

CITY OF SEAL BEACH

**SEWER SYSTEM MANAGEMENT PLAN
PROGRAM AUDIT
2016**



Submitted to
City of Seal Beach
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INTRODUCTION

I-1 Sanitary Sewer System Waste Discharge Requirements

The California State Water Resources Control Board (State Water Board) adopted Statewide General Waste Discharge Requirements for sanitary sewer systems in May 2006 as Order No. 2006-0003. In 2008, the Monitoring and Reporting Program (MRP) portion of the Waste Discharge Requirements (WDR) was revised as Order No. 2008-0002-EXEC. The MRP was amended again in September 2013. The Amendment, WQO 2013-0058-EXEC became effective on September 9, 2013. These Water Quality Orders are referred to as the Sanitary Sewer System Waste Discharge Requirements (WDR).

The purpose of the WDR is to provide consistent statewide requirements for quantifying and reducing the number of wastewater spills and the volume of wastewater spilled in the State of California.

I-2 State Water Resources Control Board Order No. 2006-0003

Provision 11 of Order No. 2006-0003 (Order 2006-0003), sets the requirement for the preparation of a Sewer Systems Management Plan that addresses proper funding, management, operation and maintenance of the sanitary sewer system:

The enrollee (City of Seal Beach) shall develop and implement a written Sewer System Management Plan (SSMP) 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 City's office and/or available on the internet. This SSMP must be approved by the Enrollee's governing board (City of Seal Beach, Board of Directors) at a public meeting.

In Provision 13, mandatory elements of the SSMP are specified. The order requires:

As part of the SSMP, the Enrollee (City) 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 (City'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.

I-3 Amended Monitoring and Reporting Program, Water Quality Order No. 2013-0058-EXEC

The amended Monitoring and Reporting Program (amended MRP), which became effective on September 9, 2013 established monitoring, record keeping, reporting, and public notification requirements for Order 2006-0003. The amended MRP revised the spill categories and added a third category. A very important element of the amended MRP is the requirement for preparation of **SSO Technical Reports** for spills that equal or exceed 50,000 gallons that are spilled to surface waters, and development of a **SSO Water Quality Monitoring Program**. The City's Emergency Overflow Response Plan will need to be updated to comply with the amended MRP requirements.

I-4 California Regional Water Quality Control Board, Santa Ana Region, General Waste Discharge Requirements

The California Regional Water Quality Control Board, Santa Ana Region (RWQCB-SA) required the preparation of a Sewer System Management Plan, as included in Provision 11 of Order No. R8-2002-0014, General Water Discharge Requirements for Sewage Collection Agencies in Orange County within the Santa Ana Region. The RWQCB-SA adopted its general waste discharge requirements in April 2002, which was over four (4) years prior to the statewide order adoption. Order R8-2002-0014 was critical in the development of the statewide Order 2006-0003. While the general requirements of Order 2006-0003 and R8-2002-0014 are similar, the regulations contain differences in its organization and wording.

The City's SSMP was prepared in accordance with the RWQCB-SA Order No. R8-2002-0014. The City initially prepared the SSMP document in 2005. It is recommended that the City update all of its SSMP documents in order to comply with Order 2006-0003. All references to Order No. R8-2002-0014 should be updated to correspond to the appropriate requirements of the order in place at the time of the update. Following the completion of this audit, the City's SSMP documents will be updated as necessary.

I-5 SSMP Audit 2013

The City of Seal Beach's 2013 SSMP Audit discussed the effectiveness of the City's SSMP by evaluating the City's compliance with the elements/requirements listed in Provision 13 of the Order 2006-0003. Recommendations for updates and improvements to the City's SSMP were included in the audit report.

I-6 SSMP Audit 2016

The 2016 Audit addresses all elements of the SSMP, documents the operation and maintenance activities performed by the City along with their effectiveness; and capacity improvements implemented. Topics discussed in the audit are as follows:

- Requirements of Order 2006-0003
- Description of what the City has done to comply with Order 2006-0003
- Proposed revisions to the SSMP per the amended MRP, Order 2013-0058-EXEC
- Recommendations for updating or improving the existing SSMP

The City's current SSMP document refers to an old Waste Discharge Requirement Order. All references to the WDR need to be updated to reference the current Order 2006-0003.

SECTION 1

GOALS

1-1 Waste Discharge Requirement

Order No. 2006-0003 states that:

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

1-2 Goals of the Sewer System Management Plan

The SSMP document includes an older version of the City's Goals. It is recommended that the City review and update its SSMP document with more current Goals and include the requirements of the amended MRP, Order 2013-0058-EXEC, which will be referenced throughout this SSMP Audit report.

