

Sewer System Management Plan
(Final Report)
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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

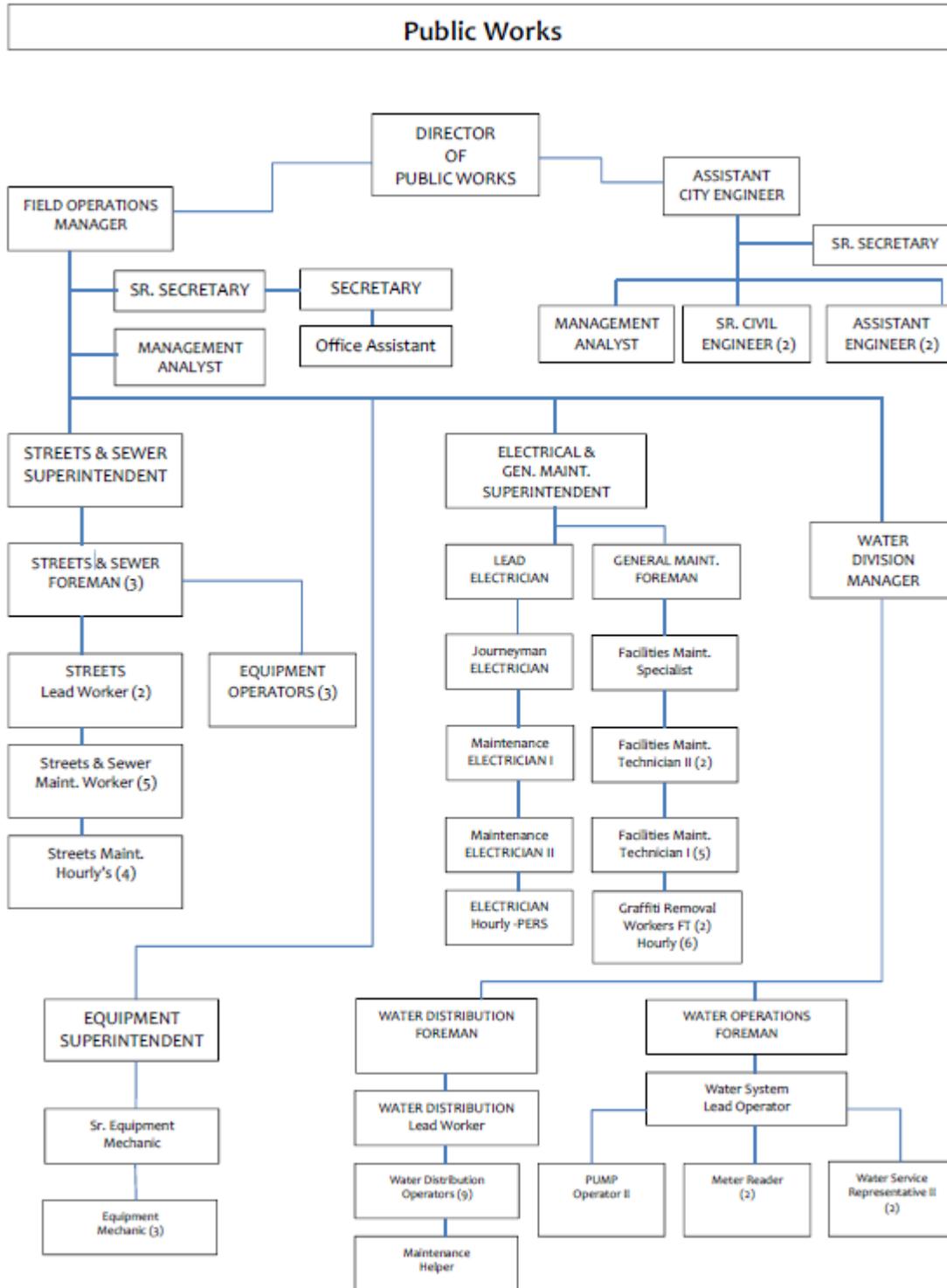
The City is required to apply for coverage under the WDR for facilities it owns. The City is required prepare a comprehensive SSMP, and if it has not yet fully adopted applicable codes, local ordinances or resolutions governing the performance of items stipulated in the WDR, it will promptly undertake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

