Attachment A

CITY OF PASADENA

# CITY OF PASADENA
# SEWER SYSTEM MANAGEMENT PLAN

**NOVEMBER 2019**

# CITY OF PASADENA

# SEWER SYSTEM MANAGEMENT PLAN (SSMP)

CITY OF PASADENA DEPARTMENT OF PUBLIC WORKS
100 N. Garfield Avenue Room N306
Pasadena, California 91101

Pursuant to the provisions of the
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006.0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS (WDR)
FOR SANITARY SEWER SYSTEMS

November 2019

## TABLE OF CONTENTS

## ABBREVIATIONS / ACRONYMS

| | |
|---|---|
| APWA | American Public Works Association |
| BMP | Best Management Practice |
| CCTV | Closed-Circuit Television |
| CFR | Code of Federal Regulations |
| CIP | Capital Improvement Program |
| CIWQS | California Integrated Water Quality System |
| CM | Corrective Maintenance |
| CMMS | Computerized Maintenance Management System |
| COPHMP | City of Pasadena Hazardous Materials Personnel |
| CSCS | Collection System Crew Supervisor |
| CWEA | California Water Environment Association |
| City | City of Pasadena |
| EHD | Environmental Health Division |
| ERP | Emergency Response Plan |
| FOG | Fats, Oils, and Grease |
| gpm | Gallons per minute |
| GPS | Global Positioning System |
| GWDR | General Waste Discharge Requirements also referred to as the Waste Discharge Requirements (WDR) |
| I/I | Inflow / Infiltration |
| LACSD | Los Angeles County Sanitation District |
| LRO | Legally Responsible Official |
| MRP | Monitoring and Reporting Program |
| MS4 | Municipal Separate Storm Sewer System |
| O&M | Operation and Maintenance |
| OES | Office of Emergency Services |
| Order | SWRCB Order No. 2006-0003-DWQ adopted May 2, 2006 |
| PM | Preventative Maintenance |
| PMC | Pasadena Municipal Code |
| PMP | Preventative Maintenance Program |
| PWWF | Peak wet weather flow |
| RWQCB | Regional Water Quality Control Board |
| SECAP | System Evaluation and Capacity Assurance Plan |
| SOP | Standard Operating Procedure or Standard Maintenance Procedure |
| SSO | Sanitary Sewer Overflow and any sewer spill or overflow of sewage |
| SSORP | Sanitary Sewer Overflow Response Plan |
| SSMP | Sewer System Management Plan |
| SWIWM | Street Maintenance and Integrated Waste Management |
| SWRCB | State Water Resources Control Board |
| WDR | Waste Discharge Requirements also referred to as the General Waste Discharge Requirements (GWDR) |
| WWTP | Wastewater Treatment Plant |

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# INTRODUCTION

On May 2, 2006 the SWRCB adopted Order Number 2006-0003-DWQ that requires all publicly-owned sewage collection systems having more than one mile of pipeline develop, implement and fund a Sewer System Management Plan (SSMP), which establishes the minimum requirements under which a public collection system must be operated and maintained. The purpose of the Order is to prevent sanitary sewer overflows (SSOs), to provide a plan and schedule for measures to be implemented to prevent SSOs, as well as measures to effectively clean up and report the spills.

The City of Pasadena (City) Department of Public Works (DPW) operates and maintains its own sanitary collection system. The City's sanitary collection system consists of approximately 328 miles of gravity pipelines, serving the majority of parcels within the City's 23.1 square mile City limits, and conveys an annual average flow of approximately 14 million gallons per day (MGD). The City's wastewater collection system conveys untreated wastewater to Los Angeles County Sanitation District's (LACSD) trunk sewer system via 92 separate connections.

The system has three City-owned lift stations and seven privately owned lift stations. The City-owned lift stations include:

- Rosemont Pump Station located at 1910 Rosemont Avenue
- Rockwood Pump Station located at Rockwood Road and La Loma Road
- Busch Garden Pump Station located at 1170 Busch Garden Court.

In preparation for this SSMP, the City has undertaken several major projects to ensure the sustained reliability of the sanitary collection system. A comprehensive Sewer System Master Plan Update is currently underway that includes flow studies for capacity and initial system condition assessments use to recommend projects for the CIP.

This SSMP reflects the ongoing day-to-day activities of the City of Pasadena for the management, operation, maintenance, and funding of the City's sanitary collection system. As so, this SSMP becomes a living document subject to constant review and revision as conditions and needs of the collection systems change. This SSMP relies on numerous supporting documents, also subject to change, that form the basis for how the City conducts its collection system operation. The most current version, although it may be subject to update at any time, will be found at the City of Pasadena's Department of Public Works offices.

In September, 2013, the SWRCB made substantial changes to the Monitoring and Reporting requirements for sanitary sewer overflows. These new requirements, Order Number WQ 2013-0058-EXEC to the Monitoring and Reporting Program are discussed in Chapter 3, Section 3.4.1 and details how the City is organized to respond and report sanitary sewer overflows.

## DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

   (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

   (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

   (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

   For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipe or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, City, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order. The City of Pasadena is the Enrollee.

4. **SSO Reporting System** – Online spill reporting system that 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.

5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

7. **Nuisance** - California Water Code 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.

8. **WDR** – State Water Resources Control Board (SWRCB) Order No. 2006.0003-DWQ, known as the WASTE DISCHARGE REQUIREMENTS (WDR), which was adopted May 2, 2006.

9. **MRP** – SWRCB Order No. WQ 2013-0058-EXEC, known as the MONITORING AND REPORTING PROGRAM (MRP), which was adopted September 9, 2013.

# CHAPTER 1 – PROHIBITIONS AND PROVISIONS

This chapter describes the sewage discharge prohibitions and thirteen provisions prescribed in the Order.

## 1.1 Prohibitions

To meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, the discharger is required to comply with the following prohibitions:

- Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.
- Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

## 1.2 Provisions

The discharger must meet the following thirteen provisions:

1. The Enrollee must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.

2. It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with the general WDRs. Nothing in the general WDRs shall be:

   (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;

   (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;

   (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or

   (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.

3. The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.

4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

5. All SSOs must be reported in accordance with Section G of the general WDRs.

6. In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:

   (i) The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;

   (ii) The Enrollee can identify the cause or likely cause of the discharge event;

   (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.

   (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;

   (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:

   - Proper management, operation and maintenance;
   - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);

- Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
- Installation of adequate backup equipment; and
- Inflow and infiltration prevention and control to the extent practicable.

(vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

(vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.

7. When a sanitary sewer overflow occurs, the Enrollee shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

   The Enrollee shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

   - Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;
   - Vacuum truck recovery of sanitary sewer overflows and wash down water;
   - Cleanup of debris at the overflow site;
   - System modifications to prevent another SSO at the same location;
   - Adequate sampling to determine the nature and impact of the release; and
   - Adequate public notification to protect the public from exposure to the SSO.

8. The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.

9. The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.

10. The Enrollee shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Enrollee.

11. The Enrollee shall develop and implement a written Sewer System Management Plan and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

12. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)' signature and stamp.

13. The mandatory elements of the SSMP are specified below. However, if the Enrollee believes that any element of this section is not appropriate or applicable to the Enrollee's sanitary sewer system, the SSMP program does not need to address that element. The Enrollee must justify why that element is not applicable. The SSMP must be approved by the deadlines listed in the SSMP Time Schedule in Section D.15 of the WDR.

# CHAPTER 2 – GOALS

This chapter describes the goals of the Sewer System Management Plan (SSMP). The goal of the SSMP is to provide a documented plan that describes all collection system activities and programs employed by an Enrollee 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 of Pasadena is required to comply with the "State Water Resources Control Board (SWRCB), Order No. 2006-0030 DWQ" (Order) on General Waste Discharge Requirements (WDR) for publicly owned sewage collection agencies having more than one mile of collection pipelines.

The Pasadena DPW is charged with the implementation and enforcement of this SSMP. Through this charge, the DPW will coordinate with other City and non-City agencies to meet the goals and objectives of this SSMP. In particular, the DPW's Engineering Division ensures the proper design of new and replacement City sewers and with the City's Environmental Health Division to ensure compliance with the City's proactive Fats, Oil, and Grease Program (FOG).

## 2.1 Purpose

This element describes the City of Pasadena's stated goals of the SSMP and is intended to clarify the City's desired level of service being provided to their customers. The purpose of the Order is to prevent sanitary sewer overflows (SSOs). The City is required to prepare and maintain an SSMP to support this purpose.

## 2.2 Goals

The City of Pasadena's SSMP outlines the City's plan to achieve the goal of properly managing, operating, and maintaining the sanitary sewer system to prevent and reduce SSOs, and to mitigate any SSOs that may occur. More specifically, the goals of Pasadena's SSMP are:

1. To properly manage, operate, and maintain all portions of the wastewater collection system.
2. To provide adequate capacity to convey the peak wastewater flows
3. To control Inflow and Infiltration to minimize peak wastewater flows.
4. To minimize the frequency of SSOs.
5. To mitigate the impacts associated with any SSOs that may occur.
6. To meet all applicable regulatory notification and reporting requirements.

As required by the Order, a copy of the SSMP is maintained at the City of Pasadena DPW and is available to the public, state, and RWQCB upon request (as discussed in, Section D, Provisions, Item 11) and is available to the sanitary collection system operating and maintenance personnel at all times.

The City will also comply with the Order Number WQ 2013-0058-EXEC to the Monitoring and Reporting Program and all future revisions, included by reference in the Order.

## 2.3 About This Document

The City has prepared this SSMP to ensure compliance with the Order. This SSMP pertains to the management, operation, and maintenance of the collection system. This SSMP document is divided into chapters with each chapter dedicated to a specific element of the WDR. Within each chapter the compliance efforts of the City are listed.

Each chapter contains the requirement taken from the WDR and the plan the City utilizes to comply with that requirement. The Compliance Summary of each chapter summarizes the program or activities the City utilizes for compliance. The Compliance Documents section lists the supporting documents, and their location, that the City has developed as part of its SSMP. Roles and Responsibilities (located only in Chapter 3 – Organization) contain the title and description of duties for the City staff positions responsible for developing and/or implementing the elements of the SSMP.

Actual contact information for the listed job titles is maintained as a separate file available at the City of Pasadena. This is done to facilitate staff changes and protect staff privacy.

# CHAPTER 3 – ORGANIZATION

This chapter describes the City's organization and chain of communication. The Order requires the following:

(a) The name of the responsible or authorized representative as described in Section J of this Order (WDR).

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and

(c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services [OES]).

## 3.1 Name of Responsible or Authorized Representative

The City of Pasadena Municipal Code (PMC) details authoritative powers provided to City employees. Chapter 13.24 Article I of Title 13 Utilities and Sewers lists the personnel responsible with administering the provisions of said Chapter.

The personnel that are prescribed as responsible in charge are as follows:

1. For the sewer construction and design portion of Chapter 13.24, the City Engineer as provided by Section 13.24.130 and a deputy or other person authorized by said City Engineer as provided by Section 13.24.140.
2. For the sewer maintenance and operation portion of Chapter 13.24 and as described in Section J of SWRCB Order No. 2006-0003, the Public Works Administrator is in charge of signing and certifying all reports, memorandums, and other information related to this SSMP.

The Pasadena Assistant City Engineer is the Legally Responsible Official (LRO) listed on the Notice of Intent (NOI) and is responsible for the certification of SSO reports.

Table 3-1 lists in descending order the persons authorized to administer the provisions of this SSMP.

**Table 3-1. Authorized SSMP Administrators**

| Title | Department | Phone | Email |
|---|---|---|---|
| Assistant City Engineer (Administrative and Management) | Public Works | (626) 744-4307 | bmaue@cityofpasadena.net |

| Title | Department | Phone | Email |
|---|---|---|---|
| Public Works Superintendent (O&M) | Public Works | (626) 744-4148 | atorres@cityofpasadena.net |

## 3.2 Administrative and Maintenance Positions

The Order requires 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. The Roles and Responsibilities section of this chapter outlines the various positions responsible for the development and implementation of the SSMP for the City of Pasadena. The included organizational charts list the titles of the positions responsible for the development and implementation of the SSMP in a hierarchal format. Current names and contact information for all positions is available at the City of Pasadena DPW.

### 3.3.1 Compliance Summary

The organization charts for the City's SMIWM, Engineering and Public Health divisions include the titles of all responsible officials in hierarchal format and are included in Appendix A. The City's organization is revised as necessary to meet changing conditions. Organizational charts are periodically modified to reflect changes in the organization with updated organizational charts being available at the City of Pasadena DPW. Names and contact information for all City of Pasadena staff are available at the City of Pasadena DPW offices. A narrative description of each positions involvement in the development and implementation of the SSMP is included in the Roles and Responsibilities section of this chapter.

### 3.3.2 Compliance Documents

The following lists and organizational charts detail the filled positions of the City's organizational structure. Each is located at the City of Pasadena DPW office.

- Updated organizational charts
- Updated listing of staff positions
- Updated staff contact information

### 3.3.3 Roles and Responsibilities

- The USEPA is authorized under the Clean Water Act to enforce the Capacity Management, Operations, and Maintenance (CMOM) requirements on the states. In response, the SWRCB and R9WRCB have adopted various orders. Relevant to this SSMP Development Plan are the **SWRCB Order DWQ 2006-0003** and **R9WQCB Order 2006-0013**.

- The City Council is responsible for adopting each article of compliance with orders issued by the State Water Resources Control Board and the Region 4 Water Quality Control Board.
- The **LACSD** operates and manages the wastewater treatment services for the member cities, including the City of Pasadena. The City has no formal agreement with LACSD as the Sanitary Districts were formed under the authority provided by the Sanitary District Act of 1923. LACSD has a wastewater ordinance for which they require all members to comply.
- The **State and Regional Board** are responsible to provide direction, support, and enforcement of their respective orders which are based on the Clean Water Act, Porter-Cologne Act, and other specific regulations. They work to coordinating orders to eliminate redundancy and enforcement of their orders.
- The **City Attorney** is appointed by the City Council is responsible for legal services for the City. The City Attorney is assigned to the WDR compliance program for review of all orders, regulations, and statutes; development of local ordinances for implementation of WDR orders; handling of code compliance cases requiring legal assistance; as well as coordinating with the City Manager and staff to ensure enforcement of all local ordinances to reduce and eliminate SSOs.
- The **Finance Director** is responsible for managing the budgeting and funding processes required to support the WDR program. These include preparation of the Operating Budget, Capital Improvement Program Budget, any adjustments and modifications, as well as, managing any bond programs that may be required to fund needed improvements, all in coordination with and support of the relevant departments. The Sewer Billings are also managed under the direction of this director.
- The **City Engineer** is responsible for providing overall direction, delegating authority, and facilitating coordination between the departmental divisions of Public Works, Water and Power, Transportation, Planning, Code Compliance, and Engineering, as well as other City departments. He/she also support lateral coordination between other City Departments and other jurisdictions involved in WDR compliance activities.
- The **Assistant City Engineer**, the LRO as designated by the Public Works Administrator, is responsible for certifying CIWQS reports and supporting the City Engineer with the development of engineering projects within the City, including the development or oversight of engineering projects and studies for the sanitary sewer collection system. The Assistant City Engineer manages the Civil (streets/storm water/sewers) and Inspection groups.
- The **Principal Engineer** is responsible for all aspects of sanitation engineering (streets/storm water/sewer), including private development review, standards, planning, designing, and construction engineering for CIP projects, budgeting, interagency coordination, and maintaining flow agreements. This person will periodically collect and analyze all WDR tracking data in preparing bi-annual program audits and 5-year reauthorizations of the SSMP. Additionally, this

person is responsible for creation of and maintenance of the sewer and storm water GISs and for communicating routinely with satellite systems.