The goals and objectives from the Goals section are currently to:

1. Prevent sewer system overflows by
 - a. Providing adequate capacity in its system in accordance with its criteria, and schedule detailed in its System Evaluation and Capacity Assurance Plan
 - b. Cost effectively minimizing the sources of inflow and infiltration
 - c. Implementing its fats, oils, and grease (FOG) control program to minimize the entry of these substances into its collection system
 - d. Inspecting its system, assessing its condition, and replacing and/or rehabilitating it as detailed and scheduled in its Sewer System Rehabilitation Plan
 - e. Establishing and implementing an operation and maintenance program with adequately trained staff to not only prevent SSOs, but also to extend the useful life of its system
 - f. Establishing proper legal authority for implementing the above
 - g. Maintaining the necessary level of funding for providing proper operation, maintenance, and repair of its system as detailed in its Operation and Maintenance Program; and providing adequate capacity as detailed in its System Evaluation and Capacity Assurance Plan through periodic reviews of its rate structure.
2. Minimize the impact of SSOs that do occur by preparing a proper Overflow Emergency Response Plan, training its staff in its implementation, implementing the plan when needed, and updating it based on information developed from events that do occur.
3. Provide a plan and schedule for measures to be implemented to prevent SSO's.

1-3 Compliance

The City has completed and is currently implementing its Preventative Maintenance Program. The City has the legal authority to implement the SSMP goals. The SSMP goals element needs to be adjusted to recognize that these tasks have been established, and are being updated as additional improvements/work are being done.

1-4 Summary of Recommended Updates

The following items are recommended to be updated in the Goals Section of its SSMP:

1. Review and update its SSMP document with more current Goals and include the requirements of the amended MRP, Order 2013-0058-EXEC Update the SSMP document with the Goals section prepared in 2007, incorporating the amended MRP requirements.
2. Make it clear that the City has already established an operation and maintenance program with adequately trained staff to prevent SSOs and extend the useful life of its system (reference to Goal 1e).
3. Make it clear that the City has already established an overflow response plan and trained its staff in its implementation (reference to Goal 2).
4. Include goals for maintaining and operating lift stations
5. Include goals for maintaining system records

SECTION 2
ORGANIZATION

2-1 Waste Discharge Requirements

Order No. 2006-0003 requires that the SSMP identify:

- (a) *The name of the responsible or authorized representative as described in Section J of this Order,*
- (b) *The names and telephone numbers of 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 as applicable (such as County Health Officer, County Environmental Health Agency, and/or State Office of Emergency Services (OES)).*

2-2 Compliance

It is recommended that the City update the Organization section of its SSMP document. It should include the requirements of the amended MRP.

a. Legally Responsible Official

Order No. 2006-0003 requires that the SSMP identify, *“The name of the responsible or authorized representative as described in Section J of this Order.”* Section J states that all applications, reports, or information shall be signed and certified by *“a person designated, for a municipality, state, federal or other public agency, as either a principal executive official, or by a duly authorized representative person”*.

The sewer collection system is managed by the Public Works Department. The City’s legally responsible official (LRO) is the Deputy Director of Public Works. This should clearly be stated in the City’s SSMP document.

b. Organization Chart

Order No. 2006-0003 requires that the SSMP identify, *“The names and telephone numbers of 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 City has generally provided the contact information of the management, administrative, and maintenance positions in its SSMP document, throughout the text. The staff’s telephone numbers should be consolidated into a table, similar to Table 2-1:

**Table 2-1
Contact List**

Contact		Phone Number		Email Address
Name	Title	Office	Mobile	
Jill R. Ingram	City Manager	(562) 431-2527 ext-1300	N/A	jingram@sealbeachca.gov
Steve Myrter	Director of Public Works	(562) 431-2527 ext-1321	N/A	smyrter@sealbeachca.gov
Michael Ho*	Deputy Director of Public Works	(562) 431-2527 ext-1322	N/A	mho@sealbeachca.gov
David Spitz	Associate Engineer	(562) 431-2527 ext-1331	N/A	dspitz@sealbeachca.gov
David Fait	Maintenance Services Supervisor	(562) 431-2527 ext-1432	(562) 370-3483	dfait@sealbeachca.gov

*Legally Responsible Official

The SSMP document should also include an organizational chart that clearly illustrates the chain of command within the City and an itemized list of SSMP tasks for each responsible City staff member. These tasks should be monitored and updated, as needed. The SSMP tasks have been summarized as listed in Table 2-2.

The City staff responsibilities regarding the SSMP tasks are referred to throughout the SSMP document, but the references are not always consistent. The City should review the staff responsibilities annually and make updates to its SSMP document, as staff responsibilities change.

c. Chain of Communication for SSOs

Order No. 2006-0003 requires that the SSMP identify, *“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 Board, and other agencies as applicable (such as County Health Officer, County Environmental Health Agency, and/or State Office of Emergency Services (OES)).”*

The City includes a complete list of individuals and agencies that need to be contacted in the event of a sanitary sewer overflow (SSO). The SSMP document also includes a detailed sewer system overflow emergency response plan flow chart, which details the reporting procedure during an SSO. This flow chart should be updated to reflect the requirements of Order 2013-0058-EXEC.

