres	
2267546	November 2010	2010-12-06	David Ernesto	



		10:54:17	Torres	
2267542	October 2010	2010-12-06 10:53:19	David Ernesto Torres	
2267541	September 2010	2010-12-06 10:52:40	David Ernesto Torres	
2267538	August 2010	2010-12-06 10:51:52	David Ernesto Torres	
2267534	July 2010	2010-12-06 10:50:49	David Ernesto Torres	
2267507	June 2010	2010-12-06 10:37:18	David Ernesto Torres	
2267505	May 2010	2010-12-06 10:36:48	David Ernesto Torres	
2267502	April 2010	2010-12-06 10:36:14	David Ernesto Torres	
2267500	March 2010	2010-12-06 10:35:49	David Ernesto Torres	
2234893	February 2010	2010-03-24 18:03:10	David Ernesto Torres	
2234892	January 2010	2010-03-24 18:02:32	David Ernesto Torres	
2234891	December 2009	2010-03-24 18:01:45	David Ernesto Torres	
2217062	November 2009	2009-12-08 12:52:14	David Ernesto Torres	
2217060	October 2009	2009-12-08 12:51:44	David Ernesto Torres	
2217053	September 2009	2009-12-08 11:24:41	David Ernesto Torres	
2217048	August 2009	2009-12-08 11:19:43	David Ernesto Torres	
2217043	July 2009	2009-12-08 11:15:59	David Ernesto Torres	
2217042	June 2009	2009-12-08 11:15:07	David Ernesto Torres	
2217041	May 2009	2009-12-08 11:14:14	David Ernesto Torres	
2217040	April 2009	2009-12-08 11:13:28	David Ernesto Torres	
822583	March 2009	2009-04-14 15:43:33	David Ernesto Torres	
822582	February 2009	2009-04-14 15:42:43	David Ernesto Torres	
822581	January 2009	2009-04-14 15:42:02	David Ernesto Torres	
822580	December 2008	2009-04-14 15:41:04	David Ernesto Torres	
822578	November 2008	2009-04-14 15:39:00	David Ernesto Torres	
822579	November 2008	2009-04-14 15:39:37	David Ernesto Torres	
822577	October 2008	2009-04-14 15:38:18	David Ernesto Torres	
822576	September 2008	2009-04-14 15:37:25	David Ernesto Torres	
822575	August 2008	2009-04-14 15:35:10	David Ernesto Torres	
822574	July 2008	2009-04-14 15:34:28	David Ernesto Torres	
2276530	June 2008	2011-02-17 12:11:50	David Ernesto Torres	
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769995	April 2008	2008-06-23 13:46:22	David Ernesto Torres	
769994	March 2008	2008-06-23 13:45:39	David Ernesto Torres	
769997	February 2008	2008-06-23 13:49:07	David Ernesto Torres	
769992	January 2008	2008-06-23	David Ernesto	

		13:44:16	Torres	
769975	December 2007	2008-06-23 13:41:27	David Ernesto Torres	
769973	November 2007	2008-06-23 13:40:54	David Ernesto Torres	
769976	October 2007	2008-06-23 13:42:23	David Ernesto Torres	
690383	September 2007	2007-11-01 09:44:21	David Ernesto Torres	
690390	August 2007	2007-11-01 09:49:46	David Ernesto Torres	
690389	July 2007	2007-11-01 09:49:29	David Ernesto Torres	
690386	June 2007	2007-11-01 09:48:27	David Ernesto Torres	
690385	May 2007	2007-11-01 09:47:50	David Ernesto Torres	
690384	April 2007	2007-11-01 09:47:10	David Ernesto Torres	
2276529	March 2007	2011-02-17 12:10:59	David Ernesto Torres	
2276528	February 2007	2011-02-17 12:10:05	David Ernesto Torres	
486040	January 2007	2007-02-23 14:02:48	David Ernesto Torres	

(866) 792-4977

David Torres

**From:** Mohammad Mostahkami  
**Sent:** Monday, January 31, 2011 1:56 PM  
**To:** David Torres  
**Subject:** FW: EMAIL REMINDER for South Gate City CS (4SSO10435) : SSO Compliance - Best viewed in HTML.

**Importance:** High

David, immedaite action required within 45 days due to missing complaince reporting....Please see below.  
Thanks

Have a Wonderful Day

Mohammad Mostahkami, PE  
Director of Public Works / City Engineer  
City Of South Gate  
Public Works Department  
8650 California Avenue  
South Gate, CA 90280-3075  
(323) 563-9582 Phone  
(323) 563-9572 Fax  
[mmostahkami@sogate.org](mailto:mmostahkami@sogate.org)

Log in is  
Stores  
Password - Password.  
Capital  
→  
Case Sensitive  
~~Raiders~~

**From:** [sbssso@waterboards.ca.gov](mailto:sbssso@waterboards.ca.gov) [mailto:[sbssso@waterboards.ca.gov](mailto:sbssso@waterboards.ca.gov)]  
**Sent:** Monday, January 31, 2011 1:40 PM  
**To:** David Torres; Mohammad Mostahkami; Mohammad Mostahkami; [sbssso@waterboards.ca.gov](mailto:sbssso@waterboards.ca.gov)  
**Subject:** EMAIL REMINDER for South Gate City CS (4SSO10435) : SSO Compliance - Best viewed in HTML.  
**Importance:** High

TO: LEGALLY RESPONSIBLE OFFICIALS (LROs) ENROLLED UNDER THE STATEWIDE SANITARY SEWER SYSTEMS WDR (WATER QUALITY ORDER 2006-0003-DWQ)

This is a follow up email reminder for the auto-generated CIWQS compliance e-mail reminder sent on December 2, 2010.

Your State Water Board CIWQS records indicate that your collection system is enrolled under the Statewide Sanitary Sewer System Waste Discharge Requirements (Order No. 2006-0003-DWQ). Below are remaining outstanding issues identified in the CIWQS database system. Please use this email reminder as your main guide to resolve the issues identified below (disregard issues identified in the previous e-mail). Please review and address the deficiencies listed below within the next 45 days. Additional follow up e-mail reminders will be sent and will identify any outstanding issues remaining at the time the e-mail reminder is sent.

\* Your collection system needs to report the spill(s) or No-Spill certification(s) for feb-07, mar-07, jun-08, Note: Your collection system still has to report a no-spill certification for a month if all reported spills for that month are Private Lateral spills.

2/2/2011

\* You need to update your collection system Sewer System Management Plan (SSMP). For further details, please refer to [http://www.waterboards.ca.gov/water\\_issues/programs/sso/#plan](http://www.waterboards.ca.gov/water_issues/programs/sso/#plan).

To update your user information, including email, please log-into CIWQS and then click VIEW/CHANGE MY PERSONAL INFORMATION and MY EMAIL ADDRESS to change as necessary. Select SAVE CHANGES before exiting the screen.

For more information about the Statewide Sanitary Sewer Systems WDR, please visit:  
[http://www.swrcb.ca.gov/water\\_issues/programs/sso/](http://www.swrcb.ca.gov/water_issues/programs/sso/)

To assist you with learning more about SSO electronic reporting, please view the SSO Discharger Work Book at: [http://www.waterboards.ca.gov/water\\_issues/programs/sso/docs/discharger\\_workbook.pdf](http://www.waterboards.ca.gov/water_issues/programs/sso/docs/discharger_workbook.pdf)

For training resources on Electronic Reporting and Sewer System Management Plans (SSMP), visit California Water Environment at: <http://www.cwea.org/et-ssowdr.shtml>

If you are not the Sewer System Overflow Program Contact for your agency and do not need to receive this type of email in the future, or for questions or help regarding email, enrollment or technical database help, contact our CIWQS Help Line staff at:

866-79-CIWQS (24977)

M - F (8am-5pm)

Email: [ciwqs@waterboards.ca.gov](mailto:ciwqs@waterboards.ca.gov)

For technical program and other questions related to the Statewide Sanitary Sewer Systems WDR, please contact:

Victor Lopez

Division of Water Quality / Statewide SSO Program

[vlopez@waterboards.ca.gov](mailto:vlopez@waterboards.ca.gov) (916) 323-5511



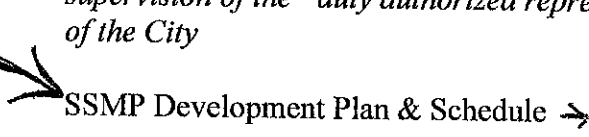
STATA WATER RESOURCES CONTROL BOARD  
GENERAL WASTE DISCHARGE REQUIREMENTS  
SANITARY SEWER SYSTEMS

SEWER SYSTEM MANAGEMENT PLANS

For agencies exceeding 100,000 in population:

<u>Completion Date</u>	<u>Order Section</u>	<u>Activity / Section</u>
May 2, 2006	"Order"	State Board Adopts
November 2, 2006	'B'	Application for Permit (NOI)
January 2, 2007	'G'	<u>Reporting Program</u> [SSO Database Acct., Username, Password, & 'Collection System Questionnaire' (update annually)] <i>All reporting activities are to be accomplished by or under the supervision of the "duly authorized representative" of the City</i>
February 2, 2007	n/a	SSMP Development Plan & Schedule →
May 2, 2007	D13 (i) & (ii)	Goals & Organizational Structure
May 2, 2008	D13 (vi) D13 (iii) D13 (iv) D13 (vii)	Overflow Emergency Response Program Legal Authority Operations & Maintenance Program Grease Control Program – FOG
May 2, 2009	D13 (v) D13 (viii) D13 (ix) (x) (xi) & 14	Design & Performance Provisions System Evaluation & Capacity Assurance Plan Final SSMP [all requirements]

*Do it today.  
Even better being*



For agencies with populations between 100,000 and 10,000, the above dates are as follows:

- May 2, 2006
- November 2, 2006
- January 2, 2007
- May 2, 2007
- May 2, 2007
- November 2, 2008
- August 2, 2009

# Appendix D

Sewer System Management Plan  
(Final Report)  
January 30, 2017



City of South Gate  
8650 California Avenue  
South Gate, CA 90280

**Prepared By:**

David Evans and Associates, Inc.  
17782 17<sup>th</sup> Street, Suite 200  
Tustin, California 92780

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**APPENDICES**

Appendix A	Waste Discharge Requirements (Order No. 2006-0003-DWQ)
Appendix B	Monitoring and Reporting Program (No. 2006-0003-DWQ)
Appendix C	WDR 'Fact Sheet'
Appendix D	Agency WDR Application (NOI)

## **ABBREVIATIONS**

BMP - Best Management Practice  
CIP - Capital Improvement Program  
CIWQS - California Integrated Water Quality System  
CMMS – Computerized Maintenance Management System  
CWC - California Water Code  
CWEA – California Water Environment Association  
FOG - Fats, Oils, and Grease  
FPS - Feet per Second  
GIS - Geographic Information Systems  
I/I - Infiltration/Inflow  
KPI - Key Performance Indicator  
LACSD - Los Angeles County Sanitation Districts  
LRO - Legally Responsible Official  
MRP - Monitoring and Reporting Program  
MMRP - Measurement, Monitoring and Reporting Procedures  
NOI - Notice of Intent  
NPDES - National Pollutant Discharge Elimination System  
OES - Office of Emergency Services  
O&M - Operations and Maintenance  
PDWF - Peak Dry Weather Flow  
PWD - Public Works Director  
RWQCB - Regional Water Quality Control Board  
SECAP - Sewer System Evaluation and Capacity Assurance Plan  
SSMP - Sanitary Sewer Management Plan  
SSO - Sanitary Sewer Overflow  
SWRCB - State Water Resources Control Board  
VCP - Vitrified Clay Pipe  
WDR - Waste Discharge Regulations

## DEFINITIONS

**Blockage or Stoppage** - A buildup of debris in the main sewer line or lateral, which obstructs the flow of wastewater and allows the waste flow to back up behind the blockage, sometimes causing an overflow.

**Geographical Information System (GIS)** – A computerized database linked with mapping, which includes various layers of information used for asset management purposes. A GIS typically contains base information such as streets and parcels. Examples of information contained in sewer system GIS files can include: a sewer main map, sewer features such as pipe location, diameter, material, condition, age, last date cleaned or repaired, and links to pictures or video inspections.