- The **Public Works Administrator** is responsible for all aspects of sewer systems operations and maintenance, divided into street cleaning and sewer maintenance/storm drains. This person is responsible for managing all maintenance and pipeline condition assessment work orders, along with all required monitoring, measurement, and program modifications that may be required to keep the program efficient. This persona is also responsible for developing and managing the FOG components of the WDR compliance program. Several **Code Enforcement Officers** will be authorized to enforce storm water and sewer/WDR codes. An **Environmental Specialist** position is anticipated to assist in storm water and WDR compliance activities.
- The **Public Information Officer** helps with the required outreach and education components, including, but not limited to, publications, press releases, and workshops. Additionally, this person will be in charge of developing the Communication Program to communicate interactively with the service population.
- The **Building Official** is responsible for reviewing any building plans for conformance to current building codes. Specifically, this position will be requiring that any grease interceptors, backflow preventers, or other onsite private sewer systems be designed and built according to the currently adopted building department requirements.
- The **ROW Agent** is responsible for researching and tracking easements, including sewer. Where easements are determined to be deficient or needed for a certain project, this person researches and negotiates the needed right of way. If negotiations fail and condemnation is required, this person works with the City Attorney's office and contract legal counsel to pursue the matter.
- All divisions will maintain relevant tracking data as required to assist with the Monitoring, Measurement, and Performance Program.

## 3.4 Chain of Communication

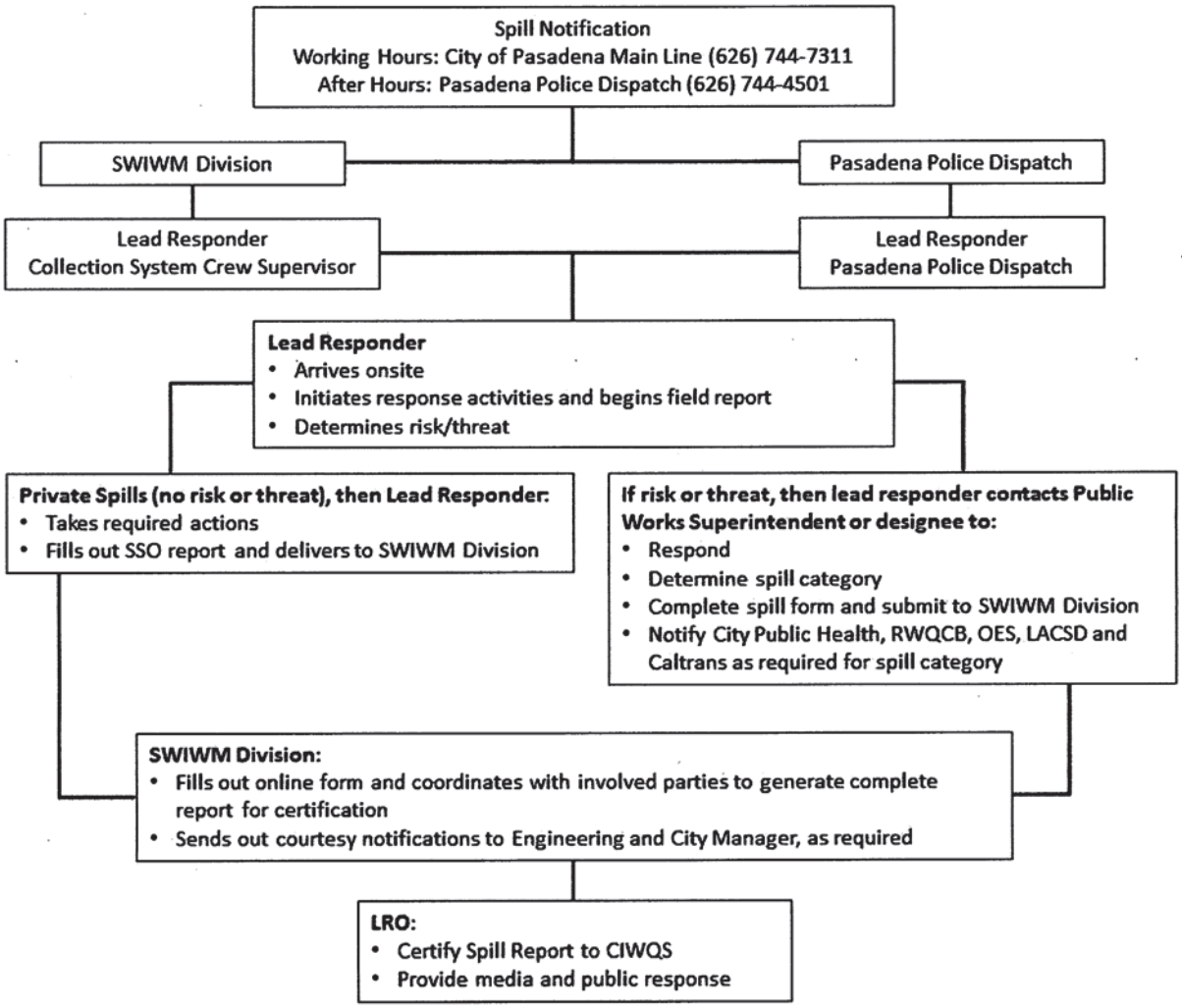
The Order requires the chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable.

### 3.4.1 Compliance Summary

The SSO Chain of Communications flow chart shows the chain of communication for reporting SSOs. This flowchart, along with the reporting guidelines, was developed to manage the reporting process. The Reporting Guidelines explains the thresholds for SSO reporting, the agencies that must be notified, and the reporting timeframes. The detailed procedures utilized by the City for SSO reporting is in the City of Pasadena Sewer Overflow Response Plan, included in Appendix B of this SSMP. This plan is kept updated by the Wastewater Division under the direction of the Wastewater Supervisor,

Public Services Director, and Director of Engineering and is executed and signed by the LRO.

In September 2013 the SWRCB changed the reporting of SSOs from appearance based to event based. Under the event based system one SSO report is required for each SSO that occurs regardless of the number of appearance points although each appearance point must be noted in the report. Previously, a separate SSO report had to be filed for each appearance point sometimes requiring numerous SSO reports for the same SSO event.




### 3.4.2 Compliance Documents

The following documents and charts describe the City of Pasadena's SSO reporting.

- SSO Chain of Communications flowchart – included in this SSMP and in the SSORP.

- SSO Reporting Guidelines – included in the SSORP.
- City of Pasadena Sanitary Sewer Overflow Response Plan – located at the SWIWM Division and in Appendix B of this SSMP.

### 3.4.3 Roles and Responsibilities

The City's SSO response is conducted in accordance with the City of Pasadena's Sewer Overflow Response Plan. The roles and responsibilities of each position in the chain of communications flowchart are described below:

| | |
|---|---|
| SWIMW Division | During normal working hours receives call of SSO and dispatches the Collection System Crew Supervisor (lead responder) to respond to the reported SSO. After the SSO remediation, the SWIWM completes necessary spill reporting to the CIWQS online database compliant with the MRP. |
| Police Dispatch | Receives SSO calls after normal working hours and dispatches the Lead Responder (standby person) to the scene. |
| Collection System Crew Supervisor | Evaluates the reported SSO and requests additional resources if needed to remediate the condition. |
| Public Works Superintendent (or designee) | Oversees the remediation efforts, gathers field data for spill reporting, and notifies necessary authorities compliant with the MRP. |
| LRO | Certifies spill reports to CIWQS online SSO database. |

# CHAPTER 4 – LEGAL AUTHORITY

This chapter describes the legal authority to implement the SSMP plans and procedures.

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.

## 4.1 Compliance Summary

The primary statute governing the authority of the City of Pasadena to operate and maintain a sewer system is in California Government Code Section 38900. The City has adopted local ordinances governing all aspects of the use and operation of its sewer systems.

In addition to the ordinances adopted by the City, use of the sewerage system is also regulated by LACSD. Wastewater generated by users within the jurisdiction of the City ultimately flows to the LACSD treatment plants for treatment prior to discharge. LACSD has adopted pre-treatment ordinances which apply to all industrial users and LACSD has assumed the lead in enforcing its ordinance through the issuance of Industrial Waste Discharge Permits. The City cooperates with LACSD in the enforcement process. Additionally, the City may prosecute violations of its Municipal Code by criminal complaint, and such violations constitute a misdemeanor under Chapters 8.14.100, 13.24.170 and 13.24.180 of the Pasadena Municipal Code.

The City and LACSD have a number of legal tools to prevent illegal discharges; to ensure that sewers and connections meet required construction standards; ensure access to sewer lines; limit FOG discharge; and to enforce violations of their respective sewer ordinances.

Codified ordinances include:

| Legal Authority Order Requirements | Applicable Sections of City Municipal Code |
|---|---|
| a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.) | 13.24.370, .380, 390, .420, & .430 |
| b) Require that sewers and connections be properly designed and constructed | 8.14.060 & .070 and 13.24.190 through .360 |
| c) Ensure access for maintenance, inspection, or repairs for collection system owned or maintained by the Public Agency | 8.14.080 and 13.24.560 |
| c) Limit the discharge of fats, oils, and grease and other debris that may cause blockages | 8.14 et all, and 13.24.370, .460, .540, & .620 |
| e) Enforce any violation of its sewer ordinances | 8.14.080, .090, .100 and 13.24.030, .170, & .180 |

## 4.2 Compliance Documents

City ordinances have been codified into Title 4, Title 8 and Title 13 of the Municipal Code to provide the City with the legal authority to manage, operate, maintain, and fund its sanitary sewer system. These Titles and other Ordinances adopted to amend existing ordinances may be reviewed at the City of Pasadena located at 100 N. Garfield Avenue, Pasadena, California 91101 or on the internet at the City's website https://ww5.cityofpasadena.net/main/city-services/municipal-code/.

Title 4 – Revenue and Finance
- Chapter 4.52 – Sewer Use Fee and Storm Drain Charge
- Chapter 4.53 – Sewer Facility Charge

Title 8 – Health and Safety
- Chapter 8.14 – Grease and Oil Disposal Ordinance

Title 13 – Utilities and Sewers
- Chapter 13.24 – Sewer Construction and Maintenance

# CHAPTER 5 – OPERATIONS AND MAINTENANCE

The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.

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 preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

(C) Develop 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.

## 5.1 Mapping

The requirement for this section is to maintain an up-to-date map of the collection system showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and stormwater conveyance facilities.

### 5.1.1 Compliance Summary

Updated mapping of the City's sewer system was performed as part of the 2018 Master Sewer Plan. This update was completed and integrated in the City's Geographic Information System (GIS) as included with the hydraulic model.

The City will establish procedures to maintain its sewer system information and GIS. It is recommended proper databases containing information on pump stations technical specifications, wet well dimensions, and pipe and manhole attributes also be regularly maintained.

Hard copies of these materials will be updated quarterly and posted at Wastewater Operations and in the Engineering Departments. Updated GIS maps should be included in all of the City's sewer response vehicles. A procedure will be developed and implemented to update the GIS continuously with system modifications.

### 5.1.2 Compliance Documents

The documents supporting compliance with the requirements for mapping are as follows:

- Engineering Division Sewer GIS.
- Sewer system atlas maps.

## 5.2 Preventive Maintenance Program

The Order requires the City to describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) Program should have a system to document scheduled and conducted activities, such as work orders.

### 5.2.1 Compliance Summary

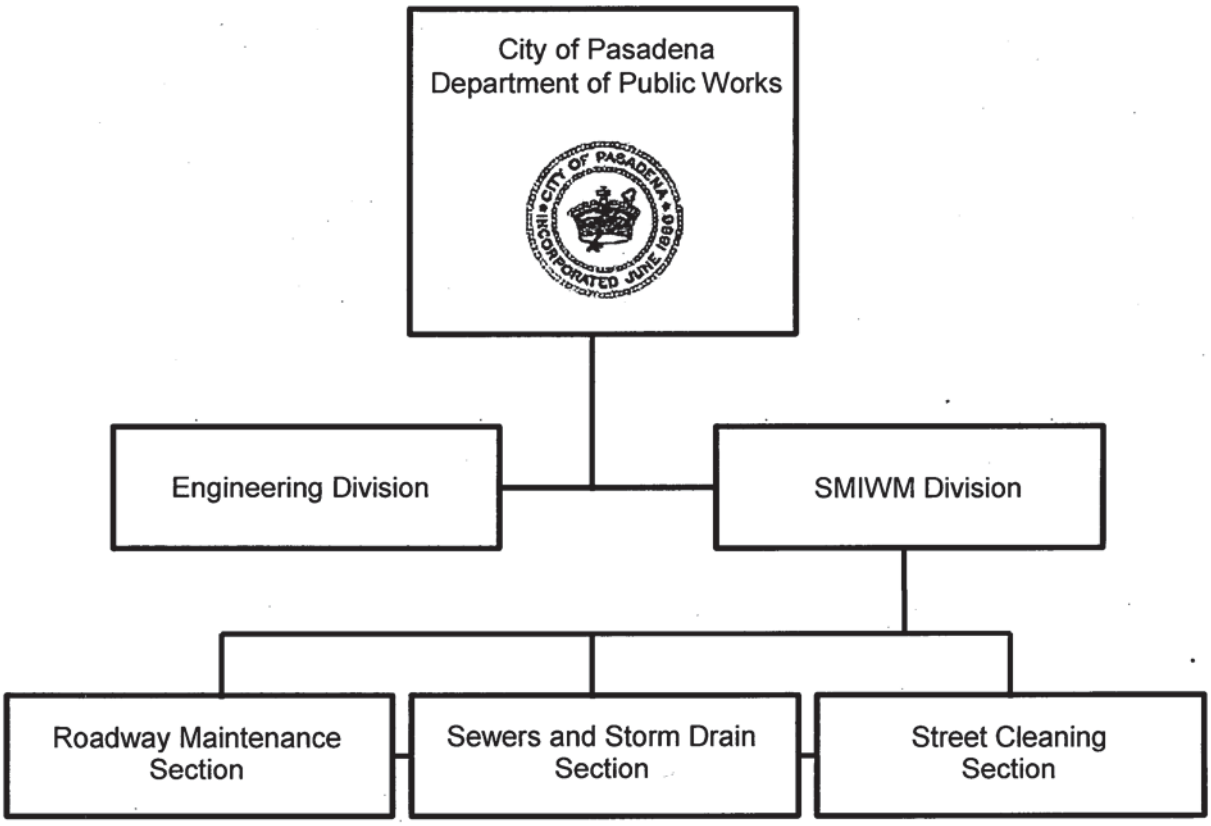
The City of Pasadena Public Works Street Maintenance & Integrated Waste Management (SMIWM) Division is responsible for the operation and maintenance of all City-owned sewer and storm drainage collection and pumping facilities, including responding to and reporting all SSOs. In general, the costs associated with the Sewer and Storm Drain Section of SMIWM is borne by the City of Pasadena's Sewer Fund.