**Table 2-2
Staff SSMP Responsibilities**

Task	City Council	City Manager	Director of Public Works	Associate Engineer	Maintenance Services Supervisor	Field Crews
SSMP Development Plan and Schedule	Review, Approve					
Legal Authority	Review, Approve	Oversees				
Fats, Oils, and Grease Program	Review, Approve		Oversees	Participates		
Final SSMP Document	Review, Approve		Oversees	Participates	Participates	
Sewer Enterprise Funding Plan	Review, Approve		Oversees	Participates	Participates	
Goals of SSMP			Oversees	Participates	Participates	
Organization of SSMP			Oversees	Participates	Participates	
Up to Date Map of Collection System, Pumping Facilities, and Stormwater Conveyances			Oversees	Participates	Participates	
System Evaluation and Capacity Assurance Plan			Oversees	Participates		
Sewer System Rehabilitation Plan			Oversees	Participates	Participates	
FOG Outreach			Oversees	Participates		
Plan for FOG Disposal			Oversees	Participates	Participates	
FOG Source Control Measures			Oversees		Participates	
Design and Construction Standards			Oversees	Participates		
Procedures and Standards for Inspection and Testing			Oversees	Participates	Participates	
SSMP Monitoring			Oversees	Participates	Participates	
SSMP Internal Audits			Oversees	Participates	Participates	
SSMP Communication Program			Oversees	Participates		
Overflow Response Plan					Oversees	
Preventative Maintenance Plan					Oversees	Implements
CCTV Inspection and Condition Assesment					Oversees	Implements
SSO Trend Maintenance					Oversees	Implements
Staff Training Program					Oversees	Implements
Equipment Inventory					Oversees	Implements
Sanitary Sewer Overflows					Reports	Responds

2-3 Summary of Recommended Updates

The following items are recommended to be updated in the Organization Section of its SSMP:

1. Clearly identify legally responsible official and any duly authorized representatives
2. Update the SSMP document with a current contact list, including office telephone numbers, mobile phone numbers, and email addresses.
3. Include an organizational chart that clearly illustrates the chain of command within the City
4. Include an itemized list of SSMP tasks for each responsible City staff member
5. Update the sewer system overflow emergency response plan flow chart to reflect the requirements of Order 2013-0058-EXEC.

SECTION 3

LEGAL AUTHORITY

3-1 Waste Discharge Requirements

Order No. 2006-0003 requires that:

Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

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

Order No. 2006-0003 prohibits any SSO that results in a discharge of untreated or partially treated wastewater to the waters of the United States or that creates a nuisance as defined in California Water Code Section 13050(m).

Legal Authority is a very important component of a sewage collection agency's responsibility in regulating the usage of the sanitary sewer system.

3-2 Compliance

The City possesses relevant legal authority through its Municipal Code, available to the public on the City's official website at www.sealbeachca.gov.

The City should have the legal authority to regulate the maintenance of its entire collection system, including the satellite systems. A portion of the City of Los Alamitos is tributary to the City's sewer system in the northeast portion of College Park East. The City should reference the terms of the shared sewer agreement with the City of Los Alamitos in the SSMP document. The Leisure World Retirement Community, Rossmoor/Los Alamitos Area Sewer District, and Sunset Beach Sanitary District provide sewer services to areas within the City boundaries. Unlike the City of Los Alamitos, these agencies do not connect to Seal Beach sewers. The City should include the terms of any applicable agreements in the SSMP document.

The SSMP document states that the City adopted the Orange County Sanitation District's (OCSD) Ordinance No. OCSD-01. Section 9.30.025 of the City's Municipal Code states, "*No person shall fail to comply with the provisions of Ordinance No. OCSD-01 of the Orange County Sanitation District*". Ordinance No. OCSD-01 was overridden by OCSD-39 and subsequently by OCSD-48, which establishes OCSD's wastewater discharge regulations. Ordinance OCSD-48 generally does the following:

- Provides for maximum safety standards and public benefit from the use of OCSD's Sewerage Facilities
- Sets uniform requirements for sewer use and wastewater discharges
- Provides the process to obtain a discharge permit or certification and enforcement measures for noncompliance with permit requirements
- Enables OCSD to enforce civil or criminal penalties and/or suspend or revoke permits for violations of Pretreatment Standards and requirements and compliance schedules
- Seeks to improve the quality of wastewater received for treatment
- Encourages water conservation, wastewater minimization, and protection of groundwater
- Distributes costs equitably for all users of OCSD's Sewerage Facilities
- Supports the proper disposal of prescription drugs as provided by the Office of National Drug Control
- Demonstrates OCSD's commitment to wastewater reclamation and reuse, meeting applicable air quality goals, and the beneficial use of biosolids
- Enables OCSD to comply with all applicable state and federal laws

It is recommended that the City edit its SSMP document to reference the current OCSD WDR Ordinance. It is recommended that the City review the OCSD ordinance updates annually to ensure that the regulations are relevant for City purposes.

Table 3-1 summarizes the relevant legal authority documents which correlate to the requirements.