**Infiltration/Inflow (I/I)** -- Infiltration is generally extraneous subsurface water that enters the sewer system over long periods of time, such as groundwater seepage through joints, cracks and manhole structures. Inflow is generally extraneous surface waters that enters the system during a storm or flooding event, such as through manholes, illicit drain connections or other defects in the sewer. While it is impossible to control all I/I, it is highly desirable to reduce I/I when cost-effective.

**Lateral** (House Connection Sewer) - The portion of sewer that connects a structure (residence or business) with the main sewer line in the street, alley or easement.

**Wastewater Collection System** -- All pipelines pump stations, and other related facilities, upstream of the headworks of the wastewater treatment plant that convey wastewater from its sources to the wastewater treatment plant.

**Waters of the United States** (paraphrased from 33 CFR Part 328) – All waters which are used, were used or may be used in interstate or foreign commerce; including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent streams), adjacent wetlands, impoundments of water, etc., the use, degradation or destruction of which could affect interstate or foreign commerce; tributaries of waters so identified; and the territorial seas.

## Executive Summary

This plan document was initially prepared in 2009 and updated in 2014 in compliance with a formal order issued by the State Water Resources Control Board. The order requires every owner and operator of publicly owned sewer systems to develop and implement a system specific Sewer System Management Plan (SSMP). This plan sets forth goals and actions to be followed, and guidelines for various activities involved in managing, operating, maintaining, repairing, replacing, and expanding the sewer system. Section 8 describes actions to follow when responding to a Sewer System Overflow (SSO) occurrence within the community, including reporting obligations. There are chapters that describe legal authorities for managing the system, and ministerial actions required in monitoring, auditing, reporting and communicating with the public and regulators. There are specific requirements for accomplishing public involvement and the reporting and modifying (changing) of the plan. These later requirements are intended to raise public awareness of the hazards associated with SSO events and to minimize the occurrence of such events.

- The City's updated plan is to be approved and certified in early 2017
- The plan is to be monitored and updated no less frequent than every five years
- The plan must be periodically audited for effectiveness, a report compiled and kept on file and such audits must occur no less frequent than every two years
- There are reporting timeframes for both emergency and routine reporting events
- The adoption of and any revision to the plan must be adopted by the City Council at a noticed meeting.
- Copies of the approved plan must be available for public review, and when requested by the State or Local regulatory agencies copies are to be provided, including any audit reports.

The key elements to the successful implementation of this plan are: 1) design and construction of replacement pipelines for any identified capacity and structurally deficient pipelines, as identified in the City's upcoming sewer master plan and 2) the continuing annual CCTV inspection of designated areas within the sewer system to determine further defects that may exist. These actions in concert with the routine maintenance and operation activities will help the City to limit the risk of SSO events within the community.

Based on a comprehensive audit and overall review of the previous SSMPs, and discussions with the Public Works Department, and a review of all other related documents, the City of South Gate hereby certifies that all SSMP Goals are on-going and are on-track.

## **SECTION 1 – Introduction**

### **1.1 Service Area and Sewer System**

South Gate is located 7 miles (11 km) southeast of downtown Los Angeles. It is part of the Gateway Cities region of southeastern Los Angeles County. The City serves a population of 99,578 people. The City's sanitary sewer collection system is managed by the Public Works Department. The collection system consists of about 119.4 miles of gravity sewer lines, no pump/lift stations, and about 100 sewer siphons within the system. Approximately 99-percent of local wastewater flows, discharge into County Sanitation Districts of Los Angeles County (CSD) facilities for transportation, treatment and disposal. The remaining one percent of total sewage generated within the City passes into the City of Paramount system and is then discharged into CSD facilities.

The City has three (3) full-time equivalent positions budgeted in the sewer maintenance fund. The distribution of City personnel is shown in the organization chart presented in Section 4.2 of this plan. These personnel provide evaluation of proposed and existing sewer facilities, administer the City's sewer service charge and enforcement ordinances, maintain and report facility maintenance activities and administer preventive maintenance and sewer construction programs.

### **1.2 Regulatory Overview**

The State Water Resources Control Board (State Water Board) adopted Water Quality Order 2006-0003, on May 2, 2006, requiring all public agencies that own sanitary sewer collection systems greater than one mile in length to comply with the Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. All public agencies must apply for coverage by November 2, 2006, by completing the notice of intent (NOI) and legally responsible official (LRO) forms that the State Water Board distributed. The City of South Gate has completed the NOI and is within the regulatory time frames.

The intent of the WDR is to provide consistent statewide requirements for managing and regulating sanitary sewer systems throughout California. The State Water Board recognized a need to provide this consistent regulatory measure because many of the Regional Water Boards were beginning to implement similar measures inconsistently throughout the State, which was creating confusion in the discharger community. The State Water Board believes that providing a consistent regulatory measure that identifies regulatory expectations and comprehensive sanitary sewer overflow data will ultimately yield better collection system management and performance.

There are three major components to the WDR, including:

- Sanitary Sewer Overflow (SSO) Prohibitions;
- Sanitary Sewer Management Plan (SSMP) Elements; and
- SSO reporting.

While there are many other relevant components and findings within the WDR, the major components identified above represent most of the State Water Board's regulatory expectations for the implementation of the WDR. This regulatory audit is intended to provide an analysis of the current programs and practices within the City of South Gate that address the above issues. This document will provide recommendations to ensure the development of appropriate SSMP programs and an appropriate time schedule necessary to comply with the WDR.

### 1.3 Prohibitions

Section C of the WDR identifies and prohibits SSOs that results in a discharge of untreated or partially treated wastewater to waters of the United States and/or creates a nuisance as defined in California Water Code (CWC) Section 13050(m) is prohibited. CWC section 13050, subdivision (m), defines nuisance as anything which meets **all** of the following requirements:

- a) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
- b) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
- c) Occurs during, or as a result of, the treatment or disposal of wastes.

Since the State Water Board has not specifically defined SSOs that are subject to this prohibition and criteria for determining whether or not an SSO violates the above prohibition, the State and/or Regional Water Board will consider potential violations on a case-by-case basis. In general however, if an SSO results in a discharge to a surface water or drainage channel, the Water Board will consider this a discharge to Waters of the US. Additionally, if an SSO reaches an enclosed storm drainage pipe, and the SSO was not fully contained, captured, and pumped back into the sanitary sewer system, the Water Board will generally assume that the SSO reached a water of the US. In both cases the SSO will probably result in a violation of the WDR prohibition.

Determining whether an SSO created a nuisance is even more problematic and subjective. Again, since the State Water Board has not specifically defined SSOs that are subject to the nuisance prohibition and criteria for determining whether or not an SSO is in violation of this prohibition, the State and/or Regional Water Board will consider violations on a case-by-case basis.

In both cases, while reporting SSOs, determining whether or not the SSO violated the prohibition is not up to the reporting Agency. It is the enforcement agency's responsibility to determine compliance with the WDR.

### 1.4 SSO Reporting

WDR finding number 9 states:

Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. 2006-0003-DWQ, are necessary to assure compliance with these waste discharge requirements (WDRs).

Furthermore, the State Water Board Fact Sheet states:

SSOs can be distinguished between those that impact water quality and/or create a nuisance, and those that are indicators of collection system performance. Additionally, SSO liability is attributed to either private entities (homeowners, businesses, private communities, etc.) or public entities.

Although all types of SSOs are important to track, the reporting time frames and the type of information that need to be conveyed differ. The Reporting Program and Online SSO Database clearly distinguish the type of spill (major or minor) and the type of entity that owns the portion of the collection system that experienced the SSO (public or private entity). The reason to require SSO reporting for SSOs that do not necessarily impact public health or the environment is because these types of SSOs are indicators of collection system performance and management program effectiveness, and may serve as a sign of larger and more serious problems that should be addressed. Although these types of spills are important and must be regulated by collection system owners, the information that should be tracked and the time required to get them into the online reporting system are not as stringent.

Obviously, SSOs that are large in nature, affect public health, or affect the environment must be reported as soon as practicable and information associated with both the spill and efforts to mitigate the spill must be detailed. Since the Online SSO Database is a web based application requiring computer connection to the internet and is typically not as available as telephone communication would be, the Online Database will not replace emergency notification, which may be required by a Regional Water Board, Office of Emergency Services, or a County Health or Environmental Health Agency.

In order to implement the above vision, the State Water Board has developed a web based database that will be used to report all SSOs. This online spill reporting system is hosted, controlled, and maintained by the State Water Board. The web address for this site is <http://ciwqs.waterboards.ca.gov>

This online database is maintained on a secure site and is controlled by unique usernames and passwords. Once the City has enrolled into the WDR, and has identified a Legally Responsible Official (LRO), the State Water Board will issue both a user name and password to the LRO and notify that individual of this information.

These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative. For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.

All reporting requirements are described within the Monitoring and Reporting Program (MRP) that was adopted by the State Water Board Order, along with the WDR. (See highlights of the newly revised MRP regulations below)

California Health and Safety Code section 5411.5, states that:

Any person who, without regard to intent or negligence, causes or permits any untreated wastewater or other waste to be discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State, as soon as that person has knowledge of the discharge, shall immediately notify the local health officer of the discharge. Discharges of untreated or partially treated wastewater to storm drains and drainage channels, whether man-made or natural or concrete-lined, shall be reported as required above.

California Water Code section 13271, also requires any SSO greater than 1,000 gallons that is discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State shall also be reported to the Office of Emergency Services as soon as:

1. That person has knowledge of the discharge,
2. Notification is possible, and
3. Notification can be provided without substantially impeding cleanup or other emergency measures.

## **SECTION 2 - SSO as Defined by the Revised MRP**

An SSO is defined by the WDR as any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system, including:

**Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

**Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

**Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

SSOs may cause a public nuisance, particularly when raw wastewater is discharged to areas having high public exposure, such as streets or surface waters used for drinking, fishing, or body-contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

Agencies in California that own sanitary sewer systems and experience SSOs are required to enter the SSO information into California's Integrated Water Quality System (CIWQS) database—the SWRCB's information management system for regulatory and water quality



data reporting. In addition, SWRCB requires that agencies notify the State Office of Emergency Services (OES) within 24 hours of any spill that exceeds 1,000 gallons.

In summary, the WDR is intended to:

- Provide a consistent and unified statewide approach for the reporting and database tracking of SSOs.
- Establish consistent and uniform requirements for SSMP development and implementation.
- Facilitate consistent enforcement of the WDR regulation and violations.

Capacity assurance is at the heart of the WDR. The SWRCB's WDR requires the preparation of SSMPs, while implementation of SSMPs is the responsibility of the nine Regional Water Quality Control Boards (RWQCBs). The SSMP consists of a set of documented plans to address how a wastewater collection system conducts business management, funding, design, operations, maintenance, and emergency response. The System Evaluation and Capacity Assurance Plan (SECAP) element of the SSMP includes evaluation of peak flows, design criteria, and capacity enhancement measures, and a schedule with planned completion dates of capital improvements.

Goals of City's SSMP are to ensure that:

1. The City's sanitary sewer collection system facilities are properly operated, maintained and managed to reduce frequency and severity of sanitary sewer overflows (SSO) and their potential impacts on public health, safety, and on the environment; and,
2. When a SSO occurs, prompt action is taken to identify, contain, remove the cause and then to promptly report the event to appropriate regulatory authorities and that the public is adequately and timely notified; and,
3. All SSO and system deficiencies and remedial actions taken are well documented; and,
4. The City sewer system operators, employees, contractors, responders, or other agents are adequately trained and equipped to address an SSO event; and,
5. The City sewer system is properly designed, constructed and funded to provide sufficient capacity to convey base flows and peak flows while meeting or exceeding applicable regulations, laws and generally acceptable practices relative to sanitary sewer system operations and maintenance.