The Sewer and Storm Drain Section currently comprise one supervisor overseeing 9 staff. Staff members are rotated among teams performing the following activities:

- Three (3) two-person teams provide crews for routine sewer line maintenance
- One (1) person performs trash removal in catch basins and storm drains
- One (1) two-person team performs CCTV for sewer line inspection.

The Sewer and Storm Drain Section of the SMIWM utilize jet cleaning trucks and vactor units in the performance of their day-to-day duties. The organizational structure of this section and its place within the Department of Public Works is shown in **Figure 5-1**.

**Figure 5-1. SMIWM Organization Chart**




To provide cleaning and maintenance for this system, the City utilizes three jet trucks and one combination truck, each with its own crew. To facilitate the cleaning effort, the City collection systems have been divided into 17 maintenance areas that the crews maintain sequentially. Under this system, City line cleaning crews clean all of the collection lines at least once annually. Enhanced Maintenance Areas are cleaned quarterly or more frequently if required. It currently takes City line cleaning approximately 12 months to complete a cleaning cycle.

To properly manage the maintenance of the collection system, the Public Works Superintendent will develop an Annual Work Plan. The Annual Work Plan sets the maintenance and operational goals and objectives for the fiscal year and serves as a planning document to ensure the maintenance needs of the collection system are met. The plan pinpoints which maintenance activity, district, basin, and month that the

maintenance activity will occur. For each maintenance activity, a description page describes the work to be completed. From the yearly work plans, monthly work plans are developed that reflect the personnel required to accomplish the goals and objectives. The monthly work plan also outlines the equipment assigned to the maintenance activity, and the tasks to be completed. The monthly work plan reflects any specialized training requirements and administrative objectives. Data from past maintenance logs and current needs assessments are used to develop the Annual Work Plan and a 10% contingency is incorporated for unforeseen emergencies or repairs.

The City has an Enhanced Maintenance Area Program in place for more frequent maintenance of sewers prone to blockage due to FOG or root intrusion. Currently the Enhanced Maintenance Area Program is maintained in the City's asset management system, Lucity™, for tracking and generation of work orders.

Reporting of all unauthorized discharges from the City's sanitary sewer collection system is required by the Order (Order No. WQ 2013-0058-EXEC).

#### *5.2.1.1 Description of Routine Procedures*

*Existing Pipe Line Operation and Maintenance Procedures*

Routine sewer line maintenance within the City of Pasadena is performed by three (3) two- person crews operating two jet trucks and one combination truck. The City is divided into 17 maintenance areas that the crews maintain sequentially. It is the goal of the Sewer and Storm Drain section to clean each maintenance area once annually, but the diversion of manpower for emergency and auxiliary activities generally prevents this from occurring. Under ideal conditions, one crew is programmed to clean approximately 4,000 linear feet per day (lf/day) of line over flat terrain and 3,000 lf/day in hilly areas. These cleaning rates reflect an operationally efficient staff as the production rates are slightly higher than the typical 2,000 to 3,000 lf/day values generally used by many other wastewater utilities.

Deviations from ideal conditions include non-standard manhole geometries, difficult easement access to manholes and service points, and the resolution of other field problems. Because the City does not own equipment suitable for cleaning locations that are inaccessible to vehicular equipment, sewer operation crews must manually drag and carry jet flushing hose equipment through private property and hand feed the cleaning hose to the sewer manhole access point. This manual operation requires a full sewer crew, is an unsanitary activity, increases the risk of field staff injuries and property damage, is an inefficient use of staff and prevents them from performing their routine duties in an efficient manner, and results in an unpleasant experience for both City staff and the City's property owners.

In addition to the performance of annual maintenance of the City's maintenance service areas, specific cleaning routes are performed to alleviate known operational and maintenance problems within the City's sewer lines. These specific cleaning routes cover areas that are impacted from known root intrusion and FOG discharges.

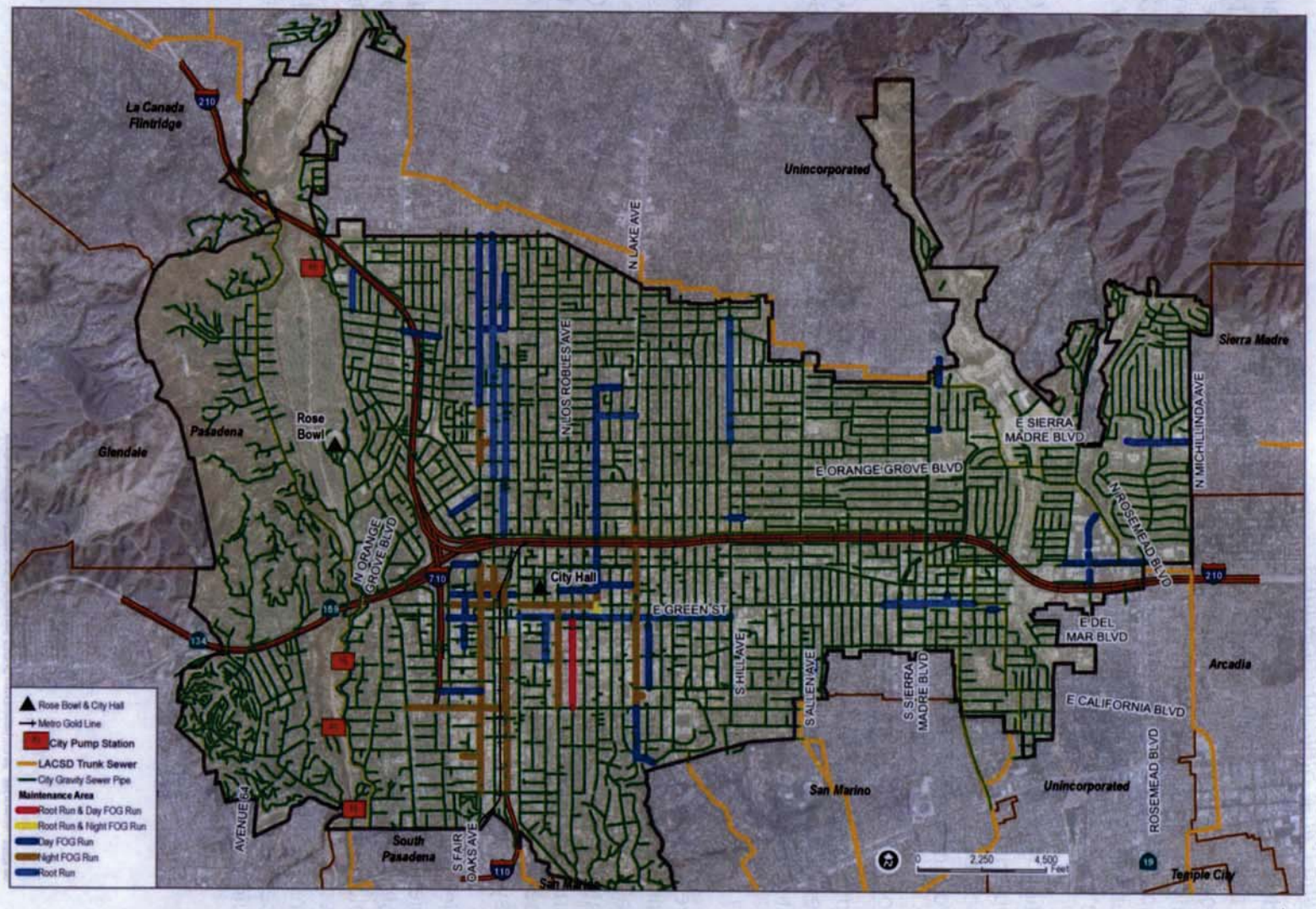
Currently, the FOG cleaning route is performed every two to three months and totals approximately 145,000 linear feet. Similarly, the root cleaning route is performed every three months and totals approximately 17,000 feet. Figure 5-2 shows the City's maintenance areas, existing FOG routes, and existing root routes.

Prevention of insect (cockroach) infestation within the City's sewer lines is performed by a chemical dosing program. The program is handled by an outside firm (Golden Bell Products) under contract to the City. Approximately 1,100 manholes are dosed per year with the understanding of a two-year chemical residual following each treatment.

In addition to these ongoing cleaning and maintenance activities, the City's SMIWM Division supports the assessment of sewer pipeline condition through video inspection services. Currently, the City owns its own CCTV equipment and the Division was recently approved to purchase one new video unit (camera and vehicle) and software. The City's CCTVs crews predominately for quality control after pipeline cleaning. The City also contracts CCTV inspection out to a local CCTV subcontractor for diagnostic assessment.

Based on discussions with City staff, the goal of the video inspection program is primarily to perform quality control behind line cleaning crews and for SSO/stoppage investigation. The City has a goal to televise the entire wastewater collection system approximately every five to seven years, with an increased frequency of up to once per year for very old facilities or areas of specific concern.

**Figure 5-2. City Maintenance Areas**



*Existing Pump Station Procedures*

As described in Section 2 of the 2018 Master Sewer Plan, the City of Pasadena operates three sewer pump stations. Routine maintenance and repair of these pump stations is contracted by the City of Pasadena to Multi-Tec, Inc. Multi-Tec keeps a regular maintenance and replacement schedule for the pump station equipment, pumps, and motors. Sewer and storm drain section staff monitor the pump stations to assure that they are operating properly on a day-to-day basis. In addition, City staff uses the combination truck to regularly clean the wet wells of the pump stations.

Section 4 of the 2018 Master Sewer Plan lists several existing conditions at the City's pump stations that will require repair or retrofitting. Budgets for such repairs are presented in Section 5 of the 2018 Master Sewer Plan. When put into effect, these improvements will reduce the amount of City staff time required at the pump stations.

*Recommended Maintenance Procedures*

As previously discussed, the SMIWM Division provides ongoing O&M of the City's sewer and storm drainage systems. The staffing requirements derived the Sewer Master Plan are provided in the following sections.

### *5.2.1.2 Routine Sewer Pipeline Cleaning*

Sewer pipeline cleaning is an important element of a utility. To assess the staffing requirements of these important O&M elements, estimated production standards are correlated with the City's 1.7 million linear feet of pipelines, 17,000 feet of tree root infested areas, and 145,000 feet of pipelines with excessive grease. Using the City's cleaning production criteria of 4,400 LF feet per day for routine maintenance and 1,300 LF per day for FOG and root areas, it would take approximately 855 crew days to clean the system annually and to clean the root infested and FOG areas quarterly.

While the estimated time requirements represent average production rates and efficiencies, these values do not include the excess time associated with resolving field problems, field staff assignment adjustments for special events, and allowances for employee benefits (e.g., holidays, vacation, sick leave). Accordingly, program schedules for these activities are developed by factoring in a 15 percent allowance for the resolution of field problems, a 5% allowance for support of special events, and a 15 percent allowance for employee benefits. The resulting implications for sewer staffing requirements are shown in Table 5-1.

**Table 5-1: Recommended Sewer Cleaning Crew Staffing**

| Description | Linear Feet |
|---|---|
| Base Cleaning Program (Annually) | 1,570,000 |
| Root Program (Quarterly) | 17,000 |
| Fog Program (Quarterly) | 145,000 |
| Total Annual FOG/Root Cleaning | 648,000 |
| Routine Cleaning Rate (LF/day) | 4,400 |
| FOG/Root Cleaning Rate (LF/day) | 1,300 |
| Crew Days Required to Meet Goal | 855 |
| **Staffing Assessment** | |
| Days Available/Year/Crew | 260 |
| Allowance for Benefits (15%) | 39 |
| Allowance for Field Resolution (15%) | 39 |
| Allowance for Special Events (5%) | 13 |
| Net Annual Available Days/Crew | 169 |
| Number of Crews to Meet Goal | 5.1 |

As shown, to accomplish the pipeline cleaning activities in conformance with the City's annual cleaning goal would require four to five two-man crews to annually clean the full sewer system and clean the high maintenance areas quarterly. The City currently has three two-man crews. Accordingly, the 2018 Sewer Master Plan recommends that two additional full-time crews be assigned to routine sewer line maintenance.

### *5.2.1.3 Existing O&M Staffing and Equipment*

As previously discussed, the City's Sewer and Storm Drain Section is staffed with 11 field personnel, one supervisor, and supporting vehicles and equipment. The sewer lift stations are maintained through an ongoing contract with Multi-Tec, Inc., and supporting management and engineering services and activities are provided from other in-house City personnel.

### *5.2.1.4 Recommended O&M Staffing and Equipment*

In accordance with the assessment and recommendations derived in the Sewer Master Plan, it was recommended that the City budget for additional personnel and related equipment. The staffing and equipment elements required to implement the sewer system O&M program goals are summarized as follows:

- Two new Sewer Maintenance Field Crew (4 – SMWs) – $524,000

- Two CNG Vactor/Hydro combination units – $1,000,000

In addition to these staffing and equipment recommendations, it is important to note that the City has embraced the need to provide dedicated staffing to these important City services to preserve and evaluate the useful life of these underground assets. Dedicated and committed staff should be assigned and trained to meet the demands of these services so that the life expectancy of these facilities can be attained. Should the City's proactive operation and maintenance program continue to fall short of the program goals, unidentified failure of sewer pipelines may occur. The cost of this activity will manifest itself in the early retirement of the City's assets and the increased potential for sanitary sewer overflows.

It is further recommended that the City evaluate the performance of the Sewer and Storm Drain Section related to the performance of the cleaning goals. While two new crews are proposed to be added, overall performance of section activities should be contrasted with prescribed goals on an annual basis to ascertain if additional staffing and equipment is required.

### 5.2.2 Compliance Documents

Documents which support compliance of this section include the following:

- Enhanced Maintenance Area Log - located at the Engineering Division.
- GIS - located at the Engineering Division.

## 5.3 Rehabilitation and Replacement Plan

In accordance with the Order, the City must develop and maintain 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. The video inspection information that follows reflects the City's program and its ability to meet this section of the Order.

The recommended goal of the video inspection program is to video inspect the entire wastewater collection system approximately every five to seven years, with an increased frequency of up to once per year for very old facilities or areas of specific concern. In accordance with this recommendation, an assessment of the video inspection program was performed.

### 5.3.1 Compliance Summary

The City utilizes its CCTV inspection program to identify and prioritize system deficiencies. Deficiencies are scored using the PACP system. Review of CCTV videos as well as the capacity evaluation as performed for the 2018 Sewer Master Plan was the basis of the development of the City's 50-year Capital Improvement Program, which serves as the basis of its rehabilitation and replacement program. Refer to Section 5 of

the 2018 Sewer Master Plan for the proposed projects, phasing and estimated costs for the City's 50-year CIP.

The City has been using its one CCTV inspection crew and truck primarily as a tool to provide quality control to sewer maintenance. The City will commence performing a full CCTV inspection of the entire collection system every five to seven years. Based on a production rate of 2,000 LF per day with same staffing allowances for benefits, field resolution and special events used for the sewer maintenance program, it is estimated that two field crews are required. A breakdown of this analysis is provided in Table 5-2.