**Table 3-1
Relevant Ordinances**

Waste Discharge Requirement		City of Seal Beach Legal Authority Documents
a)	Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc)	Municipal Code, Section 9.25.020
		Municipal Code, Section 9.25.155
		Municipal Code, Section 9.30.025, referencing OCSD Wastewater Discharge Regulations
b)	Require that sewers and connections be properly designed and constructed	Design Criteria for Sewer Facilities 2003 Edition(Resolution 5190)
		Sewer Standard Control Plans 2004 Edition (Resolution 5211)
		Standard Specifications for Public Works Construction (Greenbook)
c)	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency	Municipal Code, Section 9.25.115
		Municipal Code, Section 9.25.120
		Municipal Code, Section 9.30.010
		Design Criteria for Sewer Facilities 2003 Edition(Resolution 5190)
d)	Limit the discharge of fats, oils, and grease and other debris that may cause blockages	Municipal Code Section 9.25. Fats, Oil and grease management and discharge control program.
e)	Enforce any violation of its sewer ordinance	Municipal Code Section 9.25.155. Damages to Facilities or Interruption of Normal Operations
		Municipal Code Section 9.25.130. Enforcement
		Municipal Code, Section 9.30.025, referencing, OCSD Wastewater Discharge Regulations
		Municipal Code, Section 1.15, Enforcement

a. Illicit Discharges

Order No. 2006-0003 requires that the City have legal authority to, “prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc)”

The City’s Municipal Code prohibits illicit discharge in Section 9.25.155, which states: “Any person who discharges any waste, including but not limited to those listed under 40 CFR 403.5, which causes or contributes to any sewer blockage, SSOs, obstruction, interference, damage, or any other impairment to the City’s sewer facilities or to the operation of those facilities shall be liable for all costs required to clean or repair the facilities together with the expenses incurred by the City to resume normal operations.” Section 9.25.155 also states: “Any person who discharges a waste which causes or contributes to the City violating its discharge requirements established by any regulatory agency incurring additional expenses or suffering losses or damage to the facilities, shall be liable for any costs or expenses incurred by the City, including regulatory fines, penalties, and assessments made by other agencies or a court.”

Specific prohibited discharges are described in Ordinance OCSD-48, Section 201 which states: “These prohibitions shall apply to all users of the OCSD facilities whether or not they are subject to Federal Categorical Pretreatment Standards or any other National, State, or local pretreatment standards or requirements.” The following are some of the specific prohibitions:

Specific Prohibitions. No User shall introduce or cause to be introduced into the Sewerage Facilities, any Pollutant, substance, or Wastewater which:

- a) *Creates a fire or explosive hazard in the Sewerage Facilities including, but not limited to, waste streams with a closed-cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Centigrade) using the test methods specified in 40 CFR 261.21; or produces a gaseous mixture that is 10% or greater of the lower explosive limit (LEL).*
- b) *Causes obstruction to the flow in the Sewerage Facilities resulting in interference or damage to the Sewerage Facilities.*
- c) *Produces noxious or malodorous liquids, gases, solids or other Wastewater which, either singly or by interaction with other Wastes, is sufficient to create a public nuisance or a hazard to life, or to prevent entry into the Sewerage Facilities for maintenance or repair.*
- d) *Result in toxic gases, vapors, or fumes within the Sewerage Facilities in a quantity that may cause acute worker health and safety problems.*
- e) *Contains any radioactive Wastes or isotopes except in compliance with applicable regulations from other governmental agencies empowered to regulate the use of radioactive materials.*
- f) *Causes, alone or in conjunction with other sources, the OCSD’s treatment plant effluent to fail a toxicity test.*
- g) *Causes OCSD’s effluent or any other product of the treatment process, residues, biosolids, or scums, to be unsuitable for reclamation, reuse or disposal. Examples of items which may cause*

these conditions include, but are not limited, to food packaging, product containers, and non-dispersible products.

- h) Causes discoloration or any other condition which affects the quality of the OCSD's influent or effluent in such a manner that inhibits the OCSD's ability to meet receiving water quality, biosolids quality, or air quality requirements established by Regulatory Agencies.*
- i) Creates excessive foaming in the Sewerage Facilities.*
- j) Violates any applicable Federal Categorical Pretreatment Standards, statute, regulation, or ordinance of any public agency or Regulatory Agency having jurisdiction over the operation of or discharge of Wastewater through the Sewerage Facilities.*
- k) Has a temperature higher than 140 degrees Fahrenheit, (60 degrees Centigrade), or which causes the temperature at the treatment plant to exceed 104 degrees Fahrenheit (40 degrees Centigrade).*
- l) Has a pH less than 6.0 or greater than 12.0.*
- m) Causes corrosion, fouling, occlusion, or damage to the POTW beyond normal wear and tear.*
- n) Is released in a discharge at a flow rate and/or Pollutant concentration (including oxygen-demanding Pollutant (BOD, etc.)) which will cause interference with OCSD's Sewerage Facilities.*
- o) Is in excess of the permitted Mass Emissions Rates established in accordance with: Section 213 or the concentration limits set forth in Table I, or the discharge permit.*
- p) Contains material which will readily settle or cause an obstruction to flow in the Sewerage Facilities resulting in interference, such as, but not limited to, sand, mud, glass, metal filings, diatomaceous earth, cat litter, asphalt, wood, bones, hair, fleshings, food packaging, product containers, and non-dispersible products.*
- q) Includes petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or Pass Through.*
- r) Causes the Orange County Water District Groundwater Replenishment System product water to exceed its TOC limit of 0.5 mg/L.*