The SSMP prescribes specific milestones that relate to the specific elements required in the WDR:

1. Goals,
2. Organization,

3. Legal Authority,
4. Operations and Maintenance Program,
5. Design and Performance Provisions,
6. Overflow Emergency Response Plan,
7. Fats, Oil and Grease (FOG) Control Program,
8. System Evaluation and Capacity Assurance Plan (SECAP),
9. Monitoring, Management, and Plan Modifications,
10. SSMP Program Audits, and
11. Communication Program.

An SSMP program audit must be conducted at least every two years, and the audit report must be kept on file by the City staff. Successful implementation of an SSMP and compliance with the WDR could result in significant cost-savings to the City and its residents.

The City performed a comprehensive Gap Analysis and audit of its SSMP, utilizing an outside consultant (Hall & Foreman) which was completed in August 2015. The results and recommendations of the Gap Analysis and audit have been incorporated into this document.

In compliance with the WDR Order, the City did file its application form with the SWRCB on October 30, 2006. As a result, the City received its Username and Password for accessing the California Integrated Water Quality System (CIWQS) database. Within the database reporting program, the City completed its "collection system questionnaire" and will file all subsequent updates and all required SSO reporting.

Additionally, this document has been prepared to meet the objectives contained in the WDR Order. The document is divided into 13 sections, which closely align with the respective provisions contained in the WDR. Every section or subsection of each chapter addresses one of the key elements of the SSMP directive.

This document, plus other existing agency programs referenced herein constitute the SSMP for the City of South Gate. By implementing the procedures contained in this SSMP, the occurrence of SSO should decrease or possibly be avoided throughout the City's sanitary sewer collection system.

### **SECTION 3 - Goals**

**Section D.13(i) - Goal:** The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

#### **3.1 Overview**

This section describes the goals of the Sewer System Management Plan (SSMP), which is to provide a documented plan that describes all collection system activities and programs employed by an agency to ensure proper management of all collection system assets. Implementing an SSMP will ensure proper management, operation, and maintenance of all parts of the sanitary sewer system, ultimately helping to reduce and prevent SSOs, as well as mitigate any SSOs that do occur including meeting all applicable regulatory notification and reporting requirements.

Commitment to continual improvement will also ensure that the SSMP is both a living and sustainable document that is continually updated, revised, and tailored towards the City's needs. The City is required to comply with the "State Water Resources Control Board (SWRCB), Order No. 2006-0030 DWQ" (Order) on General Waste Discharge Requirements for publicly owned sewage collection agencies having more than one mile of collection pipelines.

#### **3.2 Purpose**

This element describes the City's stated goals of the SSMP and is intended to clarify the City's desired level of service that it is providing to its customers. Typically, high level statements regarding the overall management of a system includes a vision and mission statement, as well as a statement of short and long term goals.

THE MISSION STATEMENT is the first step in the planning process to identify overall functions or missions of the organization. This broad statement of purpose is commonly known as the mission statement.

THE VISION STATEMENT is a clarifying phrase that states where the City is heading. It helps set the course of future decisions and direction.

A STATEMENT OF GOALS should include both short and long term commitments that will ultimately measure progress toward achieving and accomplishing both the stated Vision and Mission. Goals should be developed specific to the City's desired level of service. Careful thought and planning should occur when developing the Goals, because these are measurable outcomes that can be touted if accomplished or criticized if not accomplished. The development of reasonable Goals is often a balancing act between budget and performance. Creating Goals that meet this balance is often difficult and always specific to individual communities.

### 3.3 Minimum Requirements

Goals that the City must commit to and are identified in the WDR include:

1. Create/develop a management, operation and maintenance plan and schedule to reduce preventable SSOs.
2. Respond to and mitigate all SSOs discharging from the City's collection system.
3. Ensure adequate system capacity for the current and future needs of the City's service area.
4. Establish measurable performance indicators and manage assets at lowest life cycle costs.
5. Provide accurate reporting of all SSOs as described by the Order.
6. Properly fund, manage, operate, and maintain, with adequately trained staff and/or contractors.
7. All parties involved, shall possess adequate knowledge skills and abilities necessary to ensure the proper management, operation, and maintenance of all parts of the sewage collection system owned and/or operated by the City of South Gate.

The State Water Board also expects both a plan and schedule to be created by the City to ensure that an SSMP is developed in accordance with the time schedule identified in the WDR and will facilitate proper sanitary sewer system management, operation, and maintenance.

The **goals** of this SSMP are:

1. Collection system facilities are properly managed, operated, and maintained to eliminate preventable sanitary system overflows (SSOs);
2. Response measures are in place and that all feasible steps are taken to mitigate the impacts of SSOs to public health and the environment when they occur;
3. Reporting procedures are in place to notify the appropriate regulatory and health authorities of SSOs within the required time frames; and
4. SSO events, mitigation measures, and corrective actions are documented; and
5. City sewer system operators, employees, contractors, responders, or other agents are adequately trained and equipped to address an SSO event; and,
6. City sewer system is properly designed, constructed and funded to provide sufficient capacity to convey base flows and peak flows while meeting or exceeding applicable regulations, laws and generally acceptable practices relative to sanitary sewer system operations and maintenance.

The **actions** to be taken under the SSMP are:

1. Conduct planned and scheduled maintenance and training programs to minimize risk and the occurrence of SSO, in support of the SSMP goals including cleaning and CCTV inspection of all sewer lines. This includes cleaning all sewer lines annually, all Hot Spots monthly and CCTV the entire sewer system every seven (7) years.
2. When SSO's do occur, respond to the reported site in a timely manner and undertake feasible remedial actions to contain overflow impacts, including stopping the flow from

reaching the storm drain or water course, if possible; and,

3. Stop the overflow as soon as possible and limit public access into the overflow area to prevent public contact with any wastewater contamination; and,
4. Completely recover the overflow and return it to the sewer system, and clean up the contaminated area; and,
5. Gather and compile all pertinent information regarding the overflow 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; and,
6. Condition all development and capital projects to evaluate, design and construct sewer facilities to the city approved standards and criteria.

## Section 4 – Organization

- D.13 (ii) - **Organization:** The SSMP must identify:
- (a) The name of the responsible or authorized representative as described in Section J of this Order.
  - (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
  - (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

### 4.1 Overview

This element of the WDR describes both the organizational structure of the City as well as activities, duties, and responsibilities for individuals and positions associated with the sanitary sewer system. This section should include typical positions and their associated activities, duties, and responsibilities.

### 4.2 Purpose

Clearly identifying specific roles and responsibilities within an organization will ensure an a clear understanding of duties that must be performed, as well as training and skill sets that are associated with specific jobs throughout the agency.

### 4.3 Minimum Requirements

1. The name of the responsible or authorized representative as described in Section 5 of this Order.
2. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
3. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

#### **4.4 Management**

The City was incorporated on January 20, 1923, is currently 7.4 square miles in area, and serves a population of 99,578 people, according to the 2016 estimates. The City's sanitary sewer collection system is managed by the City's Public Works Department. The collection system consists of about 119.4 miles of gravity sewer lines, no pump/lift stations, and about 100 sewer siphons within the system. Approximately 99-percent of local wastewater flows, discharge into County Sanitation Districts of Los Angeles County (CSD) facilities for transportation, treatment and disposal. The remaining one percent of total sewage generated within the City passes into the City of Paramount system and is then discharged into CSD facilities.

The City has three (3) full-time equivalent positions budgeted in the sewer maintenance fund. The distribution of City personnel is shown in the organization chart presented in Section 4.2 of this plan. These personnel provide evaluation of proposed and existing sewer facilities, administer the City's sewer service charge and enforcement ordinances, maintain and report facility maintenance activities and administer preventive maintenance and sewer construction programs.

Distribution of the City's personnel is depicted in the organization chart presented in section

4.7.1 of this plan. These personnel provide engineering evaluation of proposed and existing sewer facilities, administer the City's sewer service charge ordinance, review and permit new service connections or development projects, maintain facility record plans, and administer preventive maintenance and sewer construction programs.

#### **4.5 Authorized Representative**

The City's Field Operations Manager is the authorized representative who is responsible for the execution of compliance actions required under the WDR. This includes, but is not limited to, signing and certification of all reports and correspondence as required under this order.

#### **4.6 City's Responsibilities**

The City is required to apply for coverage under the WDR for facilities it owns. The City is required prepare a comprehensive SSMP, and if it has not yet fully adopted applicable codes, local ordinances or resolutions governing the performance of items stipulated in the WDR, it will promptly undertake actions to adopt the legal means to do so.

The City Public Works Department (PWD) plays significant roles, jointly and separately, towards attaining the goals of the WDR. The degree of these collaborative efforts will vary from department to department depending on the degree of SSO related services the PWD is providing under various agreements.

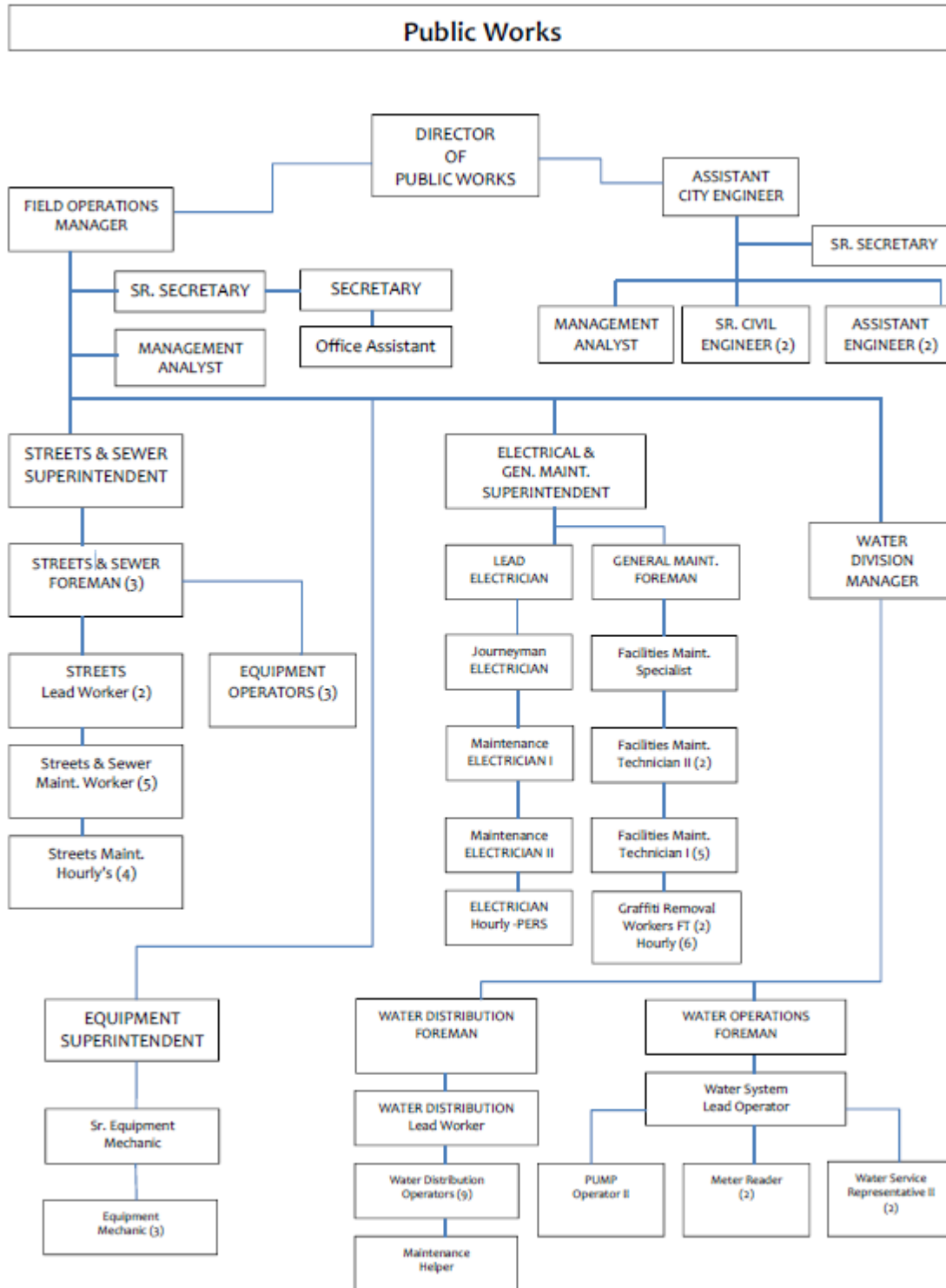
#### **4.7 Organization Chart and Responsibilities**