**Table 5-2: Recommended CCTV Crew Staffing**

| Description | Linear Feet |
|---|---|
| Base Cleaning Program (5-7 Years) | 1,570,000 |
| Areas of Concern (Quarterly) | 200,000 (est.) |
| Root Program (Quarterly) | 17,000 |
| FOG Program (Quarterly) | 145,000 |
| Total Annual CCTV Inspection | 590,000 |
| Routine CCTV Rate (LF/day) | 2,000 |
| Crew Days Required to Meet Goal | 295 |
| **Staffing Assessment** | |
| Days Available/Year/Crew | 260 |
| Allowance for Benefits (15%) | 39 |
| Allowance for Field Resolution (15%) | 39 |
| Allowance for Special Events (5%) | 13 |
| Net Annual Available Days/Crew | 169 |
| Number of Crews to Meet Goal | 1.75 |

*Recommended Staffing and Equipment*

In accordance with the assessment and recommendations derived in the Sewer Master Plan, it was recommended that the City budget for additional personnel and related equipment. The staffing and equipment elements required to implement the sewer system O&M program goals are summarized as follows:

- One new CCTV Video Inspection Field Crew (2 – SMWs) – $262,000
- One new CCTV Truck – $500,000

In addition to these staffing and equipment recommendations, it is important to note that the City has embraced the need to provide dedicated staffing to these important City

services to preserve and evaluate the useful life of these underground assets. Dedicated and committed staff should be assigned and trained to meet the demands of these services so that the life expectancy of these facilities can be attained. Should the City's proactive rehabilitation and replacement program continue to fall short of the program goals, unidentified failure of sewer pipelines may occur. The cost of this activity will manifest itself in the early retirement of the City's assets and the increased potential for sanitary sewer overflows.

It is further recommended that the City evaluate the performance of the Sewer and Storm Drain Section related to the performance of the video inspection goals. While one new crew is proposed to be added, overall performance of section activities should be contrasted with prescribed goals on an annual basis to ascertain if additional staffing and equipment is required.

### 5.3.2 Compliance Documents

The documents supporting compliance with the rehabilitation and replacement plan requirements are as follows:

- CCTV Videos and assessments – located at the City of Pasadena.
- GIS – located at the Wastewater Division.
- City of Pasadena Capital Improvement Plan – located at the City of Pasadena and on the City's website.
- 2018 Sewer Master Plan Update – to be located at the City of Pasadena and on the City's website.
- City of Pasadena Standard Drawings- located at the City of Pasadena.

## 5.4 Training Program

The City is required to provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and to require contractors to be appropriately trained.

### 5.4.1 Compliance Summary

The City does have a training program in place however training records have not been reliably kept. Based on review of the City's training program, the following recommendations are made:

Provide additional training, as listed below, staff and contractors on a regular basis, including initial and periodic training to ensure continued competency. Training should include review of the agency SSMP and SSORP, including both classroom and field training efforts to simulate an SSO, to assure understanding of existing standard operating procedures. Staff should be told where the SSMP and SSORP are kept so that they can be accessed at any time. All training activities should be documented. Consider discussing emergency response at regular contractor meetings. Include

requirements for emergency response and training in City's standard specifications for all public works projects and service contracts working on or new sewer facilities.

Recommended Additional Training to Implement:

- Simulated SSOs
- Bypass Training

### 5.4.2 Compliance Documents

The City currently not kept reliable documentation that demonstrate the type of training provided to staff and what training requirements are required of contractors. The following are documents recommended that the City maintain to document their training activities:

- Employee Training Records
- Employee Training Matrix
- Training Information Spreadsheet
- Operations and Maintenance Training Program

## 5.5 Equipment and Parts Inventories

Each Enrollee is required to provide equipment and replacement part inventories, including identification of critical replacement parts for the operation and maintenance of its sewer collection system.

### 5.5.1 Compliance Summary

The City of Pasadena is comprised of various standard sized gravity pipelines and two pump facilities that that the City is responsible for. The Pasadena DPW maintains an inventory of tools for day-to-day operations and emergency response. Inventory is maintained by visual inspection only (no list is kept). The City monitors their lift stations only; maintenance is performed by a contractor (Multi-Tek), therefore the City does not keep pump station replacement parts in inventory. It is recommended the City develop a electronic list of inventory that is kept up to date to ensure necessary tools are maintained in stock.

### 5.5.2 Compliance Documents

The City has not been maintaining thorough documentation supporting compliance with the requirement to maintain an inventory of equipment and parts including identification of critical parts. The City will commence maintaining the following document:

- Equipment Inventories

# CHAPTER 6 – DESIGN AND PERFORMANCE PROVISIONS

This chapter references the design and construction standards and specifications for new sewer systems, pump stations, and other appurtenances, and for the rehabilitation and repair of existing sewer systems. Also included are the procedures and standards for the inspection and testing of these facilities. The Order requires the following:

(a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

(b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

## 6.1 Compliance Summary

To ensure consistency in the design and construction of collection system facilities within the City of Pasadena, the City has developed Standard Plans and utilizes the "Greenbook" Standard Specifications for Public Works Construction for standard specifications, standards for installation, rehabilitation and repair and standards for cleaning, inspection, and rehabilitation of existing facilities, with supplements to these with the Pasadena Supplements and Modifications to the "Greenbook" (Pasadena Supplements), as noted herein.

**Standard Plans**

The City of Pasadena uses standard plans for the design of its sewer system. The relevant plans, listed in Table 5-1, come from the City's Public Works Department, the Los Angeles County Department of Public Works, and the "Greenbook" Committee of Public Works Standards, Inc. (in conjunction with the American Public Works Association). The latter is a southern California committee of public works agencies and associations that collaborate to develop a set of *Standard Plans for Public Works Construction*.

**Table 6-1: Standard Plans**

| Plan Number | Plan Title/Description |
|---|---|
| City of Pasadena – Public Works and Transportation Department | |
| S-002 | Substructure Legend |
| S-299 | Supporting Water Pipes Encountered During Excavation Operations |

| Plan Number | Plan Title/Description |
|---|---|
| S-301 | Saddle for House Laterals (see LACoDPW 2024-1) |
| S-382 | Pre-cast Sanitary Sewer Manhole (see PWS 200-3) |
| S-384 | Manhole Reconstruction (see PWS 205-2) |
| S-407 | Trench Compaction Requirements |
| S-416 | Restoration of Asphalt Street Excavations |
| S-417 | Restoration of Concrete Street Excavations |
| Standard Plans for Public Works Construction (Public Works Standards, 2012) | |
| 200-3 | Precast Concrete Sewer Manhole (see CoP S-382) |
| 201-2 | Precast Concrete Shallow Manhole |
| 202-2 | Drop Manhole |
| 203-2 | Brick Sewer Manhole |
| 205-2 | Sewer Manhole Adjustment (see CoP S-384) |
| 208-2 | Breaking into Existing Manholes |
| 223-2 | House Connection Remodeling |
| 224-2 | Supports for Conduits across Trenches |
| 630-4 | 600 mm (24") Manhole Frame and Cover |
| Los Angeles County Department of Public Works (LACoDPW) | |
| 2024-1 | Wye or Tee Support |
| 2027-1 | Allowable Trench Widths |
| 3080-3 | Pipe Bedding in Trenches |
| 3090-1 | Criteria for the Design of Shoring for Excavations |

**Standard Specifications**

The City of Pasadena uses the "Greenbook" Standard Specifications for Public Works Construction (Standard Specifications). The City supplements these Standard Specifications with the Pasadena Supplements.

**Standards for Installation, Rehabilitation and Repair**

Refer to the latest edition of the "Greenbook" Standard Specifications for installation, rehabilitation, and repair standards. The Pasadena Supplements add to and in some cases, supersede the Standard Specifications.

**Standards for Cleaning, Inspection, and Rehabilitation of Existing Facilities**

Refer to the latest edition of the "Greenbook" Standard Specifications for cleaning, inspection, rehabilitation and standards. The Pasadena Supplements add to and in some cases, supersede the Standard Specifications.

## 6.2 Compliance Documents

The documents used for design and performance evaluations include the following:

- Standard Plans – located on the City's website.
- "Greenbook" Standard Specifications for Public Works Construction
- Pasadena Supplements and Modifications to the "Greenbook"

# CHAPTER 7 – OVERFLOW EMERGENCY RESPONSE PLAN

Under the Order, 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.

## 7.1 Compliance Summary

The City of Pasadena responds to and reports all public SSOs from the City's sanitary sewer system and all private property spills that the City becomes aware of.

The City's Sanitary Sewer Overflow Response Plan (SSORP) provides detailed procedures for City employees responding to SSOs during or after normal working hours. The SSORP covers the overall procedure, the overflow correction, containment and cleanup and the regulatory agency notification plan. Contact information is included for all agencies and personnel that require notification in the event of a sewage spill. Compliant with the State Water Resources Control Board's Order No. WQ 2008-0002-Exec., the City notifies the Office of Emergency Services and the Los Angeles Regional Water Quality Control Board of any spills that discharge to a drainage channel or surface waters within two hours of becoming aware of the spill. The City certifies within twenty four hours to the Los Angeles Regional Water Quality Control Board that

the appropriate notifications have been completed. The City of Pasadena reports all SSOs, public and private, to the CIWQS online SSO database. All spills are reported to the Los Angeles County Department of Environmental Health.

City staff will periodically review the SSORP to ensure procedures are adequate to quickly and efficiently respond to public and private SSOs.

As listed in Section 5.4, the City will develop a training that simulates and SSO that is conducted semi-annually. A sample outline for the training includes the following: Utilizing potable water, a controlled rate of flow can be used to overflow a mock manhole that will overflow into a mock storm drain. Train City employees in flow estimation, spill recovery, and clean up. Provide training on spill response twice per year, consisting of classroom and field activities.

A copy of the SSORP is maintained by the crew supervisor. A copy of the SSORP will be kept in each response vehicle. A CIWQS Incident Report Log is used to document initial spill data and is provided in each response vehicle.

A copy of the City's SSORP is included in Appendix B.

The City will implement a more formal SSO training program and maintain a detailed log of staff trainings, including at a minimum training type, date and attendees.

## 7.2 Compliance Documents

The compliance documents that detail the City of Pasadena's Sewer Overflow Response Plan are as follows:

- Sanitary Sewer Overflow Response Plan – located at the City of Pasadena DPW.
- CIWQS Incident Report Log – located at the Engineering Division.

# CHAPTER 8 – FATS, OILS, AND GREASE CONTROL PROGRAM

Under the Order, each Enrollee is required to evaluate its service area to determine whether a FOG control program is needed. If the Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

(b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;

(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

(d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;

(f) An identification of sanitary sewer system sections subject to FOG blockages and 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.

## 8.1 Compliance Summary

The City of Pasadena addresses Fats, Oils, and Grease (FOG) control through the resources of multiple City departments. The City has historically been proactive in the control of FOG from commercial sources into its sewer system. Provisions for a FOG control program have existed in Chapter 13.24 of the City of Pasadena Municipal Code since 1950. These provisions were augmented by the adoption of Chapter 8.14 in 2002.

As described in Section 5 of this SSMP, the Department of Public Works provides prioritized cleaning and maintenance of the City's sanitary sewer system. In addition, the City Engineer approves the location of grease interceptors. The Department of Planning and Development (DPD) in conjunction with the Pasadena Public Works Department assists in the requirement and approval of the design of grease interceptors or traps through plan checking procedure.

The Department of Public Works (DPW) will hire a dedicated staff member, or alternatively outsource FOG inspection services, to perform annual inspection of food service establishments (FSEs) and to identify and monitor likely sources of FOG into the sewer system. This is accomplished by requiring and verifying the installation and use of grease interceptors or traps.

The following sections are provided to document the City's FOG program and identify additional activities or authorities as appropriate to meet the goals of the Order.

*Public Outreach and Education*

The City is committed to informing its residents about the consequences of disposing of FOG into the sink. The most notable form of public outreach and education has been through the community newsletter, *Pasadena in Focus*. The City is in the process of further developing their FOG outreach and education program, which will include at a minimum annual FSE inspections which will include printed material dissemination and information posted on the City's website.

Facility inspections are often the best opportunity for education as they allow one-on-one interactions and deal directly with specific requirements and practices for the business. The City will ensure that its inspectors are proficiently trained to educate its business and residential communities and distribute the appropriate materials.

Target audiences will include applicable City staff, FOG generating businesses and facilities, and residents. Educational materials may contain information on the State regulations, revised City ordinance and compliance requirements, sanitary sewer system overview, FOG impacts to the system, business and residential BMPs, disposal options, and source control measures. Materials will be developed in English and Spanish as needed. Many of the City's existing educational materials contain BMP information and include specific FOG control BMPs. Additionally, the City will compile a list of potential FOG hauling nd disposal companies to assist businesses and residents in contracting these services.

*FOG Disposal*

FOG can be separated from other liquid waste using a grease interceptor or trap. Storage of FOG is dependent on the device used. An interceptor is designed to store FOG in its tank. Grease interceptors are to be emptied as needed of stored FOG in order to maintain minimum design capacity. Facilities using grease traps are directed to remove FOG from the trap as frequently as necessary to maintain proper working condition. FOG removed from a grease trap should be stored in a leak-proof container until it is recycled. Removal of stored FOG from grease interceptors and traps for recycling should occur as often as needed to maintain a condition free of nuisance.

The City does not provide FOG disposal services for private businesses and property owners. It is the responsibility of the private business and property owner to hire a licensed grease hauler as needed. However, the City will keep a list of licensed grease

haulers and will provide this information to FSEs and residents as needed during inspections and site visits.

All companies doing business in California that transport inedible kitchen grease must obtain a registration sticker for each of their trucks from the Department of Food and Agricultural pursuant to provisions of the Food and Agriculture Code as well as the vehicle code. Those companies doing business within Pasadena must also obtain a business license from the City.

*Legal Authority*

Original authority to control FOG in the sewer was established by Section 13.24.370 of the PMC which states that no oils shall be discharged into the wastewater system and no fats or grease except in quantities from domestic household waste shall be disposed of in the sewer system. This has been supplemented by Chapter 8.14 to further manage and control FOG disposal to minimize FOG-related O&M costs and potential SSOs.

Food service establishments (FSEs) are required to control their FOG discharge through the use of grease removal devices and best management practices. Section 8.14.060 Grease Interceptor Requirements establishes the design requirements for gravity grease interceptors with Section 14.12.100 as well as establishing grease interceptor maintenance requirements. Section 8.14.070 Grease Trap Requirements establishes the design and maintenance requirements for grease traps. Compliance is enforced through Sections 8.14.080, 8.14.090 and 8.14.100 via inspections, hearings, violations and penalties.

*Design and BMP Standards*

In accordance with 8.14.050-C of the PMC, all new restaurants have to submit to the DPH plans to install a grease interceptor for approval by the DPD and Pasadena Public Health Department. Such establishments may request a variance to allow for the installation of only a grease trap or an alternative pre-treatment technology. However, any installation must conform to the 1998 California Plumbing Code. The Plan Check Construction Guide for Commercial Food Facilities provides a prospective restaurateur with the appropriate city code and design guidelines for grease interceptors and traps (available at the City of Pasadena Public Health Department).

Interceptors are to be installed in a location that allows easy access for inspection, cleaning, and FOG removal. Underground tanks must have a minimum capacity of 750 gallons.