Prohibition on Surface Runoff and Groundwater

- a) No person shall discharge groundwater, surface runoff, or subsurface drainage directly or indirectly into the OCSD's sewerage facilities except as provided herein. Pursuant to Section 304 or 305, et seq., the OCSD may approve the discharge of such water only when no alternative method of disposal is reasonably available or to mitigate an environmental risk or hazard.*
- b) The discharge of such waters shall require a Dry Weather Urban Runoff Permit or a Special Purpose Discharge Permit from OCSD*

- c) *If a permit is granted for the discharge of such water into a public sewer, the user shall pay the applicable charges established herein and shall meet such other conditions as required by the OCSD.*

It is recommended that the City include the OCSD specific prohibitions directly in its municipal code.

b. Design Standards

Order No. 2006-0003 requires that the City have legal authority to, *“require that sewers and connections be properly designed and constructed.”*

The City established and adopted the Design Criteria for Sewer Facilities document in December 2003 and the Standard Plans for Sewer Facilities document in February 2004, which provide the required legal authority to require proper design and construction of its sewer facilities. Reference to these documents and the resolutions adopting them should be included in City’s Municipal Code.

Section 10.15.050 of the Municipal Code states *“The subdivider shall provide a connection from each parcel to the Orange County Sanitation District’s sewage collection, treatment, and disposal system, in compliance with the District’s improvement standards and specifications”*. This section should first reference the City of Seal Beach standards and specifications, and then the OCSD standards and specifications as necessary.

c. Access to Facilities

Order No. 2006-0003 requires that the City have the legal authority to, *“ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency.”*

Section 9.25.120 of the City’s Municipal Code states, *“Persons or occupants of premises where wastewater is created or discharged shall allow the director, or city representatives, reasonable access to all parts of the FSE and all wastewater generating and disposal facilities for the purposes of inspection and sampling during all times the discharger’s facility is open, operating, or any other reasonable time..”* This section provides the City access to the Food Service Establishments (FSEs) and its wastewater facilities.

Section 9.30.010 of the Municipal Code states that *“Each sewer service lateral from the building to the collector sewer shall be maintained in a safe and sanitary condition by the owner of the property served.”* An additional statement should be added to this section to ensure that the City can gain access to their sewer facilities as well as sewer facilities tributary to their system for maintenance, inspection or repairs.

d. Fats, Oils, and Grease

Order No. 2006-0003 requires that the City have legal authority to, *“limit the discharge of fats, oils, and grease and other debris that may cause blockage.*

The City has the legal authority to manage the Fats, Oils, and Grease discharges through its Municipal

Code (Chapter 9.25, Fats, Oils, and Grease Management and Discharge Control) and its FOG Control Manual. Section 9.25.005 (b) of the Municipal Code references the governing purpose for the Fats, Oil and Grease Management and Discharge Control program. It is recommended that the City update this section to the following text:

*“The City of Seal Beach is a permittee under the **current** “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” and all addendums issued by the State Water Resources Control Board (State Water Board) and, as a permittee under the sewer WDRs, the City is required to adopt regulations and implement procedures to reduce the amount of fats, oils, and grease [“FOG”] discharged into the City’s sanitary sewer collection system”.*

e. Enforcement

Order No. 2006-0003 requires that the City have legal authority to, “*enforce any violation of its sewer ordinance*”.

Enforcement of sanitary sewer overflows (SSOs) is handled through the following Municipal Code sections:

- Section 9.25.130 through Section 9.25.195 detail the existing legal process for enforcing the requirements of Chapter 25 (Fats, Oil, and Grease Management and Discharge Control) of the City’s Municipal Code.
- Section 9.30.25 Sewerage, Orange County Sanitation District, which adopts OCSD’s wastewater Ordinance OCSD-48.
- Section 1.15 General Provisions, Enforcement, which provides the City provisions for the issuance of administrative citations and cost recovery procedures to collect payment for resources utilized to contain and clean up areas affected by SSOs.

3-3 Summary of Recommended Updates

The following items are recommended to be added and/or updated in the City’s Legal Authority (i.e. Municipal Code):

1. Include the terms of any applicable agreements in the SSMP document
2. Edit the SSMP document to reference the current OCSD Ordinance
3. Review the OCSD ordinance annually to ensure that the regulations are relevant for City purposes

Illicit Discharges (Element 3, Section a)

4. Specify types of illicit discharges similar to OCSD

Design Standards (Element 3, Section b)

5. Add reference to the City’s Design Criteria for Sewer Facilities and Standard Plans for Sewer Facilities

in the Municipal Code.