The organization chart showing the structure and relationships of the City's administrative, management and field positions relative to sewer operations and maintenance (O&M) is presented in Section 4.7.1 and the descriptions of responsibilities and support are presented in Sections 4.7.2 and 4.7.3





4.7.1 Organization Chart for the City's Sewer System Management Plan



#### 4.7.2 Description of Responsibilities

The description of responsibilities or roles of each position especially as related to SSOs are as follows:

- City Council - Responsible for establishing new and amending existing ordinances and policies governing the municipal operations, and the operations of the city's sanitary sewer system including the approving of all SO&M contracts and agreements within the community's interest.
- City Manager – 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.
- Director of Public Works – Directs the accomplishment of statutory and policy criteria, within the scope of the City Council's policy and legal requirements. Directs its execution, and evaluates work accomplished within his areas of responsibility, including the SO&M program. Also directs the planning, budgeting, design and construction of new and rehabilitation of existing sewage collection systems, and assists with claims and litigations against the City relative to public infrastructure.
- Field Operations Manager – Manages policy implementation, manages SSMP implementation, monitors SSMP implementation and effectiveness, ensures adequate resources are available for policy and SSMP activities, communicates SSMP effectiveness to the Public Works Director, recommends improvements to SSMP procedures
- Street/Sewer Superintendent - Monitors SSMP plans and procedures, facilitates field operations, assesses SSMP plans and procedures, solicits and provides feedback on effectiveness of plans
- Street Foreman - Responsible for assigning work and oversight of the sewer maintenance workers performing sewer collection system operation and maintenance and repairs. Reports to the Street/Sewer Superintendent
- Maintenance Workers (Field Crews) - Maintenance workers are responsible for performing daily maintenance activities of the sewer collection system including responding to SSOs, sewer cleaning, repairs and other activities as needed. They report to Street Foreman

#### 4.7.3 Key Support Units

Other Divisions or Departments within the City, and specific contracted services, are currently and will continue to be responsible for carrying out some of the compliance actions called for by the WDR for the City. The key support units and their responsibilities are described below:

- Office Administrative and Clerical Assistants - Perform assigned clerical work including but not limited to receive complaints and/or service requests, assist in the preparation and implementation of the annual operating budget, City Council reports and correspondence
- Finance Department – Responsible for receiving and recording sewage related fees and charges, tracking expenses attributable to the sewer system, evaluating the

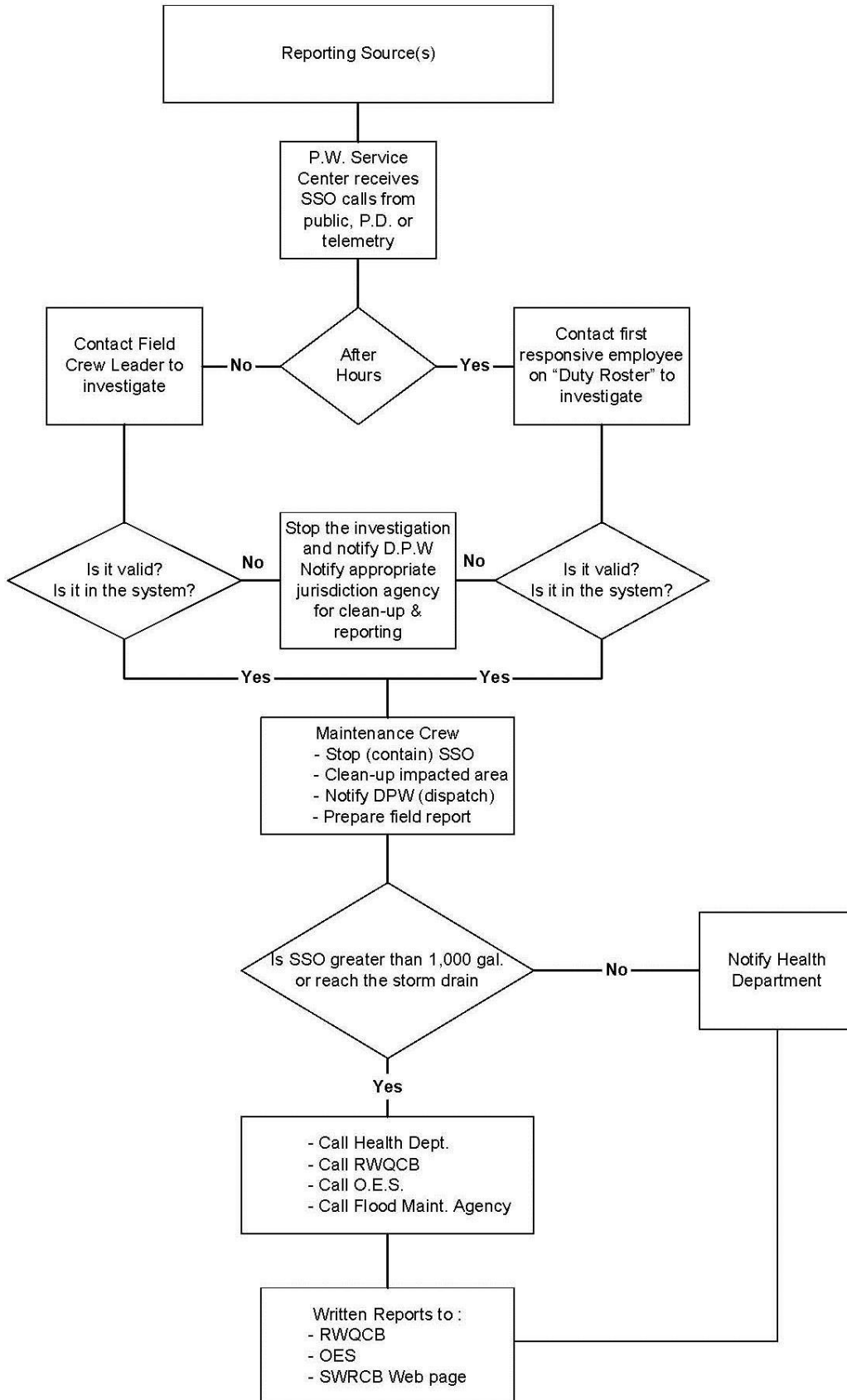
relationship of revenues vs expenses for the sewer system, facilitating and tracking any emergency related expenses incurred and participating in the annual audit of the sewer system operations and maintenance functions.

- Community Development - Building and Safety Division - Responsible for reviewing various building permit applications, their relationship to public easements and facilities, and issuing permits for sewer connections and laterals. Enforcement of the Plumbing Codes involving proper connection and discharge into the public sewer system and the maintenance of sewer laterals between the structure served and the public sewer collection main.
- Public Works Sewer Division is responsible for the enforcement of the Health and Safety Codes regarding waste disposal such as the FOG program, point source control inspection of industrial and commercial waste and grease generating facilities, and investigation of cases of illicit discharge of chemicals, debris, etc. into the public sewer system.
- Public Works - Engineering Division - Responsible for preparing plans and specifications for sewer construction and rehabilitation projects, and the administration of contracts for accomplishing such projects and emergency sewer repair projects. Also responsible for subdivision or development project plan checks to ensure compliance with the City's standards for construction of new sewer collection systems. Plan checks sewer capacity studies to size proposed sewer lines and sets requirements to ensure adequate capacity in existing systems. Prepares easement documents or identifies and procures access rights for public sewer facilities located within private properties.
- Public Works Department - Responsible for reviewing and approving permit applications for industrial waste discharge and also performs FOG related inspections
- LA County Fire Department – Responsible for assisting with protecting the public during an SSO event that expands into high use public travel ways and/or those that reach storm drains or water courses and spread the public risk to health and safety impacts.
- Police Department - Responsible for operating the Emergency Operation Center for the entire City including handling after-hours service calls reporting SSO's, and pump station malfunction calls and forwarding those reports to the DPW.

#### **4.7.4 Chain of Communication for SSO Reporting**

Once a City of South Gate Public Works staff receives a complaint or information regarding a potential SSO event during working hours, that employee will immediately notify the Street/Sewer Superintendent and the field crews are dispatched and will respond to the location and implement the Sanitary Sewer Overflow Response Plan, as shown in Section 4.7.5. Appropriate regulatory agencies will also be notified accordingly. The City contact directory for communicating with both internal and external parties involved is noted in Section 4.7.6.

### 4.7.5 SSO Reporting Procedures Flow Chart



#### 4.7.6 City's Contact Directory for SSO Responding and Reporting

Responsible Party's	Name	Phone	Afterhours or Cell Phone
City Manager	Michael Flad	(323) 563-9503	(818) 632-3110
Director of Public Works/ City Engineer	Arturo Cervantes	(323) 563-9512	(323) 314-6173
Building Official	William Campana	(323) 563-9515	(323) 816-8230
Field Operations Manager	David Torres	(323) 563-5784	(323) 216-9524
Street & Sewer Superint. (Afterhours Supervisor)	Ray Valenzuela	(323) 357-5804	(323) 537-5447
Duty Person -Afterhours *	South Gate PD	(323) 563-5436	(323) 563-5436
Public Works Foreman (Alt. Afterhours Contact)	Omar Aviles	(323) 357-5805	(323) 595-9116
Public Works Services Yard	Receptionist	(323) 563-5785	
South Gate Police	Watch Commander	(323) 563-5436	911 Emergency
Fire Department	Battalion Commander	(323) 890-4045	
	Station 54	(323) 567-8580	
	Station 57	(323) 531-9700	
	Hazmat	(323) 890-4045	
LA County Health Dept. After Hours		(562) 345-6830 (323) 667-1843	
LA County Flood		(626) 445-7630	(626) 458-4357
RWQCB Region 4		(213) 576-6725	(213) 305-2253
State OES		(800) 852-7550	(800) 852-7550

\* All afterhour calls are received and dispatched through the South Gate Police Department number.

## **SECTION 5 - Legal Authority**

- D.13 (iii) **Legal Authority:** Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
- (a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);
  - (b) Require that sewers and connections be properly designed and constructed;
  - (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
  - (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and
  - (e) Enforce any violation of its sewer ordinances

### **5.1 Overview**

This chapter is intended to identify and describe the necessary legal authority that an agency must have in order to implement SSMP plans, programs, and procedures. Regulatory mechanisms that are used by cities quite often include City Ordinances, Codes, and Resolutions, State and Federal Laws, Licensing and Permitting Processes, Memorandum of Agreements, Contractual Agreements, as well as other programmatic mechanisms necessary to carry out asset management activities.

### **5.2 Purpose**

The basis of all authority to manage, operate, and maintain agency's infrastructure is derived from documents adopted by its elected board or council. In order to ensure that the City has the proper legal authority established to implement and enforce all of the programs required by the WDR, the City must first establish necessary legal authority to do so.

### **5.3 Minimum Requirements**

The SSMP must include the legal authority, through sewer use ordinances, service agreements, or other legally binding procedures, to:

- a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);
- b) Require that sewers and connections be properly designed and constructed;
- c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
- d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and
- e) Enforce any violation of its sewer ordinances.

### **5.4 Statutory Authority**

Pursuant to the California Government Code, Sections 37100 and 54350, the City Council, as the local legislative body, may by ordinances and resolutions make and enforce all rules and regulations necessary for the administration of the city's Sewer O&M plan. Such actions include, but are not limited to, the design, construction, cleaning, repair, reconstruction, rehabilitation, replacement, operation, maintenance, discharges into, blockage of, access to, and violation enforcement pertaining to the sanitary sewers within the City's System. Consistent with the law, several ordinances have been established by the City Council to govern all aspects of the Sewer O&M plan. The legal authorities for the specific areas stipulated in the WDR are discussed below.