Manholes, a minimum of 24-inch in diameter, are to be provided over each chamber and sanitary tee. These provisions and others are listed in Section 8.14.060 as well as the the Plan Check Construction Guide, located at the City Public Health Department Environmental Health Division offices.

Traps must have a minimum flow rate of 20 gallons per minute (gpm) and a maximum flow of 55 gpm. The temperature of the wastewater entering the trap shall be equal to or

below 140 degrees Fahrenheit (60 degrees Celsius). These provisions and others are listed in Section 8.14.070.

Facilities open prior to strict enforcement of the FOG control program are required to install a grease interceptor or trap when that facility remodels, causes a FOG problem in the sewer into which the facility discharges, or when a public nuisance complaint is received.

As detailed in Section 8.14.110, some food service facilities are exempt from the FOG control program. These facilities sell or serve food, but either do not produce FOG waste or serve food prepared off-site. If in the future it is determined by the EHD that there is a FOG problem at such a facility, then the facility in violation will have to install a grease interceptor or trap.

Domestic household FOG is also exempt from the FOG control program.

Inspection and maintenance records for a grease interceptor are to be maintained for three (3) years, be kept on site, and be made available for review by the Environmental Health Division Manager. Inspection is to be performed regularly.

*Inspection and Enforcement Plan*

The City Engineer and chosen deputies are authorized under PMC Sections 13.24.130 and 13.24.140 as well as Section 8.14.080 to enforce the provisions in Chapters 13.24 and 8.14 which include installation and proper maintenance of grease traps and interceptors. These provisions are also jointly enforced by the Environmental Health Division Manager as stated in Section 8.14.080 of the PMC.

The DPW now inspects the sewers for FOG problem areas. Inspection and cleaning of the sewers is discussed in Section 4 of this SSMP and FOG-specific programs are discussed in the following section.

The City will hire a dedicated FOG inspector, or alternatively outsource FOG inspection services, to inspect all FSEs annually and distribute public outreach materials.

*FOG Enhanced Maintenance Areas*

FOG enhanced maintenance areas are included in the SWIWM Division's Enhanced Maintenance Area Program. Enhanced maintenance areas are areas of the collection system that require maintenance above the normal scheduled maintenance. The City maintains this program their asset management and integrated work order system, Lucity™. The reason the area or facility is part of the enhanced maintenance program (i.e. FOG, roots, etc.) is also noted. Enhanced maintenance areas are cleaned every three months or more frequently if required.

*FOG Source Control Program*

The City will plot on a GIS layer, the location of all FSEs and FOG generators within the city limits. The relationship between FOG related enhanced maintenance areas and FOG generators has been established. The City has the legal authority to conduct inspections of FSEs who are generating or are suspected of generating FOG. These inspections will conducted by City staff or an outside contractor. During the inspections, inspectors instruct FSE staff on the use of grease removal devices and BMPs designed to reduce FOG generation. Inspectors will also review the FSEs FOG reduction practices including review of records, manifests or invoices for grease disposal, and maintenance on any installed grease removal devices.

All FSEs are required to implement BMPs designed to minimize the generation of FOG during the food preparation and cleanup process. FSE employees are required to receive documented training twice per year on the implementation of the BMPs from their employers. New or remodeled FSEs are required to install and properly maintain an approved grease removal device.

In the event of a FOG related SSO occurring within an enhanced maintenance area (or anywhere within the sewer collection system) and the subsequent investigation shows evidence that a discharger caused or contributed to the SSO, the City may request repayment of all associated costs, issue an administrative or misdemeanor complaint, or discontinue service.

## 8.2 Compliance Documents

The FOG control program activities are documented under the following ordinances, reports, and studies:

- Chapter 8.14, Grease and Oil Disposal Ordinance, City of Pasadena Municipal Code.

# CHAPTER 9 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The Order requires that each 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.

## 9.1 Compliance Summary

To ensure that the City's sanitary collection system meets the needs of the population served, the City routinely commissions a Sewer Master Plan to review the operational needs of the collection system. To provide a current and complete assessment of the City's collection system a Sewer Master Plan Update is being completed and adopted by the City Council in 2018. The 2018 Sewer Master Plan Update will include a prioritized listing of capital improvement projects (CIP). The prioritization takes into account the age of the facilities, construction materials used, current use, capacity, and known condition.

Extensive flow monitoring was performed in conjunction with the development of the 2018 Sewer Master Plan Update. As the system utilizes permanent flow meters flow histories were also reviewed. This data was used to determine the average dry weather

flows (ADWF). Peak dry weather flows (PDWF) were calculated from the ADWF. Data from January 2018 was used to determine the average wet weather flows (AWWF) and peak wet weather flows (PWWF). By comparing the dry weather and wet weather flows the level of defect flows or inflow and infiltration (I&I) during rain events was determined.

Flow data and data from the City's sewer billing database was used to verify the equivalent dwelling units (EDU) daily flow values. Using information from the City's GIS coupled with the flow measurement data an update to the City's sewer hydraulic model was developed. This model was updated to include improvements made since the 2008 Sewer Master Plan and model. As the regulations governing the operation of sanitary and storm sewers increase, this capability will allow the City to assess the impacts of various operating strategies.

*Evaluation:*

The 2018 Sewer Master Plan did not identify and capacity-related defects for the system. Several condition-related defects were found, however, including 10,000 LF of CIPP lining, 3 in-situ point repairs, 13 excavation point repairs, two full pipe replacements, one pipe realignment and 10 trim intruding laterals. Refer to the Sewer Master Plan for more detailed information.

*Design Criteria:*

The City does not currently maintain wastewater design criteria. The design criteria recommended in the 2018 Master Plan Update are based on an evaluation of comparable criteria from neighboring sewer agencies. The City of Pasadena design standards are summarized the table below. The recommended design criteria were used for evaluating performance of the existing collection system and for the planning of new facilities to address current performance issues or address future increases in sewer flows.

**Recommended Sewer Design Criteria**

| | | |
|---|---|---|
| **Gravity Main Criteria** | Minimum pipe diameter | 8-inches |
| | Minimum allowable velocity at peak design flow | 2 ft per sec |
| | Manning's Roughness Coefficient | 0.013 |
| **Depth-to-Diameter Ratio for Gravity Mains** | For sewer mains ≤ 12-inch | 0.50 |
| | For sewer mains > 12-inch | 0.75 |
| **Pump Station Criteria** | Minimum Number of Pumps | 2 |
| | Minimum Pump Capacity | Duty pumps capable of handling the ultimate PWWF |
| | Standby Capacity | 100% of the largest pump capacity |
| | Emergency Power | Required |
| | Emergency Storage Capacity | 6 hours of ADWF |
| **Velocity for Force Mains** | Minimum allowable velocity | 2.5 ft per sec |
| | Maximum allowable velocity | 8 ft per sec |

*Capacity Enhancement Measures:*

The Sewer Master Plan did not identify any capacity-related defect; however, several condition-related defects were identified from review of City CCTV inspection videos. By estimating the rehabilitation costs, the Sewer Master Plan identified a recommended set of CIP projects necessary to address identified condition related problems. This information allows for the development of a precise CIP program based upon the computer model and an up-to-date pipeline condition assessment.

*Schedule and Funding:*

The CIP developed for the 2018 Sewer Master Plan recommended improvements and improvement programs through 2035 with a detailed focus on near-term critical projects through 2025. Refer to the Sewer Master Plan for more detailed information.

## 9.2 Compliance Documents

The documents used for system evaluation and capacity assurance are as follows:

- Sewer System Master Plan Update 2018 – to be located at the City of Pasadena and on the City's website.
- City of Pasadena Standard Specifications – located at the City of Pasadena DPW.
- City of Pasadena CIP Program – located at the City of Pasadena DPW.
- Collection System CCTV Inspection Videos - located at the City of Pasadena DPW.
- Lucity Asset Management System - located at the SWIWM Division.
- Engineering Division Sewer GIS - located at the City of Pasadena DPW.
- City of Pasadena annual budget – located at the City of Pasadena.
- City of Pasadena Municipal Code, Title 8 and Title 13 – located at the City of Pasadena and on the City's website.

# CHAPTER 10 – MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The Enrollee shall monitor and measure the effectiveness of the SSMP and shall make modifications as necessary to maintain the programs effectiveness. Under the Order, the Enrollee shall:

(a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;

(b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

(c) Assess the success of the preventative maintenance program;

(d) Update program elements, as appropriate, based on monitoring or performance evaluations; and

(e) Identify and illustrate SSO trends, including: frequency, location, and volume.

## 10.1 Compliance Summary

The City reports all public and private property spills. Spill reports are maintained at the City and on the California Integrated Water Quality System's (CIQWS) online SSO database. Spill reports are analyzed by management to determine strategies to prevent future occurrences. Spill response efforts are also analyzed by management to determine their efficiency and effectiveness. Spill data along with on-site inspection data is utilized by the FOG Control Program Manager to monitor the progress of the City's FOG Reduction Program.

The City routinely conducts an update to its Sewer Master Plan. The Sewer Master Plan Update reviews multiple aspects of the City's management, operation, maintenance, funding, and CIP progress for the collection system.

To further meet these requirements, the City will develop a select set of criteria that will monitor and measure the broad range of performance activities in managing and operating its sewer utility. Since there are a number of parameters that may be more appropriate for the City, these measures should be initially developed and evaluated during the program implementation to make sure it adequately monitors for the desired performance. The preliminary performance monitoring measures to be considered include:

- SSOs and estimated volume by cause; data to include:
  - Event date
  - Event location
  - Report date
  - Number of SSOs over the past 12 months, distinguishing between dry

weather and wet weather overflows
  - Volume of SSO that was contained in relation to total volume spilled
  - SSO impacts to public health, environment, and waters of the U.S.
  - Cause(s) of SSO
  - Average time to respond to SSO
  - Responses and corrective measures to prevent SSOs
  - Determination of any pattern of SSOs in the collection system
- Amount of time spent by operation and maintenance staff (full time equivalent or FTE) to clean, repair and monitor performance of a pipeline, manhole, pump station, and other sewer system assets
- Average time for maintenance staff to respond to a spill.
- Scheduled repairs and improvements based on system performance history and inspections (list).
- Emergency repairs (list) by cause.
- Interview collection system maintenance staff and management on the effectiveness of SSMP elements and recommend modifications and improvements
- Evaluate maintenance record reports
- Evaluate sewer system improvements and progress made or setbacks
- Evaluate industrial pretreatment program compliance and impacts due to non- compliance or modifications in discharges by industrial users

If SSO trend information and/or performance measures indicate the need for change, the program shall be updated to reflect those changes necessary to address the identified problem.

## 10.2 Compliance Documents

The compliance documents are as follows:

- SSO Reports – located at the Engineering Division.
- Lucity Asset Management System - located at the SMIWM Division.
- Engineering Division Sewer GIS - located at the City of Pasadena DPW offices.

# CHAPTER 11 – PROGRAM AUDITS

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

## 11.1 Compliance Summary

The City of Pasadena will audit its SSMP on a two year cycle from the date of initial City Council approval of the SSMP. If conditions change that warrant increased audit frequency, the City will adjust its audit cycle accordingly. Audits will review the City's SSMP activities from the time of the last audit and will summarize the data accumulated through its monitoring, measuring, and program modification efforts. Particular attention will be paid to each program's effectiveness in meeting its goals, objectives, and priorities while ultimately being tied into the budgetary process.

The audit process will include the review of additions or improvements made to the collection system during the current audit period and describe planned additions and improvements for the upcoming audit period. Supporting documents will be reviewed to ensure they are up to date and the most recent documents are available and referenced. This process will also ensure that historical documents are kept for future reference.

Employee training will be reviewed to ensure programs and mechanisms are in place to provide necessary training, and that all staff is up to date with required training. Training includes on the job requirements, safety, required licenses and/or certificates, and professional development.

Completed audits will be retained on file by the City in the DPW offices.

## 11.2 Compliance Documents

The documents used for audit evaluations include the following:

- SSO Reports – located at the Engineering Division.
- Lucity Enhanced Maintenance Area Documentation - located at the SMIWM Division.
- Sewer GIS - located at the Engineering Division.

# CHAPTER 12 – COMMUNICATIONS

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

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

## 12.1 Compliance Summary

The Pasadena City Council encourages public participation in City activities. Time is allowed at each open City Council meeting for public comment. The City maintains a website where information about the collection system, including a copy of the latest SSMP, is publically available. The City also posts collection system documents, such as the upcoming 2018 Sewer Master Plan Update, for public review. The City's Municipal Code which provides the legal authority to manage, operate, and maintain the sanitary collection system are also online.

The City has committed to communicate the development of the SSMP with the pubic. The City will present the 2018 Master Sewer Plan in several public meetings and provide the public an opportunity to comment on its findings level of service goals, O&M activities and staffing requirements, design criteria, capital improvement program (CIP) findings, and financial implications related to sewer use fees and capital facility charges. In addition to this prior public involvement, the City may conduct up to two additional public meetings to increase public awareness should the need arise.

The City communicates with interested local and regional parties as part of its ongoing sanitary sewer and storm water management programs. With the addition of the SSMP requirements, the City will communicate with the LACSD prior to plan finalization, at least one time per year, and prior to the submittal of any updates to the SWRCB. The City will also coordinate any changes with its local industrial waste pretreatment and/or FOG program with LACSD to enhance local source control efforts and improve local wastewater effluent as appropriate.

## 12.2 Compliance Documents

The documents used for the communications program include the following:

- City of Pasadena website www.cityofpasadena.net

# CHAPTER 13 – GENERAL COMPLIANCE REQUIREMENTS

## SSMP and Program Certification

Both the SSMP and the City's program to implement the SSMP must be certified by the City to be in compliance with the requirements set forth above and must be presented to the City's governing board for approval at a public meeting. The City shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15.

In order to complete this certification, the City's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

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

The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the governing board of the City is required in accordance with D.14 when significant updates to the SSMP are made. To complete the re-certification process, the City shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

## 13.1 Compliance Summary

The SSMP will be presented to the Pasadena City Council for approval on December 16, 2019. Re-certification of the SSMP will occur every five (5) years from the date of the initial SSMP approval.