6. Revise Section 10.15.050 to include reference to City standards and standard plans

Access to Facilities (Element 3, Section c)

7. Establish legal authority to access City owned sewer facilities as well as facilities tributary to the City's sewer facilities

Fats, Oils, and Grease (Element 3, Section d)

8. Change the reference in the Municipal Code (9.25.005, b) to "current" Order of the Statewide General Waste Discharge Requirements, regarding FOG discharges

SECTION 4

OPERATION AND MAINTENANCE PROGRAM

4-1 Waste Discharge Requirements

Order No. 2006-0003 requires that:

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.*
- (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.*

4-2 Compliance

The SSMP document refers to Section 12 (iv) "Measures and Activities" of Order R8-2002-0014, which was used to prepare its Preventative Maintenance Program document.

The City's Public Works Department maintains up-to-date sewer and storm drain maps. The Preventative Maintenance Program document and the SSMP documents provide a description of routine preventative maintenance activities and the City's rehabilitation and replacement plan. A description of documentation procedures, staff training, and equipment inventory are also provided in these documents.

a. Sanitary Sewer System Map

Order No. 2006-0003 requires that the City, “*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.*”

The City keeps an up-to-date geographical information system (GIS) database of its sewer and stormwater facilities. This database includes the following:

- Manholes with ID numbers and upstream invert elevation
- Pipes with pipe size, slope, reach length, material, year of construction, estimated peak dry weather flow, calculated depth of flow at peak dry weather flow, depth to diameter ratio, velocity, and pipe capacity. The map also shows the flow direction in the pipe
- Inverted siphons
- Pump Stations
- Force Mains
- Storm Drains
- Catch Basins
- Frequent Cleaning Maintenance Locations
- Food Establishments
- Historical overflow locations and associated data
- Results of condition assessment developed through CCTV inspection of the system

The GIS is maintained by the Public Works Department, under the guidance of the Deputy Director of Public Works. It is recommended that the City review the relevant shapefiles and make any necessary updates. These reviews should be conducted annually, at a minimum, and should be documented.

The SSMP documents include separate sanitary sewer maps and drainage maps. It is recommended that the City add the storm drain facility layer (s) to the sanitary sewer map and include it in its Preventative Maintenance Program document, Overflow Emergency Response Plan document, and SSMP document.

b. Routine Preventive Operation and Maintenance Activities

Order No. 2006-0003 requires that the SSMP, “*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.*”

The routine preventative operation and maintenance activities are described in Section 3 of the Preventative Maintenance Program document:

“The primary preventative operations and maintenance work involve:

- 1. Identification of portions of the system that need frequent attention (frequent maintenance locations) through primarily CCTV inspections of the system*
- 2. Condition assessment of the gravity system based upon CCTV inspection*
- 3. Visual inspection of the manholes by the City of Seal Beach staff*
- 4. Cleaning the entire system annually*
- 5. Cleaning of the frequent maintenance locations monthly*
- 6. Inspection of all pump stations daily, monthly, and quarterly”*

The Preventative Maintenance Program document includes the frequent maintenance locations on detailed figures. The frequent maintenance locations are generally the sewers that require monthly cleaning. The figures also illustrate the locations of food service establishments, which are generally in the vicinity of the sewers that require additional maintenance. It is recommended that the City update the figures and provide tables that document the locations and reasons for the frequent maintenance for each sewer that requires it. It is recommended that the City review the frequent maintenance locations and document any necessary changes, annually at a minimum.

Gravity Sewer Maintenance – The gravity sewer maintenance element of the preventative maintenance program consists of annual, quarterly, and monthly cleaning. Monthly cleaning varies from 4,000 to 5,000 feet. The entire system (169,000 feet) is cleaned annually.

The quarterly cleaning schedule is based on past cleaning records. It is recommended that the City update the frequent maintenance maps to include sewers that require quarterly cleaning.

Documentation - The City currently cleans some of the sewers with their own equipment and contracts out the remaining sewer cleaning to outside consultants.

City daily sewer cleaning reports include the following information:

- Sewer location
- Manhole IDs
- Date
- Length
- Pipe Size
- Verification of Jetting
- Manhole inspection comments

Consultant daily sewer cleaning reports included the following information:

- Sewer location
- Manhole IDs
- Date
- Length
- Pipe Size
- Note of light, medium, or heavy grease, roots, shells, and/or debris

It is recommended that the City create one format of the cleaning report that both City staff and Empire can utilize so that information is complete and consistent. Additional items that should be added to the inspection form are as follows:

- Flow Condition
- Odor Inspection
- Pest/Vermin Inspection

It is recommended that the City review the cleaning maintenance reports, Closed Circuit Television (CCTV) inspections, and Food Service Establishment (FSE) inspections on a quarterly basis, to track the problematic sewers, which may require additional cleaning and maintenance. The City currently keeps the hard copies of the sewer cleaning maintenance records on file. It is recommended that the City create an electronic database of its monthly, quarterly, and annual cleaning maintenance reports.