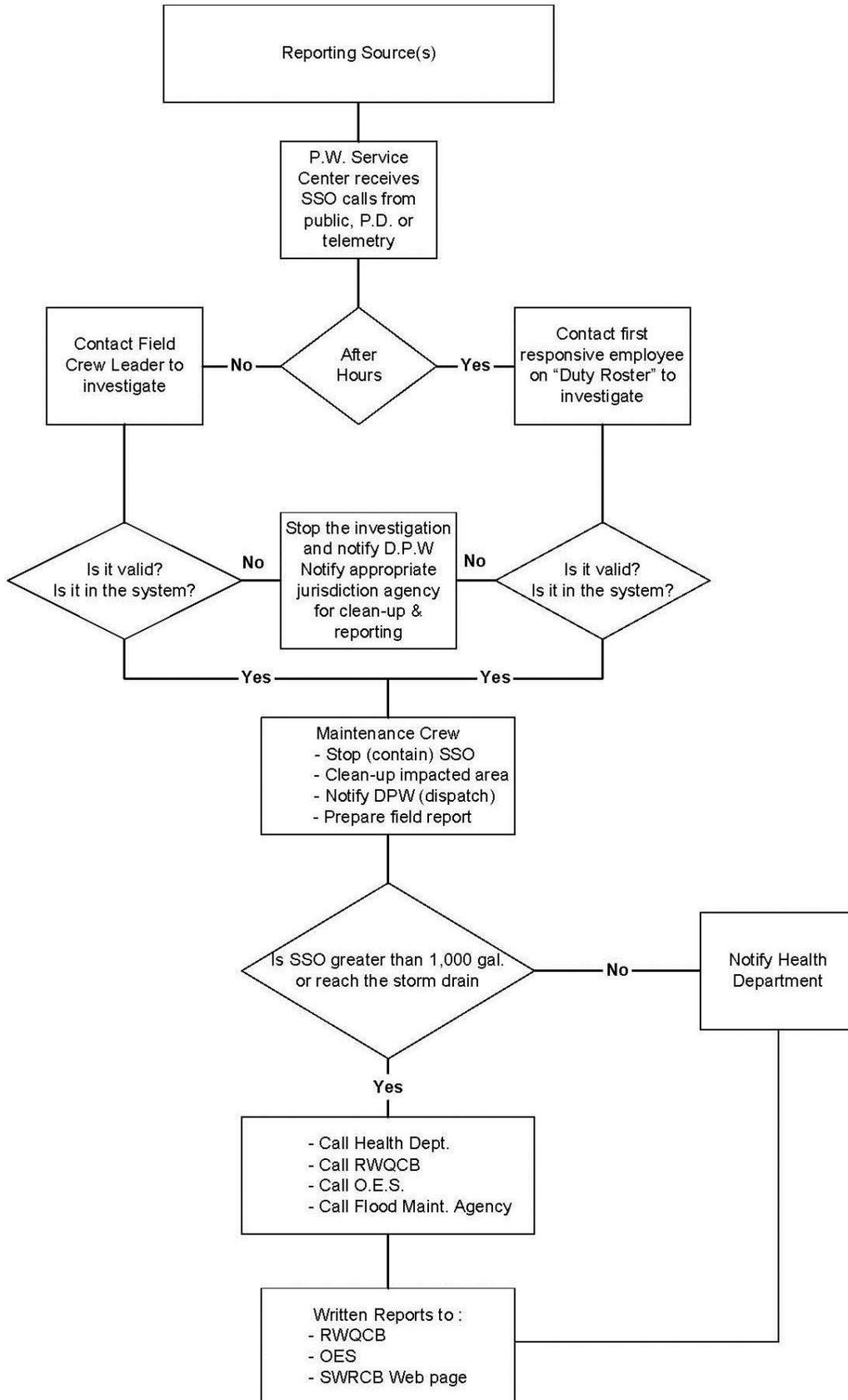
relationship of revenues vs expenses for the sewer system, facilitating and tracking any emergency related expenses incurred and participating in the annual audit of the sewer system operations and maintenance functions.