## 13.2 Compliance Documents

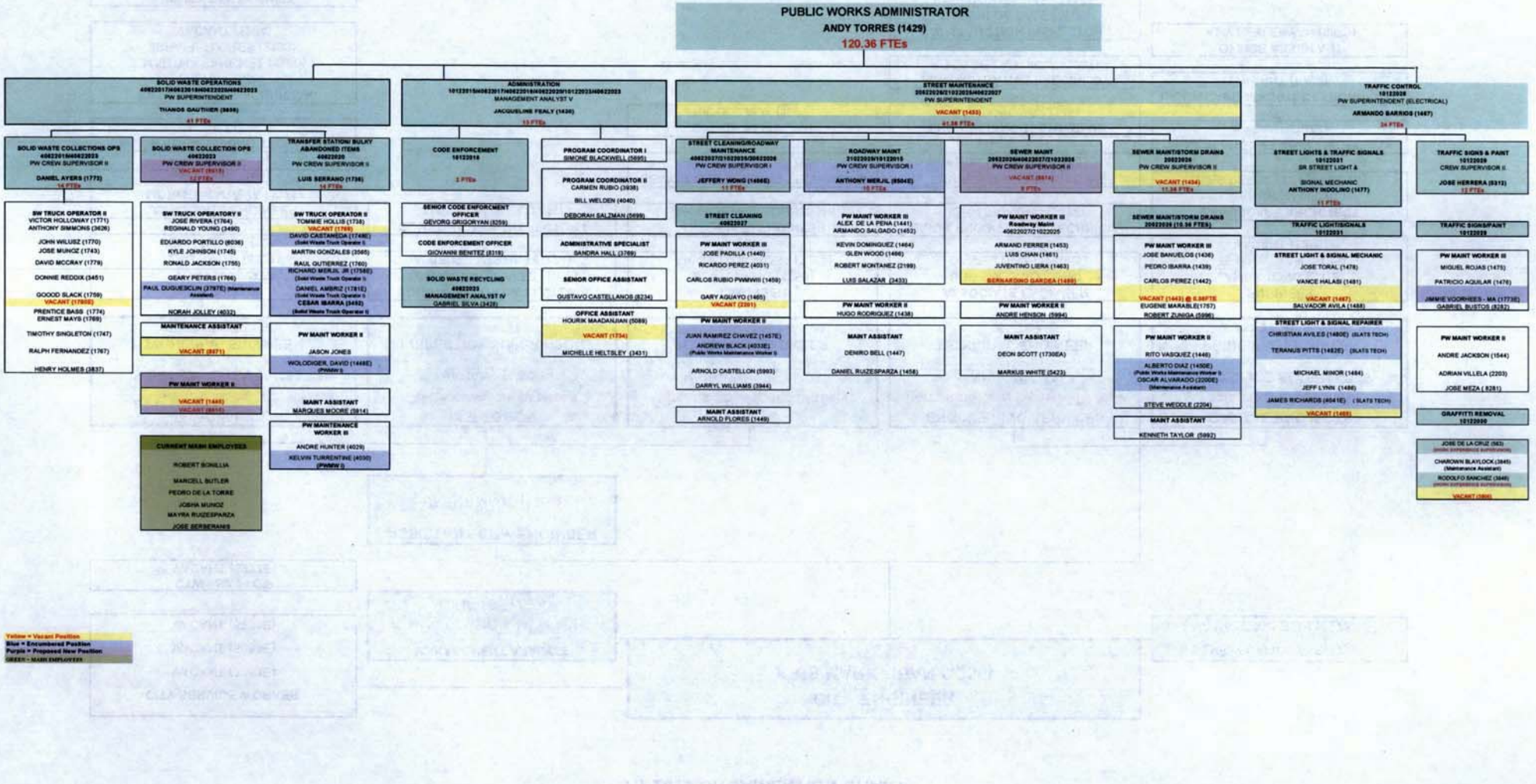
The following documents provide the legal basis for the City of Pasadena approval of the SSMP.

- Pasadena City Council meeting minutes from December 16, 2019 – located at the City of Pasadena and online.
- Approved SSMP – located at the City of Pasadena DPW offices.

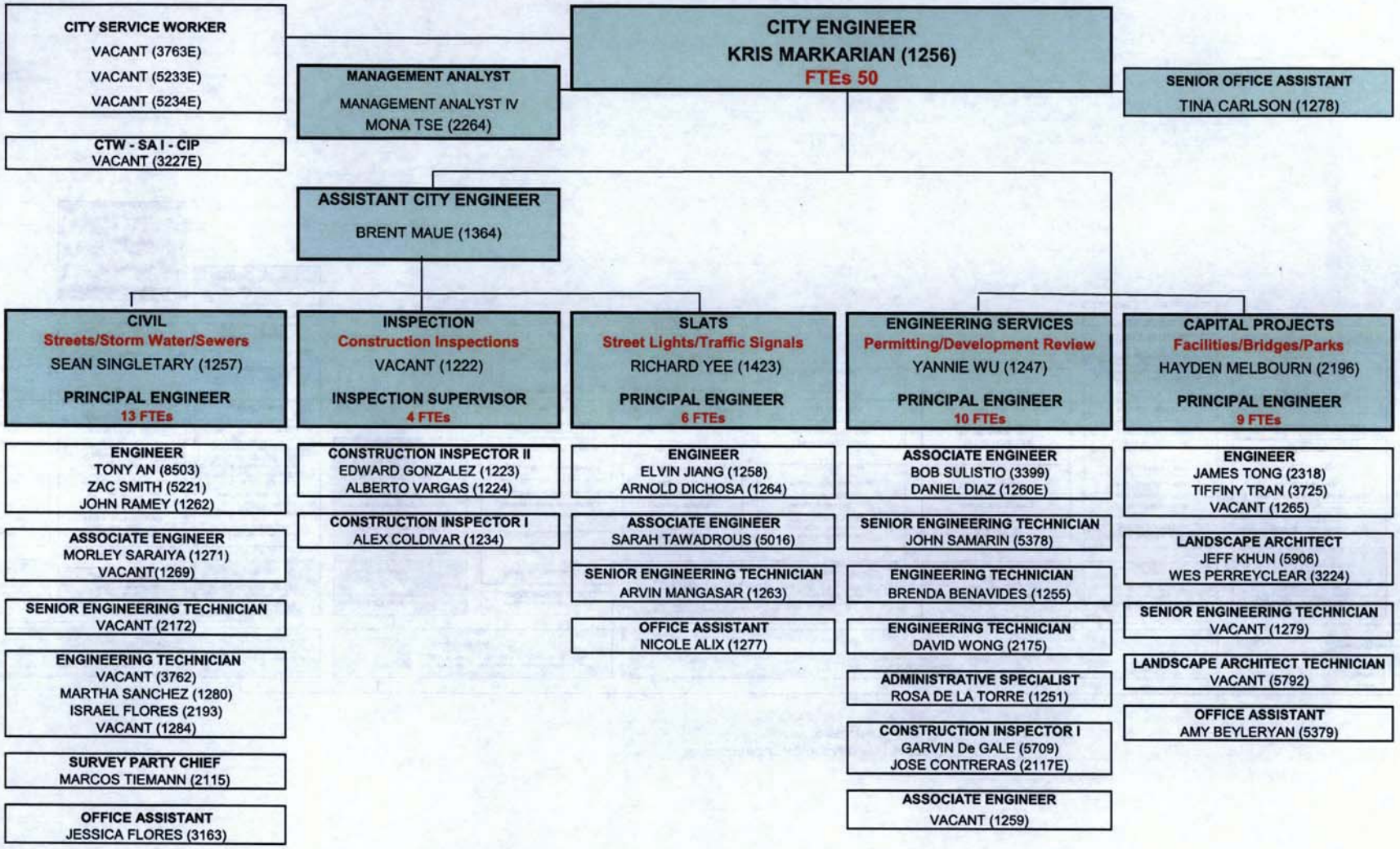
State Water Resources Control Board Order Number 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems – located at the City of Pasadena.

# APPENDIX A

## CITY ORGANIZATIONAL CHARTS

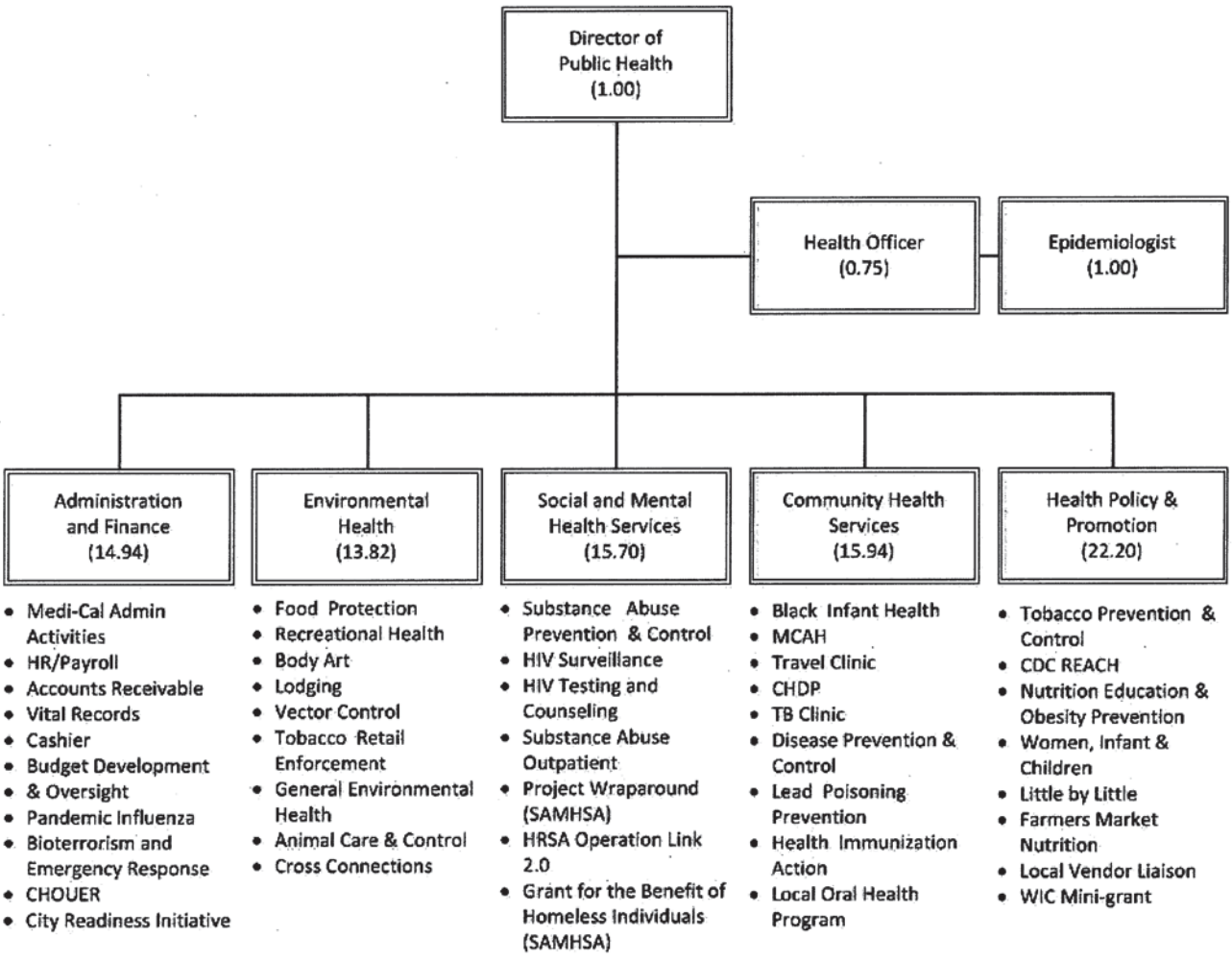

PUBLIC WORKS ADMINISTRATOR
ANDY TORRES (1429)
120.36 FTEs
SOLID WASTE OPERATIONS
40622017/40622018/40622020/40622023
PW SUPERINTENDENT
THANOS GAUTHIER (3859)
41 FTEs
SOLID WASTE COLLECTIONS OPS
40622019/40622023
PW CREW SUPERVISOR II
DANIEL AYERS (1773)
14 FTEs
SW TRUCK OPERATOR II
VICTOR HOLLOWAY (1771)
ANTHONY SIMMONS (3626)
JOHN WILUSZ (1770)
JOSE MUNOZ (1743)
DAVID MCCRAY (1779)
DONNIE REDDIX (3451)
GOOOD SLACK (1759)
VACANT (1785SE)
PRENTICE BASS (1774)
ERNEST MAYS (1769)
TIMOTHY SINGLETON (1747)
RALPH FERNANDEZ (1767)
HENRY HOLMES (3837)
SOLID WASTE COLLECTION OPS
40622023
PW CREW SUPERVISOR II
VACANT (5615)
12 FTEs
SW TRUCK OPERATORY II
JOSE RIVERA (1764)
REGINALD YOUNG (3490)
EDUARDO PORTILLO (8036)
KYLE JOHNSON (1745)
RONALD JACKSON (1755)
GEARY PETERS (1766)
PAUL DUGUESCLIN (2787E) (Maintenance Assistant)
NORAH JOLLEY (8032)
MAINTENANCE ASSISTANT
VACANT (5671)
PW MAINT WORKER II
VACANT (1445)
VACANT (5612)
CURRENT MASH EMPLOYEES
ROBERT BONILLIA
MARCELL BUTLER
PEDRO DE LA TORRE
JOSHA MUNOZ
MAYRA RUIZESPARZA
JOSE SERBERANIS
TRANSFER STATION/ BULKY ABANDONED ITEMS
40622020
PW CREW SUPERVISOR II
LUIS SERRANO (1736)
14 FTEs
SW TRUCK OPERATOR II
TOMMIE HOLLIS (1738)
VACANT (1769)
DAVID CASTANEDA (1748E)
(Solid Waste Truck Operator I)
MARTIN GONZALES (3565)
RAUL GUTIERREZ (1760)
RICHARD MERJIL JR (1758E)
(Solid Waste Truck Operator I)
DANIEL AMBRIZ (1781E)
(Solid Waste Truck Operator I)
CESAR IBARRA (3462)
(Solid Waste Truck Operator II)
PW MAINT WORKER II
JASON JONES
WOLODIGER, DAVID (1448E)
(PWMW I)
MAINT ASSISTANT
MARQUES MOORE (5914)
PW MAINTENANCE WORKER III
ANDRE HUNTER (4029)
KELVIN TURRENTINE (4030)
(PWMW I)
ADMINISTRATION
10122015/40622017/40622018/40622020/10122023/40622023
MANAGEMENT ANALYST V
JACQUELINE FEALY (1430)
13 FTEs
CODE ENFORCEMENT
10122018
2 FTEs
SENIOR CODE ENFORCMENT OFFICER
GEVORG GRIGORYAN (5259)
CODE ENFORCEMENT OFFICER
GIOVANNI BENITEZ (8318)
SOLID WASTE RECYCLING
40622023
MANAGEMENT ANALYST IV
GABRIEL SILVA (3428)
PROGRAM COORDINATOR I
SIMONE BLACKWELL (5995)
PROGRAM COORDINATOR II
CARMEN RUBIO (3938)
BILL WELDEN (4040)
DEBORAH SALZMAN (5499)
ADMINISTRATIVE SPECIALIST
SANDRA HALL (3769)
SENIOR OFFICE ASSISTANT
GUSTAVO CASTELLANOS (8234)
OFFICE ASSISTANT
HOURIK MAADANJIAN (5089)
VACANT (1734)
MICHELLE HELTSLEY (3431)
STREET MAINTENANCE
20622626/21022035/40622027
PW SUPERINTENDENT
VACANT (1453)
41.36 FTEs
STREET CLEANING/ROADWAY MAINTENANCE
40622027/21022035/30622026
PW CREW SUPERVISOR I
JEFFERY WONG (1466E)
11 FTEs
STREET CLEANING
40622027
PW MAINT WORKER III
JOSE PADILLA (1440)
RICARDO PEREZ (4031)
CARLOS RUBIO PWMWII (1459)
GARY AQUAYO (1465)
VACANT (2201)
PW MAINT WORKER II
JUAN RAMIREZ CHAVEZ (1457E)
ANDREW BLACK (4032E)
(Public Works Maintenance Worker I)
ARNOLD CASTELLON (5903)
DARRYL WILLIAMS (3944)
MAINT ASSISTANT
ARNOLD FLORES (1449)
ROADWAY MAINT
21022035/91022015
PW CREW SUPERVISOR I
ANTHONY MERJIL (5504E)
10 FTEs
PW MAINT WORKER III
ALEX DE LA PENA (1441)
ARMANDO SALGADO (1452)
KEVIN DOMINGUEZ (1464)
GLEN WOOD (1466)
ROBERT MONTANEZ (2199)
LUIS SALAZAR (2433)
PW MAINT WORKER II
HUGO RODRIQUEZ (1438)
MAINT ASSISTANT
DENRO BELL (1447)
DANIEL RUIZESPARZA (1458)
SEWER MAINT
20622626/40622027/21022035
PW CREW SUPERVISOR II
VACANT (5614)
9 FTEs
PW MAINT WORKER III
Roadway Maint
40622027/21022025
ARMAND FERRER (1453)
LUIS CHAN (1461)
JUVENTINO LIERA (1463)
BERNARDINO GARDEA (1469)
PW MAINT WORKER II
ANDRE HENSON (5994)
MAINT ASSISTANT
DEON SCOTT (1730EA)
MARKUS WHITE (5423)
SEWER MAINT/STORM DRAINS
20622626
PW CREW SUPERVISOR II
VACANT (1434)
10.36 FTEs
SEWER MAINT/STORM DRAINS
20622039 (10.36 FTEs)
PW MAINT WORKER III
JOSE BANUELOS (1436)
PEDRO IBARRA (1439)
CARLOS PEREZ (1442)
VACANT (1443) @ 0.36FTE
EUGENE MARABLE(1757)
ROBERT ZUNIGA (5996)
PW MAINT WORKER II
RITO VASQUEZ (1446)
ALBERTO DIAZ (1450E)
(Public Works Maintenance Worker I)
OSCAR ALVARADO (2200E)
(Maintenance Assistant)
STEVE WEDDLE (2204)
MAINT ASSISTANT
KENNETH TAYLOR (5992)
TRAFFIC CONTROL
10122026
PW SUPERINTENDENT (ELECTRICAL)
ARMANDO BARRIOS (1467)
24 FTEs
STREET LIGHTS & TRAFFIC SIGNALS
10122031
SR STREET LIGHT &
SIGNAL MECHANIC
ANTHONY INDOLINO (1477)
11 FTEs
TRAFFIC LIGHTS/SIGNALS
10122031
STREET LIGHT & SIGNAL MECHANIC
JOSE TORAL (1478)
VANCE HALASI (1481)
VACANT (1487)
SALVADOR AVILA (1488)
STREET LIGHT & SIGNAL REPAIRER
CHRISTIAN AVILES (1480E) (SLATS TECH)
TERANUS PITTS (1482E) (SLATS TECH)
MICHAEL MINOR (1484)
JEFF LYNN (1486)
JAMES RICHARDS (4041E) ( SLATS TECH)
VACANT (1485)
TRAFFIC SIGNS & PAINT
10122029
CREW SUPERVISOR II
JOSE HERRERA (5313)
12 FTEs
TRAFFIC SIGNS/PAINT
10122029
PW MAINT WORKER III
MIGUEL ROJAS (1475)
PATRICIO AQUILAR (1476)
JIMMIE VOORHEES - MA (1773E)
GABRIEL BUSTOS (8282)
PW MAINT WORKER II
ANDRE JACKSON (1544)
ADRIAN VILLELA (2203)
JOSE MEZA ( 8281)
GRAFFITTI REMOVAL
10122030
JOSE DE LA CRUZ (563)
(Public Maintenance Superintendent)
CHARONN BLAYLOCK (3845)
(Maintenance Assistant)
RODOLFO SANCHEZ (3846)
(Public Maintenance Superintendent)
VACANT (1484)
Yellow = Vacant Position
Blue = Encumbered Position
Purple = Proposed New Position
GREEN = MASH EMPLOYEES