South Gate Municipal Code (SGMC) Section 6.62.010 expressly adopted by reference, Sections 20.20.010 through 20.36.650 of the Los Angeles County Code (LACC) identified as Title 20 (Utilities), Division 2, as modified, to be the rules and regulations governing sanitary sewers and industrial wastes within the City of South Gate.

SGMC Section 9.05.010 has expressly adopted by reference, the 2007 edition of the State of California Plumbing Code (Title 24, Part 5 of the California Code of Regulations) based upon the 2006 Uniform Plumbing Code, as the Plumbing Code of the City of South Gate. Additionally, SGMC Section 9.05.010 has been updated and states that "the 2013 Edition of the State of California Plumbing Code (California Code of Regulations, Title 24, Part 5) based in the 2012 Uniform Plumbing Code, including any amendments and appendices thereof, as promulgated and published by the International Association of Plumbing and Mechanical Officials, is hereby adopted by reference as though fully set forth herein, and shall constitute and is hereby established as "the Plumbing Code of the City of South Gate".

#### **5.4.1 Authority to prohibit illicit discharges into the sewer system**

LACC Sections 20.36.010 and 20.36.400 of Title 20 prohibit unauthorized discharge of stormwater runoff, the dumping or deposit of offensive or damaging substances such as chemicals, debris, garbage, solid matter, grease, oils, tars, etc. which may clog, obstruct, or otherwise interfere with the effective use of the sewer system. Similar restrictions are contained in the Plumbing Code, Chapters 7, 10, and 11.

#### **5.4.2 Authority to require sewers and connections be properly designed and constructed**

Los Angeles County Code Sections 20.32.330, 340, 350, 580, 590, 600, 610, 620 and 630, require proper design and construction of new and rehabilitation work in the sanitary sewer

system within the City of South Gate. Additionally, the City will update this ordinance to add a requirement that all new sewer construction must be cleaned and CCTV'd before being accepted by the City.

**5.4.3 Authority to ensure access for maintenance, inspection, or repairs**

LACC Sections 20.24.090 and 20.24.140, authorizes the City Engineer the right to access to the sanitary sewer system for maintenance, repair and inspection within the City of South Gate.

LACC Section 20.24.080 of Title 20 requires the owner of property served by a house lateral, septic tank outlet, an industrial connection sewer, and appurtenances thereto to be responsible for its maintenance in a safe and sanitary manner.

**5.4.4 Authority limiting discharge of FOG and other debris that may cause blockage**

Chapter 10 of the Plumbing Code provides the Building Official (or other Authorized Authority) with legal authority to require installation of interceptors (clarifiers) where waste flow conditions necessitate the proper handling of the liquid waste stream flow to protect the sewer system and the public (commonly at food service establishments, processing facilities, industrial facilities, etc., that generate grease, oil, grit, acids, alkaline or flammable wastes). This authority would apply at any facility that generates FOG in an amount that will damage or otherwise increase the maintenance costs of the wastewater collection system. See Section 5.4.1 above for related prohibitions on discharges to the wastewater collection system

**5.4.5 Legal Authority to Enforce any Violation of Sewer Ordinances**

LACC Section 20.24.100 provides authority of the enforcement measures that can be taken by City Engineer.

**5.4.6 Legal Authority to Fund the operations & maintenance of the sewer system**

SGMC Section 6.63 "Sewer Maintenance Fund" provides the authority to deposit and transfer monies, sets the base service charge, and authorizes the City Council to adjust rates for the operation, maintenance, and improvement of the sanitary sewer system.



**SECTION 6 - Operation and Maintenance Program**

- D.13 (iv) **Operation and Maintenance Program:** The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:
- (a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
  - (b) Describe routine preventative operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
  - (c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
  - (d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance and require contractors to be appropriately trained; and
  - (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

## 6.1 Overview

This section of the SSMP describes how the City will operate and maintain the sanitary sewer system within its jurisdiction. It will involve the development and implementation of several major programs and activities including the production of maps, maintenance and cleaning schedules, and a comprehensive rehabilitation and replacement plan.

## 6.2 Purpose

Thorough assessment of the present condition of the sanitary sewer system, deficiencies and defects within the system can be identified so that these issues can be targeted and prioritized for rehabilitation. This program of preventative maintenance will help to ensure that costly catastrophic system failures are preempted and will serve to reduce the amount of SSOs to be reported within the City.

## 6.3 Minimum Requirements

At a minimum, each enrollee must:

- 1) Create and maintain an up-to-date map of the sanitary sewer system within an Enrollee's jurisdiction;
- 2) Develop and implement a Preventative Maintenance program that describes preventative operation and maintenance activities and a system to document scheduled and conducted activities;
- 3) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and rehabilitation actions, including regular inspections of the conditions within the system.
- 4) Provide regular training for staff and contractors
- 5) Provide equipment and replacement part inventories.

## 6.4 Preventive Maintenance Program

The City has developed a Preventative Maintenance program including cleaning of all sewer lines every one to two years. Additionally, the sewers are typically cleaned by putting high pressure water jetting nozzles in the pipe and manually removing debris from the downstream manhole and purchased equipment or staff-made appurtenances are inserted at the downstream manhole to capture and remove debris. City will also be implementing a comprehensive CCTV program to inspect all its sewer lines over a seven (7) year cycle.

The following is a summary of the key preventive maintenance activities and where applicable, frequencies for these services have been included:

- 6.4.1 Sewer O&M Mapping System – The City maintains “as-built” plans of the sewer facilities. Data on these plans, such as location, alignment, pipe material, size, etc. are stored in the drawing file system at City Hall. Overall sewer system information (generated in GIS) has been printed to map sheets. These maps have been distributed to the City's PWD and its street and sewer field crew, for reference, work scheduling, for responding to emergencies and to other assisting agencies as needed. Periodic updates of these maps are scheduled and requested by the PWD when it is necessary to reflect changes in the system.
- 6.4.2 Sewer Line, Manhole and Pump Station Inspection – On an as-need basis, sewer lines can be mirrored to assess a potential problem. However, a more thorough inspection using CCTV methods has been scheduled to be accomplished over a

seven-year cycle, with defined lengths and areas to be inspected every year.

Today's CCTV technology and tools digitize analog video output from the inspection camera on the fly while being recorded and displayed on a computer monitor used by the inspecting camera crew. While the video is being captured, a crew member views and logs events such as defects and observations using standard Pipeline Assessment and Certification Program (PACP) event codes. The digital video inspections files are transferred to an external hard drive and/or DVD disks for storage and subsequent reference use.

The inspection of manholes, interior and lid area, can be performed on a scheduled cycle to identify any structural defects, sewage flow condition, presence of vermin or rodents, deleterious industrial waste, odors and any signs of unusual settlement around the manholes and along joining sewer alignments.

- 6.4.3 Drop Manholes, Gas Trap Manholes and Siphons – Where these facilities exist, they are inspected and cleared of stoppages and flow restrictions on variable frequencies based on prior inspection records, but no less frequent than monthly.
- 6.4.4 Sewer Line Cleaning -- Sewer lines are typically cleaned by hydro jet or mechanical root cutting (rodding). The frequency of cleaning and inspection is based on inspection records and/or call-outs on reported complaints, but system cleaning is accomplished on a 2-year cycle. Sewer lines known to accumulate FOG, garbage grinds or other grit or have root intrusions are labeled maintenance “Hot Spots” and are put on a quarterly or monthly cleaning schedule. Pipe segments prone to root growth are periodically cleared using a chemical herbicide or root cutter. Those prone to accumulate FOG are periodically cleaned using caustics, surfactants, enzymes, microbes or high pressure jetting.
- 6.4.5 Vermin and Rodent Control -- Sewers infested by insects are chemically treated. Those infested by rodents are baited.
- 6.4.6 Work Scheduling and Documentation - Work orders are generated and tracked using a system called CitiTech CMMS. Maintenance activities (by city or contractor) are recorded in CitiTech CMMS and are kept on City's servers as well as at the City Yard located at 4244 Santa Ana Street.
- 6.4.3 Operating Revenues – Key to supporting a sound preventative maintenance program are the receipt of funds sufficient to support scheduled maintenance activities as described above. The City is utilizing revenues generated within the city service area based on current sewer service charge rates and total number of sewage units.

## **6.5 Rehabilitation and Replacement Plan**

Sewer facilities assessment and rehabilitation are an integral part of the city's SO&M program. A summary of recent years background of city capital improvement activities, a plan to identify and prioritize system deficiencies (condition assessment), and the programming of short-term and long-term rehabilitation projects and related funding development for those capital improvement projects are discussed below.

- 6.5.1 Recent Years CIP Activities – The City had developed a rehabilitation and

replacement plan in the past which have relied on the City's previous (1996) sewer master plan. This included removal and replacement of 5.3 miles of sewer pipe with vitrified clay pipe (VCP). Additionally 83.3 miles of sewer pipe were lined in place using cast in place pipe (CIPP) lining methods. This rehabilitation work was initiated in 2002 and completed in 2005, and involved 88.6 miles (74%) of the entire sewer system. The City will be updating its Sewer Master Plan in 2017. The new master plan will update the previous CIP recommendations from 1996.

- 6.5.2 Identification and Prioritization of System Deficiencies – Nearly all sewer pipelines within the City are made of concrete or vitrified clay and range in diameter from 6-inches to 33-inches. Sewer pipes in the original township area were constructed in the 1920's with the majority of the city's sewers being installed by 1950's. This results in a current sewer system age ranging from 40 years to over 90 years old.

Most of the concrete pipelines have been rehabilitated by CIPP lining methods between 2002 and 2005 with the follow-on CCTV inspection as the work was completed.

As the sewer collection system continues to age, the risk of failure also increases. The types of failure or risk include: deterioration collapse, blockage, overflow, excessive inflow and infiltration, and other potential service disruptions. The City will be actively addressing these issues by undertaking an update of its sewer master plan and updating and prioritizing the structural and hydraulic deficiency of the sewer collection system.

- 6.5.3 Short and Long Term Rehabilitation Action Plans – SGMC Section 6.63 authorizes the collection of fees for operations, maintenance, and for capital improvements, including rehabilitation and replacement, to the sanitary sewer system.

As previously described, the programmed CCTV inspection and evaluation activity is a key factor in the scheduling of any rehabilitation project. Those sewer segments previously inspected and evaluated will be scheduled for corrective action as funding is made available in the budget to perform the work.

In addition, as deteriorated lines are discovered during preventive maintenance activities, these locations are either immediately repaired by force account, use of emergency contractors or added into the list of future CIP projects.

## **6.6 Equipment Maintenance and Replacement Policy**

The City has a comprehensive equipment maintenance program. Equipment is regularly checked, adjusted, repaired or replaced as necessary. Those major fixed assets are replaced when they meet or exceed the City's established fixed assets replacement criteria based on age, mileage, hours of use, repair history, safety, etc. Replacement of or additions to the major assets are done through the annual budget process of the City.

## **6.7 Training for Field Operations Personnel and Contractors**

The SO&M personnel and the public works inspectors attend structured collection system

training classes or seminars given by other agencies including: California Occupational, Safety and Health Administration (CALOSHA), California Water Environment Association (CWEA), County Sanitation Districts' (CSD), etc. This is to keep them abreast with the latest information in the industry on how to safely and efficiently carry out their tasks. The City also utilizes informal training approaches, such as tailgate meetings, monthly safety meetings and apprenticeship training program from higher level staff

Additionally, only companies with well trained and experienced personnel are considered for emergency SSO mitigation or sewer construction and rehabilitation work.

## **SECTION 7 - Design and Performance Provisions**

### **D.13 (v) Design and Performance Provisions: :**

- (a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- (b) Procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.

### **7.1 Overview**

Development of standards for the design, construction, inspection, testing and acceptance of new, rehabilitated, or repaired portions for the collection system is key in ensuring a safe, and reliable collection system. Even if the City has existing standards in place a comprehensive review of these is required to establish meeting the SSMP criterion.

### **7.2 Purpose**

This requirement will create continuity within the system, preventing inconsistencies from leading to hydraulic deficiencies which can result in a sanitary sewer overflow.