Pump Station Maintenance - The City also performs routine inspections of its seven (7) pump stations, which include the following:

- Daily – Visual Inspection including:
 - Pump operating time
 - Meter readings
- Weekly - Visual Inspection including:
 - Gas engine oil level, battery, water
 - Lift Stations
 - Generator hours and oil
 - Alarms
 - Auto dialer
 - Vent blower
 - Chart recorders
 - Debris, grease in wet well
 - Packing leaks in dry well pumps
 - Check valve operation
 - Control panel lights, running time meters, pump sequence
 - Transducers
 - Bubblers
 - Smart Covers
- Quarterly Maintenance
 - Wet well cleaning (Performance Pipeline Technologies)

The daily, weekly, and monthly pump station inspections are done by the City of Seal Beach staff. Monthly maintenance is currently performed by City staff. Standardized forms are provided for these inspections, and the completed hard copies are filed for City records. It is recommended that the City create an electronic database to document the pump station maintenance evaluations.

c. Rehabilitation and Replacement Plan

Order No. 2006-0003 requires that the City must, *“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.”*

A CCTV inspection was conducted by National Plant Services in two phases, which were completed in June 2002 and December 2004. A small portion of the pipes could not be accessed due to lack of manholes at the upstream end. The reaches were evaluated and prioritized by the extent of their condition deficiencies and provided the framework for the 10-year Capital Improvement Program (CIP), which extended to 2015. The Sewer System Master Plan Update 2005 document identified 26,529 feet of sewers in the CIP in need of repairs or replacement which for the most part were completed over the last ten years.

The City CCTV inspected the entire system again in 2013. Two locations that needed immediate attention were spot repaired. It is recommended that the City have the CCTV inspection records reviewed and evaluated by NASCCO PACP certified evaluators, and update its short term and long-term sewer system rehabilitation plan (*currently being completed as a part of the 2018 Sewer Master Plan*).

Future CCTV work should be scheduled based on updated sewer condition evaluation. Funds to rehabilitate sewers with severe structural defects should be incorporated into the City's current Sewer CIP.

d. Staff Training

Order No. 2006-0003 requires that the City must, *“Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.”*

The City's maintenance staff receives training through the California Water Environment Association's (CWEA) Training Program, which is the current industry standard for training and certifying sewer collection system maintenance staff. Currently, the City staff members hold the following CWEA certifications:

**Table 4-1
City CWEA Certification**

Name	Title	CWEA Certification
David Fait	Maintenance Supervisor	3
Darrick Escobedo	Water Department	1
Cory Wekerle	Senior Maintenance Worker	1

The City also holds internal training which includes, but is not limited to, the following:

- Spill Response Procedures
- Traffic Control and Driver Safety
- Personal Protective Equipment
- Health Precautions related to working with raw sewage
- Lockout/Tagout procedures
- Confined Space entry prohibitions

The Maintenance Services Supervisor is responsible for scheduling and documenting training sessions for City staff. The training sign-in sheets are filed at the City yard, and they include the training topic, date, and list of attendees. It is recommended that the City keep track of the training history in an electronic database. It is recommended that the City update the database on a yearly basis, and the Deputy Director of Public Works should schedule new training as he/she determines is necessary.

The City requires its contractors to possess adequate training and the appropriate certification. The Deputy Director of Public Works / Maintenance Services Supervisor is responsible for verifying the qualifications of Contractor Staff. It is recommended that the City require CWEA certification for sewer and pump station maintenance tasks. NASSCO PACP certification should be required for CCTV inspections.

e. Equipment Inventory

Order No. 2006-0003 requires that the City must, *“Provide equipment and replacement part inventories, including identification of critical replacement parts.”*

The Maintenance Services Supervisor is responsible for keeping an updated inventory of the City’s equipment. It is recommended that the City maintain the equipment inventory records in an electronic database and update it on an annual basis.

It is also recommended that the City expand on its equipment inventory list, to include other items such as, replacement pumps, traffic control equipment, safety equipment, gas testing equipment, and spill response equipment.

4-3 New Monitoring and Reporting Program (Order No. WQ 2013-0058-EXEC)

The new amended Order requires that a SSO Technical Report be prepared within 45 calendar days of the SSO end date in which 50,000 gallons or greater are spilled to surface waters, as well as water quality monitoring. The staff should be trained in the requirements of the amended Order.

It is recommended that the City develop a standard operating procedure for responding to any failure at each pump station when updating the SSMP. This should include where water quality monitoring will be conducted should a Category 1 spill with 50,000 gallons or more is likely to occur, as well as what to monitor. This information should be included in the Overflow Emergency Response Plan, and Operation and Maintenance Program elements of the SSMP.

4-4 Summary of Recommended Updates

The following items are recommended to be added and/or updated in the City's Operation and Maintenance Program:

Sanitary Sewer System Map (Element 4, Section a)

1. Review and document changes to GIS shapefiles annually, at a minimum
2. Add storm drain shapefiles to the sewer maps, and include in the Operation and Maintenance Program document, Overflow Emergency Response Plan document, and SSMP document updates.