# Department of Public Works
# Engineering Division
# FY 2019 ORGANIZATION CHART




7/26/2018

CITY OF PASADENA
PUBLIC HEALTH



# APPENDIX B

SANITARY SEWER OVERFLOW RESPONSE PLAN

# Overflow Emergency Response Plan

## Organization of Plan

The key elements of the Sanitary Sewer Overflow Response Plan (SSORP) are addressed individually as follows:

- Section I Overflow Response Procedure
- Section II Overflow Correction, Containment and Cleanup
- Section III Regulatory Agency Notification Plan

## Section I: Overflow Response Procedure

The Sanitary Sewer Overflow Response Procedure presents a strategy for the City of Pasadena to mobilize labor, materials, tools and equipment to correct or repair any condition which may cause or contribute to an un-permitted discharge. The plan considers a wide range of potential system failures that could create a sanitary sewer overflow (SSO) to surface waters, land or buildings.

### *Receipt of Information Regarding an SSO*

An overflow may be detected by system employees or by others. During regular working hours the Public Works/Street Maintenance and Integrated Waste Management is primarily responsible for receiving phone calls from the public of possible SSO from the wastewater collection system. After hours, the Police Department Dispatch is the primarily responsible for contacting the necessary personnel to respond to a SSO. The Police Dispatch (PD) number is staffed 24 hours a day every day of the year.

1. The telephone operator receiving the call should obtain all relevant information available regarding the overflow including:

   a. Time and date call was received;

   b. Specific location;

   c. Description of problem;

   d. Time possible overflow was noticed by the caller;

   e. Caller's name and phone number;

   f. Observations of the overflow (e.g., odor, duration, back or front of property); and

   g. Other relevant information that will enable the responding personnel to quickly locate, assess, contain and stop the overflow.

   If the call is received during working hours the SMIWM division telephone operator then records the SSO information and creates a work order for assignment to Collection System Crew Supervisor (CSCS). If the call is received after hours and dispatched by the PD, the responding stand-by personnel will document their actions to be recorded at the first available opportunity.

2. Pump station failures are monitored and received by the CSCS. Should there be a failure; the CSCS will immediately initiate the investigation and response action.

3. Sewer overflows detected by any personnel in the course of their normal duties shall be reported immediately to the SMIWM division. Dispatch personnel should record all relevant SSO information and dispatch the CSCS or appropriate crew.

4. The CSCS shall confirm the SSO. Until verified, the report of a possible spill will not be referred to as a "sanitary sewer overflow or an SSO."

5. Sanitary Sewer Overflow incidents will be tracked on the City of Pasadena's daily sewer maintenance sheet and then downloaded to the Collection System Sections software tracking system

*Dispatch of Appropriate Personnel to Site of Sanitary Sewer Overflow*

Failure of any element within the wastewater collection system that threatens to cause or causes an SSO will trigger an immediate response from the CSCS, who is on call for duty, to isolate and correct the problem. Personnel and equipment shall be available to respond to any SSO location. Response personnel will be dispatched to any site of a reported SSO immediately.

1. Dispatching Personnel

   - Dispatchers should receive notification of sewer overflows as outlined above in the section entitled "Receipt of Information Regarding an SSO" and dispatch the CSCS and/or the appropriate personnel and resources as required.
   - Dispatchers shall notify the appropriate manager or supervisor by any means necessary regarding SSOs and field personnel locations.

2. Personnel Instructions and Work Orders

   - Responding crews should be dispatched by 8-R radio or any means necessary. SMIWM division should receive instructions from sewer investigators or their supervisors regarding appropriate personnel, materials, supplies, and equipment needed.
   - Dispatchers shall ensure that the entire message has been received and acknowledged by the personnel who are dispatched. All standard communications procedures should be followed. All personnel being dispatched shall proceed immediately to the site of the overflow. Any delays or conflicts in assignments must be immediately reported to the CSCS for resolution.
   - Response personnel should in all cases report their findings, including possible damage to private and public property, to the CSCS immediately upon making their investigation. If the CSCS has not received findings from the field personnel within 30 minutes of being dispatched, the CSCS shall contact the response personnel to determine the status of the investigation.
   - CSCS shall refer all pertinent information to the Public Works Supervisor, including any details of the problems described by customers.

3. Additional Resources

   - CSCS should receive and shall convey to appropriate parties requests for additional personnel, material, supplies, and equipment from crews working at the site of a

SSO.

4. Preliminary Assessment of Damage to Private and Public Property

   - The response personnel shall not enter private property for purposes of assessing damage. It is the primary responsibility of the response personnel to contain sewage and attempt to clear any blockage in the collection system. Given consent by the private property owners, the Public Works Superintendent is responsible for entering private property taking the appropriate still photographs and/or video footage. If possible, pictures should be taken of all indoor and outdoor areas the SSO has impacted. Thoroughly document the nature and extent of impacts. Available photographs are to be forwarded to Public Works Superintendent for documentation proposes.

5. Field Supervision and Inspection

   - The Public Works Superintendent who is on call should visit the site of the SSO to ensure that provisions of this SSORP and other directives are met.
   - The Public Works Superintendent is responsible for confirming that the SSO is documented correctly and that information conveyed to the SMIWM Division Administrator.

6. Coordination with Hazardous Material Response

   - Upon arrival at the scene of a sewer overflow, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the CSCS or the response personnel should immediately contact their supervisor for guidance before taking further action.
   - Should the supervisor determine the need to alert the hazardous material response team, the CSCS and/or personnel on the scene shall await the arrival of the City of Pasadena's Hazardous Materials Personnel (COPHMP) to take over the scene.
   - Remember that any vehicle engine, portable pump or open flame (e.g., cigarette lighter) can provide the ignition for an explosion or fire should flammable fluids or vapors be present. Keep a safe distance and observe cautiously until assistance arrives.
   - Upon arrival of the COPHMP, the CSCS and/or Collection System Personnel will take direction from the person with the lead authority of that team. Only when that authority determines it is safe and appropriate for the CSCS and/or Collection System Personnel to proceed under the SSORP with the containment, clean-up activities and correction.

## Section II: Overflow Correction, Containment, and Clean-Up

SSOs of various volumes occur from time to time in spite of concerted prevention efforts. Spills may result from blocked sewers, pipe failures, or mechanical malfunctions among other natural or man-made causes. City of Pasadena is constantly on alert and should be ready to respond upon notification and confirmation of an SSO.

This section describes specific actions to be performed by the crews during an SSO. The

objectives of these actions are:

- To protect public health, environment and property from sewage overflows and restore surrounding area back to normal as soon as possible;
- To establish perimeters and control zones with appropriate traffic cones and barricades, vehicles or use of natural topography (e.g., hills, berms);
- To promptly notify the regulatory agency's communication center of preliminary overflow information and potential impacts;
- To contain the sewer overflow to the maximum extent possible including preventing the discharge of sewage into surface waters; and
- To minimize the City of Pasadena's exposure to any regulatory agency penalties and fines.

Under most circumstances, the City of Pasadena will handle all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and mitigate or control the problem. For example, repair of a force main could require the temporary shutdown and diversion of the flow at an upstream location. If the closure is not handled properly, sewage system back-ups may create other SSO.

*Responsibilities of Response Crew upon Arrival*

It is the responsibility of the first personnel who arrive at the site of a sewer overflow to protect the health and safety of the public by mitigating the impact of the overflow to the extent possible. Should the overflow not be the responsibility of City of Pasadena but there is imminent danger to public health, public or private property, or to the quality of waters of the U. S., then prudent emergency action should be taken until the responsible party assumes responsibility and provides actions.

It should be noted that in case of emergency when public health, safety and welfare is jeopardized as declared by the Health Department, the following parties are empowered as Peace Officers to enter into private properties for immediate SSO response: Police Officers, Fire Fighters, City Engineer and/or Public Works Director, and Health Officials.

Upon arrival at an SSO, the response crew should do the following:

- Determine the cause of the overflow, e.g. sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;
- Once cause is determined, ownership of the problem needs to be identified.
- Identify and request, if necessary, assistance or additional resources to correct and/or contain overflow or to assist in the determination of its cause;
- Determine if private property is impacted. If yes, the dispatcher should be informed so that the Pasadena Health Department may be advised.
- Upon determination of private property being damage as a result of City of Pasadena collection system generated SSO, the CSCS will contact a water damage clean-up contactor to execute emergency clean up at city expense.

- Take immediate steps to stop the overflow, e.g. relieve pipeline blockage, manually operate pump station controls, repair pipe, etc. Extraordinary steps may be considered where overflows from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way);

- If the cause is determined to be private generated SSO, and the damage is limited to the property, upon request the CSCS may provide a list of contactors to assist with clean up and/or pipe clearance.
- If necessary, request additional personnel, materials, supplies, or equipment from Departments of Police, Fire and Health that will expedite and minimize the impact of the overflow, such as traffic diversion, crowd control, and street closure.

### *Initial Measures for Containment*

Initiate measures to contain the overflowing sewage and recover where possible sewage which has already been discharged, minimizing impact to public health or the environment.

- Determine the immediate destination of the overflow, e.g. storm drain, street curb gutter, body of water, creek bed, etc.;
- Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
- Take immediate steps to contain the overflow, e.g., block or bag storm drains, recover the sewage through vacuum truck and/or divert into downstream manhole, etc.

### *Additional Measures under Potentially Prolonged Overflow Conditions*

In the event of a prolonged sewer line blockage or a sewer line collapse, a determination should be made to set up a portable by-pass pumping operation around the obstruction.

- Appropriate measures shall be taken to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Continuous or periodic monitoring of the by-pass pumping operation shall be implemented as required.
- Regulatory agency issues shall be addressed in conjunction with emergency repairs.

### *Cleanup*

SSO sites are to be thoroughly cleaned after an overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, rubber products) is to remain.

- Where practical, the area is to be thoroughly flushed and cleaned of any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.
- If necessary, Police Officers should be dispatched to assist street closure, traffic diversion, or crowd control.
- The overflow site is to be secured to prevent contact by members of the public until the

site has been thoroughly cleaned.

- Where appropriate, the overflow site is to be disinfected and deodorized.

*Sanitary Sewer Overflow Reporting and Tracking*

SSO documentation shall be completed by the CSCS, and reviewed by the Public Works Superintendent. Public Works Supervisor shall promptly notify the SMIWM Division Administrator when the overflow is eliminated. Information regarding the SSO should include the following:

1. Indication that the SSO had reached surface waters, i.e., all overflows where sewage was observed running to surface waters, or there was obvious indication (e.g. sewage residue) that sewage flowed to surface waters; and
2. Indication that the sewage overflow had not reached surface waters. Guidance in characterizing these overflows to include:
    a. Sewage overflows to covered storm drains (with no public access) where personnel verify, by inspection, that the entire volume is contained in a sump or impoundment and where complete clean-up occurs leaving no residue.
    b. Preplanned or emergency maintenance jobs involving bypass pumping if access by the public to a bypass channel is restricted and subsequent complete clean-up occurs leaving no residue (Any preplanned bypass under these circumstances will not be considered an overflow.); and
    c. Overflows where observation or on-site evidence clearly indicates all sewage was retained on land and did not reach a surface water and where complete cleanup occurs leaving no residue.
3. Determination of the start time of the SSO by one of the following methods:
    a. Date and time information received and/or reported to have begun and later substantiated by the CSCS or response crew;
    b. Visual observation.
4. Determination of the stop time of the SSO by one of the following methods:
    a. When the blockage is cleared or flow is controlled or contained; or
    b. The arrival time of the CSCS or response crew, if the overflow stopped between the time it was reported and the time of arrival.
5. Visual observations, such as:
    a. An estimation of the rate of sewer overflow in gallons per minute (GPM) by one of the following criteria:
    b. Direct observations of the overflow; or
    c. Measurement of actual overflow from the sewer main.