- 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>Telephone/Fax <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>Written Report/*Online Database Call Cal OES at: (800) 852-7550</p>

1	<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"> ➤ 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). 	<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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2	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.
3	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.
Private Lateral Spill	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.
N/A	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.

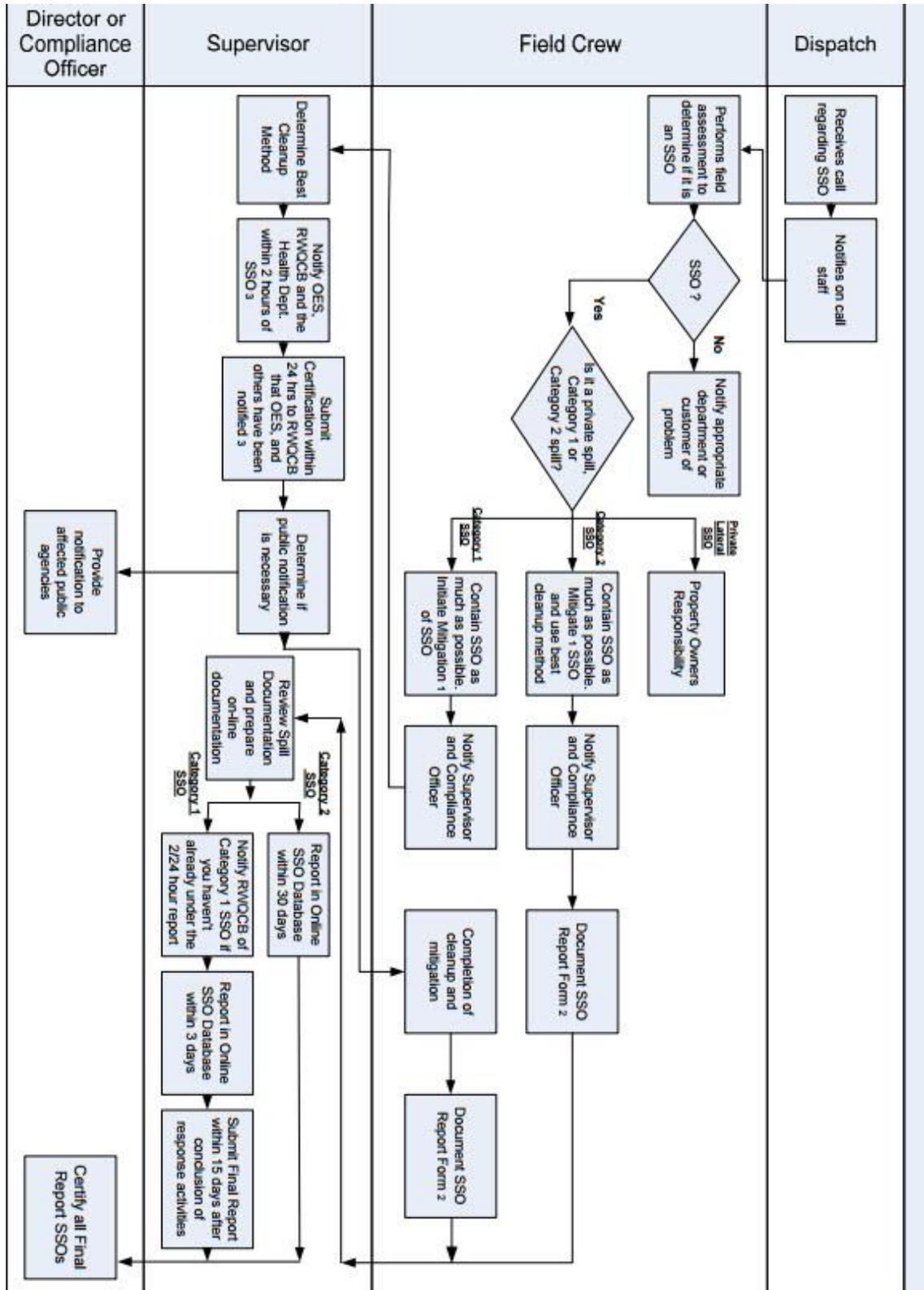
8.4.5 Program to eliminate or minimize discharge of SSO into Waters of the United States

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 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 sewer 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.