### **7.3 Minimum Requirements**

At a minimum, each enrollee must:

- 1) Develop and implement consistent design and construction standards for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- 2) Develop and implement procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.

### **7.4 Design and construction standards and specification**

The City has adopted, by reference, Title 20 of the Los Angeles County Code. Part 3 of Section 20-32 in County's Code includes the general design and construction requirements for the City's wastewater collection system. The sections include the requirements for sewer pipe size, minimum grades, manholes, and construction requirements.

### **7.5 Procedures and standards for inspection and testing**

The City provides inspection for the installation of new and rehabilitation of deteriorated public sewer facilities within the City's jurisdiction. Inspectors are well trained in pipeline and pumping station construction, they attend training classes and educational seminars to stay familiar with advancements in the industry. The inspectors are also provided with adequate tools and materials to perform their jobs, including the project specific Construction Plans and

Specifications, the Standard Specifications and Standard Plans for Public Works Construction and the Public Works Inspector's Manual and reporting forms. The City also requires the preparation and submittal of "Record Drawings" of each as-constructed and completed project prior to final approval and acceptance of the project as public infrastructure.

**SECTION 8 - Overflow and Emergency Response Plan**

**D. 13 (vi) Overflow Emergency Response Plan** - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure an appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

**8.1 Overview**

This element of the SSMP consists of both the contingency plan and the procedures for responding to an overflow event.



## **8.2 Purpose**

Proper procedures must be established and put into practice in order to minimize the negative effects of an SSO. This section requires the implementation of a concise set of procedures that will seek to ensure that all negative effects of an SSO on public health and the environment are minimized. Proper overflow response procedures are one of the main reasons for the development of the WDRs for SSOs.

## **8.3 Minimum Requirements**

At a minimum, each enrollee must include in its overflow emergency response plan:

- 1) Proper notification procedures for primary responders and regulatory agencies;
- 2) A program to ensure appropriate response to all overflows;
- 3) Procedures to ensure prompt notification of appropriate officials or other potentially affected agencies for reporting purposes;
- 4) Procedures to ensure that all appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are properly trained;
- 5) Procedures to address emergency operations
- 6) A program to ensure all steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States.

## **8.4 Overflow Response Procedure**

The City provides 24-hour emergency services to investigate and act upon reports or complaints related to problems in the sewer system. Personnel are available 24-hours each day of the year to receive and act on any calls or automated alarms related to problems such as SSO's. During business hours, emergency calls are received by the operator, who will call and dispatch the nearest sewer maintenance crew to the problem site. For after hour emergencies, the Police Department dispatcher will contact the 'On-call' sewer maintenance worker, in the order listed on the emergency home telephone list. The on-call worker who receives the emergency call will investigate the complaints and take appropriate action, including immediate dispatch of a standby crew with necessary equipment to take care of the problem, or refer the call to other agencies if the problem is found to be under another's jurisdiction. These overflow reporting procedures are presented in a flow chart in Section 4

The crew responding to an overflow emergency is required to stop the overflow, contain it as much as possible, limit access to the contaminated area, and ensure that the facility or area is cleaned up and returned to normal operation. Residents or businesses in the immediate vicinity of the overflow are to be informed of the cause of the problem and the remedial action taken.

The County Health Department is notified of all overflows and if the overflow exceeds 1,000 gallons and or reaches the storm drain system, the Regional Water Quality Control Board and the State Office of Emergency Services are notified. The Flood Maintenance District (FMD) is notified of all overflows that discharge into the storm drain system. The role of FMD is to assist in tracing and capturing the spill as much as possible before it reaches the Waters of the United States. The agencies to be notified, method and time frame for notification, the phone/fax numbers of the agencies are presented in Section 8.4.1. The relevant data about the overflow, such as location, volume, agencies notified, etc. is recorded in field report forms and later stored in the computer. All field personnel are trained to be conversant with these procedures and to accurately report of SSO incidents. The SO&M time goal on responding to emergencies, such as SSO, floodouts, or serious stoppages/blockages, is 60 minutes.

8.4.1 Regulatory Agencies Notification and Time Frame

SSO Category	Type or Description	Agencies to be Notified	Type of notification and time frame	
			<p><b>Telephone/Fax</b>  <i>Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify the California Office of Emergency Services (OES) and obtain a notification control number.</i></p>	<p><b>Written Report/*Online Database</b>   <b>Call Cal OES at: (800) 852-7550</b></p>

<p>1</p>	<p>Discharges of untreated or partially treated wastewater of <u>any volume</u> resulting from an enrollee's sanitary sewer system failure or flow condition that:</p> <ul style="list-style-type: none"> <li>➤ Reach surface water and/or reach a drainage channel tributary to a surface water; or Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).</li> </ul>	<p>LA County Health Department, County Operator (notify if sewer discharge enters waters of the state)</p> <p>Flood Maintenance Division</p> <p>State Office of Emergency Services</p> <p>LA County Sanitation Districts Sanitation District (Report public sewer backups into dwellings or the street)</p> <p>Regional Water Quality Control Board</p> <p>State Water Resources Control Board</p>	<p>626-430-5420- Bus. Hrs 213-974-1234- After Hrs</p> <p>562-861-0316- Bus. Hrs</p> <p>800-852-7550 [24/7]</p> <p>562-437-6520 (Same for after hours)</p> <p>213-576-6657 - Bus. Hrs 213-305-2253 - After Hrs</p> <p>N/A</p>	<p>N/A N/A N/A N/A</p> <p>The City will submit a draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.</p>
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<b>2</b>	Discharges of untreated or partially treated wastewater <u>greater than or equal to 1,000 gallons</u> resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.	County Health Department  State Water Resources Control Board	626-430-5420-Bus. Hrs 213-974-1234-After Hrs  N/A	N/A N/A The City will submit a draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.
<b>3</b>	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.			The City will submit a certified report within 30 calendar days of the end of month in which SSO the occurred.
<b>Private Lateral Spill</b>	A discharge from a privately owned lateral.	County Health Department  State Water Resources Control Board	626-430-5420-Bus. Hrs 213-974-1234-After Hrs N/A	On-Line Database at enrollee's discretion.
<b>N/A</b>	No SSO in a calendar month	State Water Resources Control Board	N/A	Online Database Certified – Within 30 days after a calendar month end, file statement that no SSO occurred.

#### **8.4.2 Field Response, Report Protocol and Forms**

Corrective actions and reporting guides are described and an investigation and reporting format are included for reference use.

#### **8.4.3 Procedure to ensure that staff and contractors are aware of and are appropriately trained to follow Emergency Response Plan**

The SO&M Emergency Response Plan is available to key personnel who are responsible for managing or responding to SSO's. Copies of the City's instruction manuals are available to field crews and engineers at the office who manage or have the role of preparing SSO reports to regulatory agencies. The experience of the Contractors' emergency response team plays a very important part in the selection process during the selection of the City's as needed Emergency Contractors.

#### **8.4.4 Procedures to address emergency operations such as traffic and crowd control and other necessary response activities.**

The SO&M field personnel and employees of the emergency response contractors who are retained for SSO responses are well trained in traffic and crowd control. The City's vehicles are well equipped with traffic and crowd control tools, including orange traffic control cones, yellow tape, flashing lights, orange uniforms, first-aid supplies, etc.

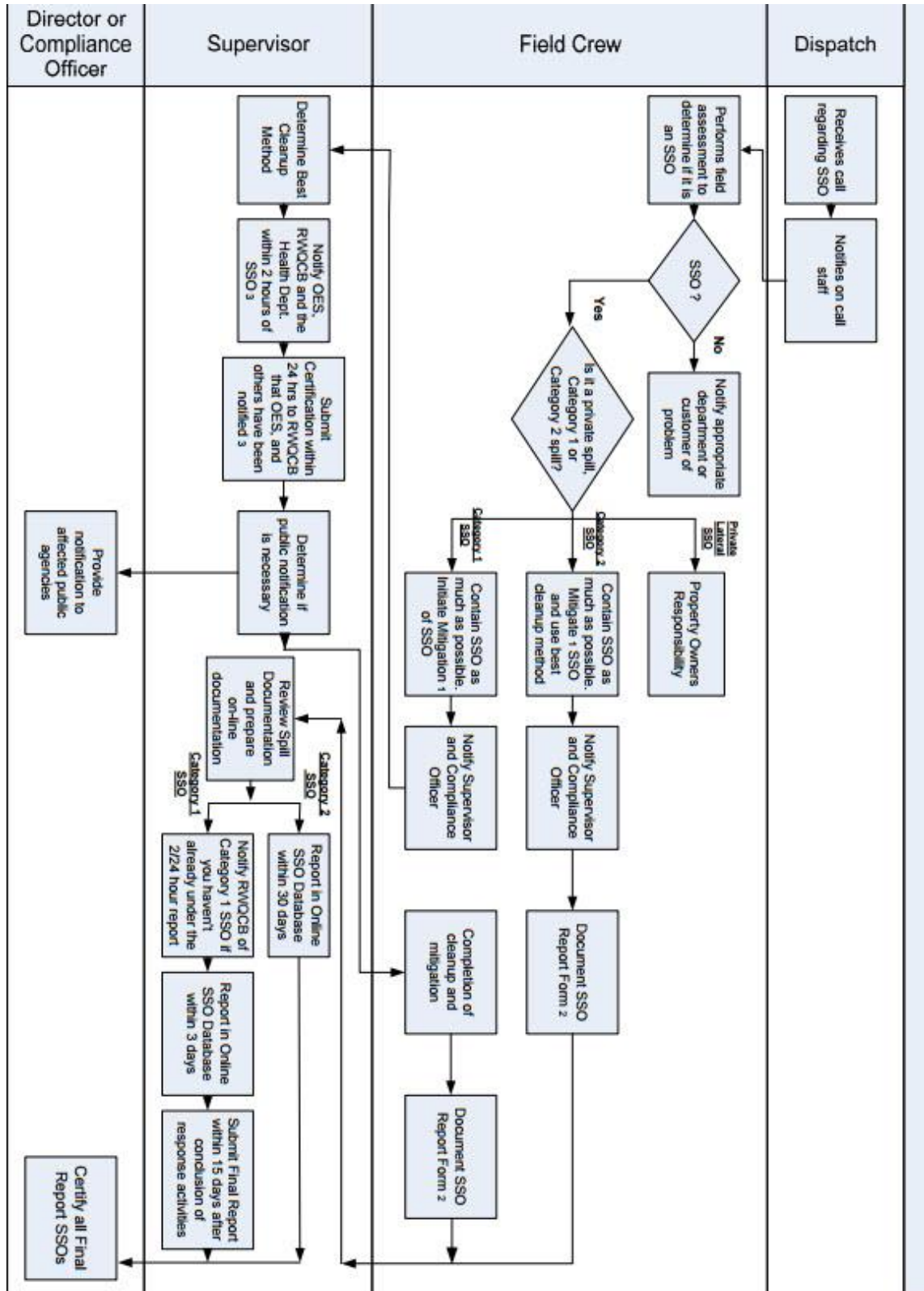
#### **8.4.5 Program to eliminate or minimize discharge of SSO into Waters of the United States**

The SO&M personnel and emergency contractors' crews are properly trained on methods and procedures to prevent or limit the amount of SSO into Waters of the United States and how to mitigate their impacts. Some of the methods include the use of sand bags to contain SSO's, absorbent tube socks to prevent SSO discharge into storm drain catch basins, and the use of vacuum trucks to suck up contained spills and dump effluent back into the collection system at other safe locations. SO&M personnel have the reduction of response time for SSO as one of the major goals. Reducing response time would significantly limit the amount of SSO that reaches the Waters of the United States.

#### **8.4.6 SSO flow estimation tables and photographs**

City crews have been provided with flow estimation pictures and tables that help in estimating sewer overflows.

The following chart shows the City's current Sanitary Sewer Overflow Response Plan. City will be updating this Response Plan to ensure its adequacy, in 2017.