6. Determination of the volume of the sewer overflow:

    a. When the rate of overflow is known, multiply the duration of the overflow by the overflow rate; or

    b. When the rate of overflow is not known, investigate the surrounding area for evidence of ponding or other indications of overflow volume.

7. Photographs of the event, when possible.

8. Assessment of any damage to the exterior areas of public/private property. CSCS shall enter private property for purposes of estimating damage to structures, floor and wall coverings, and personal property.

## Section III: Regulatory Agency Notification Plan

The Regulatory Agency Notification Plan establishes procedures that the City of Pasadena shall follow to provide formal notice to the Office of Emergency Services and the Regional Water Quality Control Board as necessary in the event of SSO. The reporting criteria below explains to whom various forms of notification should be made, and lists agencies/individuals to be contacted.

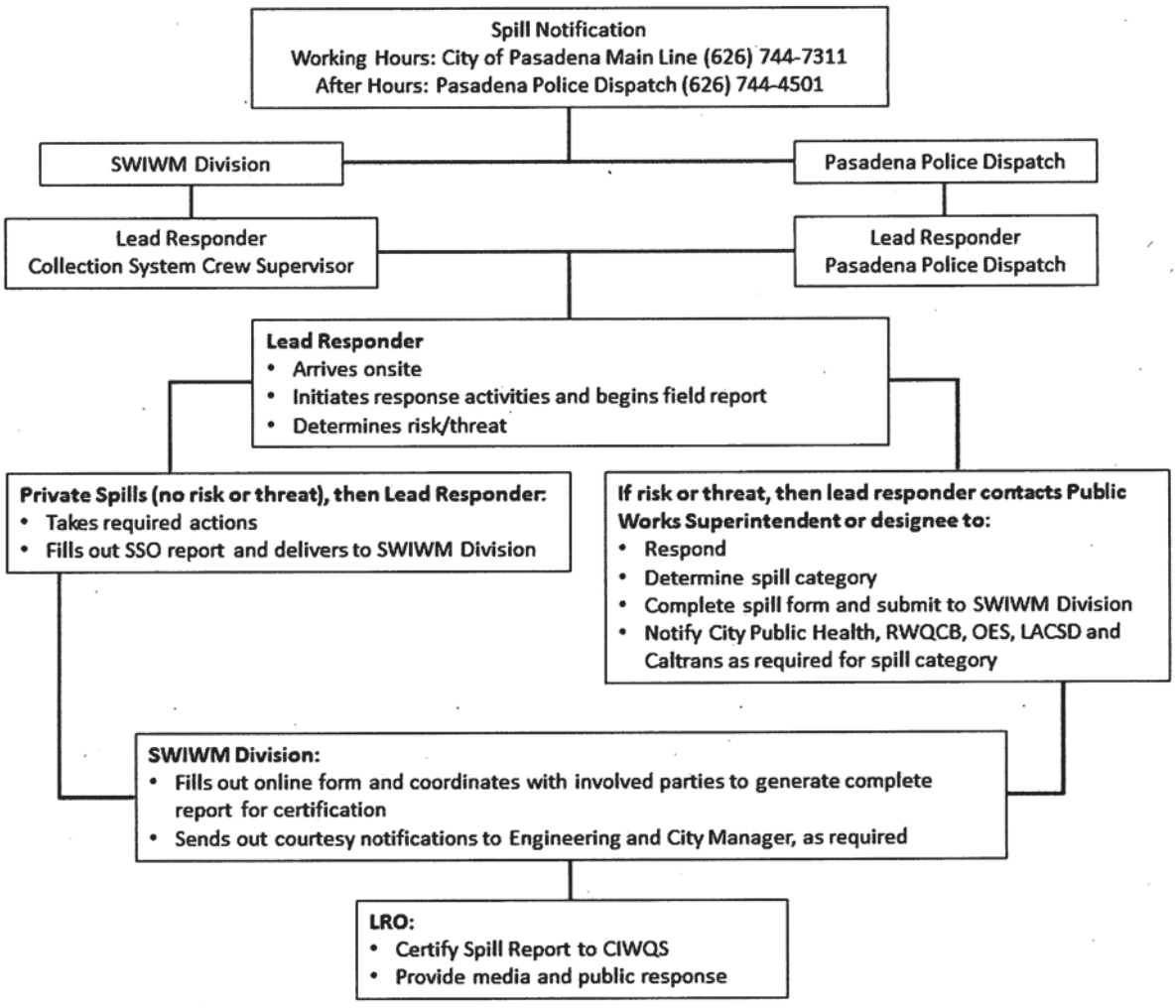
The procedures for providing notification to the media of an SSO is responsibility of the City of Pasadena's Public Information Officer. Internal notification and mobilization of personnel are detailed in Section I: Overflow Response Procedure.

Using data supplied during the verification process and updates from the CSCS or the response crew, the Pubic Works Superintendent shall prepare the initial and final SSO Reports which shall be reviewed, approved, and submitted by the Public Works Administrator or the Public Works Director's designee. These reports shall be made available to those desiring additional information or written confirmation.

*Chain of Communication Flowchart*

The SSO Chain of Communications flow chart shows the chain of communication for reporting SSOs. This flowchart, along with the reporting guidelines, was developed to manage the reporting process. The Reporting Guidelines explains the thresholds for SSO reporting, the agencies that must be notified, and the reporting timeframes. The detailed procedures utilized by the City for SSO reporting is in the City of Pasadena Sewer Overflow Response Plan. This plan is kept updated by the Wastewater Division under the direction of the Wastewater Supervisor, Public Services Director, and Director of Engineering and is executed and signed by the LRO.

In September 2013 the SWRCB changed the reporting of SSOs from appearance based to event based. Under the event based system one SSO report is required for each SSO that occurs regardless of the number of appearance points although each appearance point must be noted in the report. Previously, a separate SSO report had to be filed for each appearance point sometimes requiring numerous SSO reports for the same SSO event.




*SSO Reporting Guidelines*

Reporting of all unauthorized discharges from the City's sanitary sewer collection systems is required by the Order. Discharges are rated by category. A Category 1 SSO is an unauthorized SSO of any volume that reaches surface water or a storm drain or channel that is tributary to surface water. A Category 2 SSO is any unauthorized discharge of 1,000 gallons or greater that does not reach surface waters, a drainage channel or storm water system (MS4) and is not fully captured and properly disposed of. A Category 3 SSO is all other unauthorized discharges from the City's collection systems.

Private lateral discharges are sewage discharges that occur from private sewer lateral or other privately-owned sewer assets. The City is not responsible for private lateral discharges but is required to report them as the City becomes aware of them. Updated SSO Reporting Flow Charts, staff titles, and staff contact information is maintained at the Pasadena DPW offices.

Failure to comply with the monitoring and reporting requirements of the State could result in civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000

a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

**Notification Requirements.** The City is required to notify Cal OES and obtain a notification control number for any SSO from the City's system that is greater than or equal to 1,000 gallons that discharges to, or probably will discharge to surface water directly or by way of a drainage channel or MS4. Notification is to be immediate but not later than 2 hours after the City becomes, (A) aware of the SSO, (B) notification is possible, and (C) notification is possible without substantially impeding the cleanup or other emergency activities.

To satisfy the notification requirements for each applicable SSO the City must provide the information requested by Cal OES before receiving a control number. The requested spill information may include the following:

1. Name of person notifying Cal OES and direct return phone number.
2. Estimated SSO volume discharged (gallons).
3. If ongoing, estimated SSO discharge rate (gallons per minute).
4. SSO Incident Description:
    a. Brief narrative.
    b. On-scene point of contact for additional information (name and cell phone number).
    c. Date and time enrollee became aware of the SSO.
    d. Name of sanitary sewer system agency causing the SSO.
    e. SSO cause (if known).
5. Indication of whether the SSO has been contained.
6. Indication of whether surface water is impacted.
7. Name of surface water impacted by the SSO, if applicable.
8. Indication of whether a drinking water supply is or may be impacted by the SSO.
9. Any other known SSO impacts.
10. SSO incident location (address, city, state, and zip code).

After the initial notification to Cal OES and until the City has certified the SSO report in the CIWQS Online Database, the City is required to provide updates to Cal OES regarding substantial changes to the SSO's estimated volume or known impacts.

**Reporting Requirements.** All SSOs occurring within the City's sanitary sewer collection system must be reported to the CIWQS Online SSO Database. SSOs from the City's collection system are classified as Category 1, Category 2 or Category 3 depending upon their size and whether they spilled to surface waters.

- A Category 1 SSO is any unauthorized volume discharge that reaches surface water or a drainage channel that is tributary to surface water or an MS4 and is not fully captured and disposed of properly. Any volume of wastewater not recovered from an MS4 is considered to have reached surface waters unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin.

- A Category 2 SSO is any unauthorized wastewater discharge equal to or greater than 1,000 gallons and does not reach surface waters, a drainage channel, or MS4 unless the entire volume of the SSO is recovered and disposed of properly.

- A Category 3 SSO is any other unauthorized discharge of wastewater resulting from a failure or flow condition in the City's sanitary sewer collection system.

Category 1 and category 2 SSOs must have a draft report submitted to the CIWQS Online Database within three (3) business days of the City becoming aware of the SSO. A final SSO report must be certified within 15 calendar days to the CIWQS Online Database. A Category 3 SSO must be reported to CIWQS and be certified within 30 calendar days after the month that the SSO occurred.

At a minimum, the following mandatory information shall be reported for a *draft* **Category 1 SSO Report**:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

At a minimum, the following mandatory information shall be reported for a *certified* **Category 1 SSO Report**, <u>in addition</u> to all fields required in the *draft* Category 1 SSO Report:

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.
10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

At a minimum, the following mandatory information shall be reported for a *draft* **Category 2 SSO Report:**

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.

7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.

At a minimum, the following mandatory information shall be reported for a *certified* **Category 2 SSO Report**, in addition to all fields required in the *draft* Category 2 SSO Report :

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. Description of SSO destination(s).
16. SSO end date and time.

17. SSO causes (mainline blockage, roots, etc.).
18. SSO failure point (main, lateral, etc.).
19. Whether or not the spill was associated with a storm event.
20. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
21. Description of spill response activities.
22. Spill response completion date.
23. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion
24. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

At a minimum, the following mandatory information shall be reported for a *certified* **Category 3 SSO Report**, in addition to all fields required in the *draft* Category 2 SSO Report :

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. Description of SSO destination(s).
16. SSO end date and time.

17. SSO causes (mainline blockage, roots, etc.).
18. SSO failure point (main, lateral, etc.).
19. Whether or not the spill was associated with a storm event.
20. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

**SSO Technical Report.** The City must submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the end date for any SSO of 50,000 gallons or greater was spilled to surface waters. The Technical Report shall include:

Causes and Circumstances of the SSO:

a. Complete and detailed explanation of how and when the SSO was discovered.
b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
d. Detailed description of the cause(s) of the SSO.
e. Copies of original field crew records used to document the SSO.
f. Historical maintenance records for the failure location.

Enrollee's Response to SSO:

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.
b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.
c. Final corrective action(s) completed and/or planned to be completed, including a schedule for action not yet completed.

Water Quality Monitoring:

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
b. Detailed location map illustrating all water quality sampling points.

**No spill certification**. If no spills occurred during a calendar month the City must:

1) certify, within 30 calendar days after the end of the month that no spills occurred that there were no spills during that designated month or

2) certify quarterly, within 30 calendar days of the end of the quarter, that there were no spills during that quarter.

Quarters are Q1-January/February/March, Q2-April/May/June, Q3-July/August/September, Q4-October/November/December. If the City reports a private property sewage discharge during a month (or quarter) that no spills occurred from the City's system, the City is still required to file a no spill certification.

**Amended SSO Reports**. The City may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or adding an attachment to the SSO report in the CIWQS Online SSO Database.

Updated SSO Reporting Flow Charts, staff titles, and staff contact information are maintained at the Pasadena City Hall. SDCDEH has requested to be notified of any discharge from the City's collection system or from any private lateral or other private sewer asset that the City become aware of. Pasadena Public Works has requested to be notified of any sewage spills that impact their storm water system.

**CIWQS Online Database Unavailability.** Should the CIWQS Online Database be unavailable, the City is to fax or e-mail the required spill information to the Region 9 Water Quality Control Board. The City must also enter all required spill information into the CIWQS Online Database once it becomes available.

**Collection System Questionnaire.** Every twelve months the City must complete and certify their Collection System Questionnaire.

The following table summarizes the required reporting and reporting time frames the City utilizes to comply with the Order.

| Type of Spill | Agency(s) to notify | Notification Timeframe | Report Timeframe |
|---|---|---|---|
| Category 1 – any volume discharge of sewage resulting from a failure or flow condition in the City's sanitary sewer collection system that:<br>A. Reach surface waters and/or reach a drainage channel tributary to a surface water; or<br>B. Reach a Municipal Separate Storm Sewer System (MS4) and are not fully 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).) | Cal OES<br>RWQCB per staff request. | Within 2 hours of City staff becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons, notify the Cal OES and obtain a notification control number. Additionally, certify to RWQCB that OES was notified within 24 hours. | Submit draft report on CIWQS within **3** business days of becoming aware of the SSO.<br>Certify within **15** calendar days of the SSO end date.<br>SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater is spilled to surface waters. |
| Category 2 – Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** that **do not** reach surface water, a drainage channel, or MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly. | RWQCB per staff request. | Immediate | Submit draft report on CIWQS within **3** business days of becoming aware of the SSO.<br>Certify within **15** calendar days of the SSO end date. |
| Category 3 – All other discharges of untreated or partially treated wastewater resulting from a flow condition or failure in the sanitary collection system. | RWQCB per staff request. | Immediate | Must report and certify on CIWQS within 30 days after the end of the calendar month in which the SSO occurred. |

| Type of Spill | Agency(s) to notify | Notification Timeframe | Report Timeframe |
|---|---|---|---|
| Private lateral sewage discharges that are caused by blockages or other problems within a privately owned lateral or other private sewer assets. | RWQCB per staff request. | Immediate as the City becomes aware. | Private lateral sewage discharges must be reported to the Online SSO Database based upon the SDRWQCB order. The Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party should be identified, if known. |
| No Spill Report | CIWQS | | "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. |

The following table lists the contact information for the various agencies requiring notification of an SSO.

| Normal Hours | After Hours |
|---|---|
| **RWQCB – Los Angeles Region 4** (213) 576-6600 | RWQCB: (213) 434-3773 (voice mail) |
| **Cal OES (Office of Emergency Services)** (800) 852-7550 | 24 hours |
| **Caltrans District 7** (213) 897-3656 | 24 hours |
| **Pasadena Public Health Department** (626) 744-6062 | N/A |
| **Pasadena Police Department** (626) 744-4501 | 24 hours |
| **Pasadena Fire Department** (626) 744-4655 | 24 hours |