**SECTION 9 - FOG Control**

**D. 13 (vii) FOG Control Program** - Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. The plan shall include the following as appropriate:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

### **9.1 Overview**

Under the Order, the City is required to evaluate its service area to determine whether a Fats, Oils, and Grease (FOG) control program is needed. If the City determines that a FOG program is not needed, it must provide justification for why it is not needed. If FOG is found to be a problem, the City must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system.

### **9.2 Purpose**

FOG is generated in most types of restaurants and food service establishments during food preparation, food service, and kitchen clean up. If flushed down the drain, FOG can build up in pipes, pumps, and equipment -- causing significant problems in the sanitary sewer system, including line blockages. Blockages can lead to sewer overflows, posing environmental and public health hazards. Understanding and controlling discharges of FOG will greatly reduce potential liability of SSOs and efforts required to keep lines clean. The key to reducing FOG in the sanitary sewer system includes both a good source control program, as well as preventative maintenance to ensure FOG that does build up within the system is cleaned before significant buildup can occur. Additionally, understanding your collection system and the type of discharges within the service area is paramount to the strategic implementation of a FOG program.

### **9.3 Minimum Requirements**

At a minimum, each enrollee must:

- 1) Determine if FOG is (or could be) an issue within the service area. (If FOG is found not to be an issue, then justification must be provided).
- 2) Create a plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- 3) Develop a plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- 4) Ensure that the appropriate legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- 5) Require the installation of grease removal devices (such as traps or interceptors), including design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- 6) Make sure that the agency has the authority to inspect grease producing facilities, enforcement authorities, and whether the agency has sufficient staff to inspect and enforce the FOG ordinance;
- 7) Identify sections of the sanitary sewer system that are subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- 8) Develop and implement a source control and/or cleaning program for all sources of FOG discharged to the sanitary sewer system.



#### **9.4 Public education and outreach program**

City proactively reaches out to users of its sewer system regarding the community's FOG source control program. Information on proper disposal of FOG and other SSO prevention measures, including installation of grease traps, backwater valves, sewer lateral maintenance, etc. is disseminated through publication of quarterly articles in newsletters, and notices with business license renewals, on a usual schedule. These notifications provide descriptions of grease control efforts that can be undertaken by homeowners and businesses alike.

The City uses John Hunter and Associates to provide informational and educational information to businesses and residents.

FOG in the local sewer system can be a prime contributor to an SSO and its corresponding health and safety impacts. Related health and safety issues can also result from the discharge of pharmaceuticals and pesticides into the sanitary sewer system. Although not usually a causative factor in sewer overflows, these chemicals can be toxic and have disruptive environmental and biological effects. Discharges of such chemical compounds into the sewers should also be avoided and addressed in the education and outreach program. *"No drugs or household pesticides down the drain"*, is a compatible health and safety advisory.

#### **9.5 Disposal method and schedule for FOG generated within the system service area**

Solidified FOG, found in the public sewer system during regular scheduled cleaning operations or clearing of a blockage, is trapped, collected and taken to an available local rendering company or qualifying dump bin (site), or to the Joint Water Pollution Control Plant (JWPCP), in the City of Carson, operated by CSD. The solid debris (FOG, roots, grit, etc.) collected from the system are taken to permitted FOG disposal facilities such as a land fill or the JWPCP. FOG in liquid form is flushed down by hydro jetting to receiving treatment facilities for disposal.

Additionally, City's FOG consultant also direct business to the [calfog.org](http://calfog.org) website so they can find FOG rendering business and also have a list that they provide during the inspections.

#### **9.6 The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.**

The legal authority to prohibit illicit discharges (i.e. FOG, etc.) into the sewer system is discussed in Section 5 of this document. Requiring grease interceptors at FSE to prevent the discharge of grease to the public sewer system and educating the public on proper disposal methods for FOG are also discussed in this chapter. Discharges from industrial classification facilities are usually controlled under the terms of an industrial wastewater discharge permit, which is issued and monitored by the local sewerage agency.

#### **9.7 Requirements to install grease removal devices, design standards, maintenance, BMP's, record keeping and reporting requirements.**

The City Building Official is authorized to monitor and enforce the terms of the Plumbing Code and the Public Health Code, respectively. This includes domestic waste disposal from residential and commercial facilities. The City 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.”

The DPW is charged with reviewing, permitting, and inspecting the existing 200+/- industrial waste facilities that discharge into the City’s wastewater collection system. Pretreatment devices are required for industrial waste generating facilities, including restaurants and other FSE. Grease removal devices are required to be designed per the PC, Chapter 10, approved, installed and operated in a manner to control discharges of FOG into the sanitary sewer system. Such devices are also to ensure that connected facilities do not create nuisances or menaces to the public peace, health or safety hazards, or adverse impacts on the public sewerage system, soil, underground and/or surface waters. If there is a FOG related problem associated with an industrial waste permit, City will take enforcement action against the permittee.

If during inspection of the sanitary sewer system, SO&M personnel determine that a FOG related problem exists and is traceable to a domestic sewage source of such character that is not satisfactory, under the City Code, pretreatment could be required or the discharge required to be eliminated. Domestic waste containing FOG can lead to SSO which are public nuisances, and California Health and Safety Code Division 5, Part 3, Chapter 6, Article 2 can also be used to impose appropriate domestic sewage discharge requirements.

The effectiveness of any grease removal devices is dependent upon their routine maintenance and monitoring/inspection for conformance with its intended purpose. Regular inspection and maintenance activity logging with quarterly reporting are required and are verified by City staff as part of the Industrial /Non-Domestic Waste Permit inspections.

**9.8 Authority to inspect grease producing facilities, to enforcement, and evidence of adequate staffing to inspect and enforce the FOG ordinance.**

As discussed in Section 5 of this document, the City has legal authority to inspect and enforce the local FOG ordinances. City has adequate staff to conduct inspections of the few pre-treatment facilities at the permitted FSE connected into the city sewer system. The funding mechanism now in place allows for increases in permit and other services charges if necessary to hire additional staff.

**9.9 Cleaning schedule for identified FOG prone sewer segments**

Experience has shown that FOG contributes to about 50% of the total SSO events that occur in a community sewer system. The remaining 50% is usually attributable to root intrusion into the system and other structural causes. As indicated in Section 6 of this document, FOG prone sections of City’s collection system, otherwise called "hot spots," are identified during routine maintenance operations and investigation of stoppages resulting in a SSO event. These “hot spots” are typically cleaned by hydro jetting and rodding or cutting if roots are encountered. Those portions of the system found to have persistent FOG problems are inspected and cleaned more frequently, depending on the magnitude of the problem. Furthermore, segments of the collection system with persistent FOG problems are referred to the DPW for additional evaluation and corrective actions.

For example, City has increased maintenance frequency in the known hot spot areas. Several known hot spot areas are equipped with Smart Manhole Covers. Food service

facilities discharging to the known hot spots have grease removal devices and their maintenance frequency is also increased. The maintenance of the grease interceptors and grease traps is verified during the annual Industrial Waste Inspection. If a facility is contributing excess amount of FOG and they do not have a grease removal device they will be notified by the Public Works Director to install a pretreatment system.

### **9.10 Source control measures developed and implemented for “hot spots”**

Each “hot spot” cause and condition is not the same. For each identified problem location, the means of effective maintenance is noted on the respective “hot spots” list for review and regular follow-up action by the sewer maintenance crews. The activities can be amended as needed.

### **9.11 Some BMPs for Fats, Oils and Grease**

Examples of BMPs for local application are on the following pages.

#### **Some Best Management Practice (BMP) for Fats, Oils, and Grease**

Residual fats, oils and grease (FOG) are by-products that food preparation and food service establishments and automotive service facilities and machine shops must constantly manage. Typically, FOG enters a facility’s plumbing from wash sinks and floor drains during daily operations. Sanitary sewer systems are not designed or equipped to handle accumulating FOG on the interior of sewer collection system pipes due to unmanaged – unmaintained discharges. Keeping FOG materials out of the plumbing system, by reasonable methods, is an important factor. The following are suggestions for proper FOG management:

#### **Bulk or Dry Clean-Up**

- Practice bulk and dry materials clean-up before using wet methods that use water.
- Remove bulk or other solid food and grease laden substances into a suitable container before rinsing or washing the initial containers or surfaces that will drain into the plumbing system.
- Keep drain screens in place and fully serviceable to avoid clogging drains or accumulating FOG or grit on the interiors of pipes.
- Do not pour grease, fats, or oils down the drain nor place food scraps in the drain.
- Use food grade paper to soak up oils and grease and dispose of appropriately.
- Use paper towels to wipe down surfaces and work areas. Cloth towels require washing and thereby introducing FOG back into the drains.

- Success of bulk or dry clean-up is dependent upon the behavior of individuals and their access to tools and materials for use in removing bulk and dry materials before washing.

#### **Spill Prevention**

- Preventing spills reduces the amount of waste that will require clean-up.
- A dry surface work place is safer for everyone in avoiding slips, trips and falls.
- Capture bulk or dryer materials and place them into an appropriate container.
- Empty containers before they are full to avoid spills.
- Cover any FOG container before transporting to the rendering storage container.
- Provide employees with proper tools to transport materials without spilling.

## Maintenance

- Whatever method(s) are being used to collect, filter and store FOG, ensure that equipment is regularly maintained.
- Employees should be aware of and trained to perform correct and scheduled cleaning procedures.
- A daily and weekly maintenance schedule is highly recommended.
- Contract with a responsible service company to regularly and thoroughly clean larger components and spaces requiring specialized equipment and skills (e.g. large hood filters, hot tanks, floor drain pipes, specialty tools).
- Smaller and less complex elements can be cleaned by hand by the user (e.g. small hood filters, counter/bench tops, sinks, storage areas, daily tools).
- Skim/filter fryer grease daily and test the oil to determine when change is necessary. Build-up of carbon deposits on the bottom of the fryer acts as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner. This extends the life of both the fryer and the oil.
- Avoid discharging fryer oil into a drain or grease trap, but dispose into a rendering container for transport to a rendering company.
- Cleaning intervals depend upon the type of product being prepared and the typical deposition of materials experienced. The larger the volume produced and deposits incurred, the more frequent the cleaning. This may warrant setting up a system of high use, high deposition work to be done in certain equipment that is cleaned more frequently than others to confine maintenance efforts.

## Grease Traps and Interceptors

- For grease traps and interceptors to be effective, the units must be properly sized, constructed and installed in a location to provide an adequate retention time for settling and accumulation of the FOG.
- For information on properly locating, constructing and sizing grease traps and interceptors, contact the local governmental agency and examine EPA guidance documents and UPC criteria.
- Ensure all grease-bearing drains discharge to the grease trap/interceptor.
- No toilet or shower waste should be plumbed to the trap/interceptor

## Oil and Grease Collection/Recycling and Food Donations

- FOG consists of commodities that if handled properly can be treated as a valuable resource.
- Some rendering companies will offer services free-of-charge and other will give a rebate on the materials collected. Contact local rendering representative for specific information and details.
- Use only covered rendering barrels and make sure all drain screens are installed.
- Use a 3-compartment sink for ware washing. Begin with a hot pre-wash, then a scouring detergent wash, then a hot rinse. Each step should be trapped to capture non-emulsified FOG.
- Donations can reduce disposal costs. Ensure that edible food is not washed or flushed down the drain. Edible food waste may be donated to a local food bank. Inedible food waste can be collected by a garbage feeder that will use discards for feeding livestock.

**SECTION 10 - System Evaluation and Capacity Assurance**

**D. 13 (viii) System Evaluation and Capacity Assurance**

**Plan:** The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

(a) **Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

(b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and

(c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

(d) **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14

### **10.1 Overview**

This element of the SSMP includes several major programs and activities regarding development of a capital improvement plan and hydraulic analysis. Most of the requirements would be satisfied by a recent collection system master plan.

### **10.2 Purpose**

An important step in attempting to minimize the amount of SSOs in a given system, one must determine how the system will react to different conditions and stresses. Once this is achieved, City officials can identify areas in need of improvement and prioritize projects for a capital improvement program.

### **10.3 Minimum Requirements**

At a minimum, each enrollee must:

- 1) Describe the methods used to identify areas of the sanitary sewer system that lack the sufficient capacity to convey an appropriate peakflow;
- 2) Establish consistent design criteria;
- 3) The identification of capacity needs and the approach used to take the results of the capacity evaluation to produce a prioritized list of capacity improvement projects; and
- 4) The development of a project schedule that addresses both condition-related and capacity-related projects.

### **10.4 System Evaluation**

To assess the adequacy of the existing sewer system, a hydraulic evaluation of the city's sewer system will be updated in 2017. The resulting report and recommended improvements will be added to this SSMP at that time.

### **10.5 Design Criteria**

SGMC Section 6.62.010 forms the foundation upon which the City Engineer is given the legal responsibility for ensuring sound, logical, and functional design of the public sewer infrastructure. The Code defines terms, establishes fees, sets out provisions for enforcement and maintenance, and sets the basis of design standards for sewers. For specifics on design and performance provisions, refer to Section 7.

### **10.6 Adequate Capacity**

City's Public Works Department is the first line of defense in ensuring that the public sewer infrastructure is adequately planned, sized, correctly designed and easily maintainable. PWD legal authority to perform this important task is set forth in the multiple documents discussed in Section 5 and as detailed below.

For any new or expanded sewage discharges, the city requires completion of a sewer capacity study, by a registered engineer, prior to giving approval for projects that can affect the capacity of the public sewer system. The completed study will analyze the capacity in the existing system and will set forth mitigation requirements for the applicant to ensure adequate capacity. The study will also justify the sizing of proposed lines to accommodate the peak flows from all areas tributary to the mainline sewer under consideration or pumping station, now and in the future. The approved capacity study is referenced directly by the city's plan checker when design plans for the new infrastructure are submitted to assure adequate capacity. All proposals for new connection to existing sewer must also comply with the DPW's policies for managing

available sewer capacity.

### **10.7 CIP Schedule**

An updated sewer CIP will be done upon completion of the new Sewer Master Plan update, and added to this document.

**SECTION 11 - Monitoring, Measurement, and Program Modification**

**D.13 (ix) Monitoring, Measurement, and Program**

**Modifications:** The Enrollee shall:

- a. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- b. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c. Assess the success of the preventative maintenance program;
- d. Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e. Identify and illustrate SSO trends, including: frequency, location, and volume

**11.1 Overview**

It is critical that the City monitors implementation of the SSMP elements, and measures the effectiveness of SSMP elements in reducing SSOs. Effectiveness should be measured by developing and tracking performance indicators on a regular basis. Performance indicators should be selected to meet the goals of the wastewater collection system agency.

**11.2 Purpose**

In order to effectively manage programs, performance measures that gauge success should be developed and data to support the findings must be collected. To this end, accurate and consistent data keeping is extremely important for successful sewer system management. It is imperative that the correct data is captured, in a format that is easily extractable, and that operations personnel understand their role in this process. Focus should be placed on performance metrics, components of trend tracking, and bench-marking procedures both internally and externally. Based upon data collected, decisions can be made as to changes that may be warranted and needed in order to maximize program efficiencies. Setting up a Monitoring, Measurement, and Program Modification program will allow a community to better manage and implement SSMP programs.

**11.3 Minimum Requirements**

At a minimum, the enrollee must:

- a. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- b. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c. Assess the success of the preventative maintenance program;
- d. Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e. Identify and illustrate SSO trends, including: frequency, location, and volume



## 11.4 Monitoring

Relevant data on all work done in the implementation and execution of the SSMP program will be documented and maintained in the DPW filing system and used in preparing the monthly Summary of Maintenance of Productivity. These data files are used in the evaluation of the effectiveness of the overall program.

## 11.5 Program Effectiveness Evaluation

The effectiveness of the program shall be monitored and tracked through the City Performance Measure Indicators of key activities to minimize sewer overflows. These include:

- total number of overflows
- total number equal to or greater than 1000 gallons discharged or reaching the Waters of the United States
- overflow response time
- reduction in repeated incidents of overflow at the same location
- reduction in number of overflows caused by flows exceeding the capacity of the collection system.

## 11.6 Program Modifications

The City will be establishing the preventive maintenance sewer metrics for use in monitoring, measuring and adjusting sewer maintenance activities. After these metrics are included in the City's work order system, they will be monitored on a regular basis. Until this time, City staff will compile and monitor the most relevant indicators, which include the number and causes of SSOs, length of pipes cleaned, length of pipes televised, and length of pipes repaired.

## 11.7 SSO Location Mapping and Trends

### *11.7.1 Location Map*

The locations of SSO occurrences are plotted annually on a citywide map. The causes of the SSO are also recorded. These maps are used for establishing SSO patterns, identifying hot spots as indicated by clusters on the maps, and for scheduling work assignments and providing information on SSO activities.

### *11.7.2 Mapping of SSO Frequencies*

The monthly numbers of SSO's are also depicted in charts and graphs. The charts are used to identify SSO trends and as an indicator of infiltration/inflow problems that need to be corrected. The graphs are used to identify SSO trends and to evaluate overall SSMP program success especially by comparing the graphs to different years and with results from other sewerage agencies.

**SECTION 12 - Program Audit Procedures**

**D.13 (x) SSMP Program Audits** - As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them

**12.1 Overview**

Audit programs are intended to provide controls for ensuring that all programs associated with the SSMP are being implemented as planned and managed appropriately. Audit outcomes should provide information about challenges and successes in implementing the SSMP by evaluating work practices and operations, documentation, procedures records and staff for implementation effectiveness and consistency. The audit will identify any program or policy changes that may be needed to continually improve effective implementation. Information collected as part of an audit should be used in to plan program or procedure revisions necessary to improve program performance.

**12.2 Purpose**

SSMP audit program development should be developed specifically for the sanitary sewer system, but agency-wide procedures should be incorporated to ensure program sustainability. The audit can contain information about successes in implementing the most recent version of the SSMP, and identify revisions that may be needed for a more effective program. Information collected as part of the Monitoring, Measurement, and Program Modifications program should be used in preparing the audit. Quite often, performance measures and other management indicators are developed, providing a baseline that performance can be measured against. Tables, figures, and charts can be used to summarize information about these indicators. An explanation of the SSMP development and accomplishments in improving the sewer system should be included in the audit, including:

- Progress made on development of SSMP elements, and if the sewer system agency is on schedule in developing all elements of the SSMP;
- SSMP implementation efforts over the timeframe in question;
- The effectiveness of implementing SSMP elements;
- A description of the additions and improvements made to the sanitary sewer collection system in the past reporting year; and
- A description of the additions and improvements planned for the upcoming reporting year with an estimated schedule for implementation.

### **12.3 Minimum Requirements**

The WDR requires that all agencies develop appropriate audit procedures necessary to evaluate the effectiveness of the SSMP, as well as the agency's compliance with all requirements identified in the WDR. The audit must identify any deficiencies in an agency's SSMP programs and include steps to correct these issues. At a minimum, audits must be conducted every two years and a report of the findings must be prepared and kept on file.

### **12.4 SSMP Program Audit**

The City will conduct periodic internal audits and prepare a report, at a minimum of every two years. The audit will focus on evaluating the operational and cost effectiveness of the SSMP as well as the City's compliance with all elements of the SSMP. This will include:

- Identification of any deficiencies in the SSMP
- Steps taken to correct any identified deficiencies
- Notes of interviews with key responding personnel and any contractors utilized
- Notes of operational observations, especially of each SSO event
- Notes on related equipment inspections
- Findings of all reviews of related records

The City hired an outside consultant this year to conduct a comprehensive audit and gap analysis. The results and recommendations of this audit was used to update the SSMP document. All audits including the 2014 audit and gap analysis will be kept on file in the Office of the City Clerk, the DPW office and at the field maintenance yard site.

### **12.5 SSMP Certification**

The SSMP has been presented to and acted upon by the South Gate City Council at a public meeting. Subsequent SSMP approval must also be considered and acted upon at a public meeting. Once it is approved, the Director of Public Works must certify its approval in compliance with the WDR requirements, including completion of the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form and sending the signed form to:

State Water Resources Control Board  
Division of Water Quality  
Attn: SSO Program Manager  
P.O. Box 100  
Sacramento, CA 95812

### **12.6 SSMP Modification and Re-certification**

The SSMP must be updated every five years to keep it current. When significant amendments are made to any portion or portions of the SSMP, it must be resubmitted to the City Council for approval and re-certification. The re-certification shall be in accordance with the certification process described in section 12.5 above.

## **SECTION 13 - Communication Program**

(xi) **Communication Program** – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented. The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee’s sanitary sewer system.

### **13.1 Overview**

Communication programs are often underrated and overlooked. However, an effective communication program may end up being the key element that keeps your organization from missing critical SSMP deadlines. Involving the public early and at appropriate times will help your organization avoid last minute comments that delay approval of your SSMP by your governing body. A quality communication program with satellite agencies will help to minimize negative operational impacts on your plant or collection system.

It is important to identify an individual who will be responsible for development of your communication program. Larger agencies will typically have Communications and Media Officers or Public Information Officers who are appropriate to lead the development of the communication program. Smaller agencies who don’t have these staff in-house should look to those within the agency who have exhibited strong writing skills, public speaking skills, experience with customer interface, or have successfully completed controversial projects. A self-assessment and rough timeline follow to help you on your way to a successful communication program!

### **13.2 Purpose**

Identifying key stakeholders and key issues, and thinking about how various stakeholders might react are the first steps to developing a communication plan. Understanding what elements of an SSMP they will be most concerned with, is one of the many potential considerations that an agency may identify. Involving the right stakeholders on potentially controversial issues as early as possible is important to the success of any new program. Emphasizing collaboration and shared goals to reach a workable solution will not always ensure buy off, but will promote ownership and understanding. Avoiding proper outreach efforts for controversial issues in the hope that interested parties won’t catch on usually backfires. These issues should be considered when developing a communication program.

### **13.3 Minimum Requirements**

- a) The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

- b) The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

#### **13.4 Communication**

The City will provide all stakeholders and interested parties, the general public and other agencies, with status updates on the development and implementation of the SSMP and consider comments received from them. The City will utilize media such as quarterly newsletter, billing insert, special brochures, annual reports, notices in newspapers, and the City's home web page for conveying this information. Additionally, the City will:

- *Identify an individual within its organization who is responsible for development, implementation, and interface for the communication program.*
- *Identify resources necessary to solicit and incorporate input on each phase of your SSMP (development, implementation, and performance), as well as document your outreach efforts.*
- *Identify key community stakeholders and key issues that various stakeholders may be interested in and/or concerned with.*
- *Make sure to involve the right stakeholders on potentially controversial issues as early as possible. Emphasize collaboration and shared goals to reach a workable solution.*
- *Create a list of key milestones in each phase of your SSMP when stakeholder input would be most useful and effective.*
- *Create a convenient mechanism for stakeholder input. Additionally, key considerations, while developing a communication program include:*
- *Consider the development of a variety of communication methods, including newsletters, public meetings, web pages, and public service announcements. Different agencies will find that different communication methods are effective. Look for a method that reaches the desired audience at a reasonable cost.*
- *Consider joint efforts to develop a website with other agencies or professional organizations and share costs. The website could contain general information about the new Waste Discharge Requirements and SSMP components, provide space to make documents available for public review, and contain contact, meeting times and locations, and other agency-specific information.*
- *For communication with other satellite agencies, consider regular coordination meetings, annual surveys for changes in their system, and/or web pages devoted to satellite agency issues.*
- *Make sure to have identified a staff person responsible for satellite agency coordination. This person will ensure that the program is sustained, and City's efforts to get the program up and running aren't wasted once the SSMP is complete.*

#### **13.5 SSMP Availability**

Copies of the SSMP will be maintained in the City offices of the City Clerk, the City Engineer, and the Director of Public Works and at each SO&M field yard sites, with applicable

summaries, reports, and notices posted on the City's home web page. The adopted document shall also be made readily available to the Regional Water Quality Control Board (Region No. 4) representatives upon request and to the operators of any collection system or treatment facility downstream of the City's sanitary sewer system.