Routine Preventative Operation and Maintenance Activities (Element 4, Section b)

3. Update the figures and provide tables that document the locations and reasons for the frequent maintenance for each sewer that requires it.
4. Update the frequent maintenance maps to include sewers that require quarterly cleaning.
5. Create one format of the cleaning report that both City staff and Empire can utilize so that information is complete and consistent.
6. Review cleaning maintenance reports, Closed Circuit Television (CCTV) inspections, and Food Service Establishment (FSE) inspections on a quarterly basis, to track the problematic sewers, which may require additional cleaning and maintenance.
7. Create an electronic database of its monthly, quarterly, and annual cleaning maintenance reports.
8. Create an electronic database to document the pump station maintenance evaluations.

Rehabilitation and Replacement Plan (Element 4, Section c)

9. Review and evaluate CCTV inspection records by NASCCO PACP certified evaluators, and update its short term and long term sewer system rehabilitation plan (*currently being completed as a part of the 2018 Sewer Master Plan*).
10. Schedule future CCTV work based on updated sewer conditions
11. Incorporate funds for future CCTV inspection and analysis into sewer system budget

Staff Training (Element 4, Section d)

12. Maintain the training history records in an electronic database
13. Evaluate upcoming training schedule, on a yearly basis
14. Require CWEA certification and NASSCO PACP certification for contract work regarding pump station maintenance and CCTV inspections, respectively

Equipment Inventory (Element 4, section e)

15. Maintain equipment inventory list in an electronic database
16. Expand on its equipment inventory list, to include other items such as, replacement pumps, traffic control equipment, safety equipment, gas testing equipment, and spill response equipment.

Amended MRP Requirements (Element 4, New Regulations)

17. Train staff in the requirements of the amended Monitoring and Reporting Program requirements
18. Develop a standard operating procedure for responding to any failure at each pump station

SECTION 5

DESIGN AND PERFORMANCE PROVISIONS

5-1 Waste Discharge Requirements

Order No. 2006-0003 requires that the City have:

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

5-2 Compliance

The City has developed a Design Criteria for Sewer Facilities document and a Standard Plans for Sewer Facilities document that are on file with the Department of Public Works – Engineering Division. These documents were adopted by the City Council through Resolution 5190, and Resolution 5211, respectively. The Standard Plans are also located on the City's official website.

It is recommended that the City update the Municipal Code to require sewers and connections to be designed and constructed to the standards included in the Design Criteria for Sewer Facilities and the Standard Plans for Sewer Facilities.

a. Standards for Installation, Rehabilitation, and Repair

Order No. 2006-0003 requires that the City possess, "*Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for rehabilitation and repair of existing sewer systems.*"

Standards for design and construction of sewer facilities are included in the Design Criteria for Sewer Facilities document. Topics covered in this document include, but are not limited to, the following:

- Minimum Pipe Size
- Minimum and Maximum Slope
- Design Flow Criteria
- Easements
- Stationing Procedures
- Sewer Pipe Material
- Clean-Outs
- House Laterals
- Sewer Pump Station Design Requirements
- Minimum Velocity
- Pipe Depth to Diameter Ratio
- Standard Location and Alignment
- Horizontal Curves
- Minimum Depth
- Manhole Design Requirements
- Separation Requirements between Utilities
- Private Sewer Laterals
- Standard Sewer Notes

The Standard Plans for Sewer Facilities document includes details for manholes, laterals, bedding, cleanouts, concrete encasements, concrete slope anchors, steel casing pipe, PVC liner, gas flap installation, criteria for separation of water and sewer mains, and grease interceptors.

It is recommended that the City review the standards, and implement updates/improvements based upon experience with the use of these standards. This should include design standards for the rehabilitation and repair of existing sewers such as for spot repair and lining.

b. Standards for Inspection and Testing of New, Rehabilitated and Repaired Facilities

Order No. 2006-0003 requires that the City possess, "*Procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances and for rehabilitation and repair projects.*"

The SSMP document details that: "*The City of Seal Beach adopted the Standard Specifications for Public Works Construction (Greenbook)*". The Greenbook and the Design Criteria for Sewer Facilities documents provide the inspection and testing procedures for the following:

- CCTV Inspection (Greenbook 306-1.4.1)
- Water Exfiltration Testing (Greenbook 306-1.4.2)
- Water Infiltration Testing (Greenbook 306-1.4.3)
- Air Pressure Test (Greenbook 306-1.4.4)
- Water Pressure Test (Greenbook 306-1.4.5)
- Equipment Installation and Testing (Design Criteria for Sewer Facilities, 17.28.b)

5-3 Summary of Recommended Updates

The following items are recommended to be added and/or updated in the City's Design and Performance Provisions:

1. Update the Municipal Code to require sewers and connections to be designed and constructed to the standards included in the Design Criteria for Sewer Facilities and the Standard Plans for Sewer Facilities.
2. Review the standards, and implement updates/improvements based upon experience with the use of these standards

SECTION 6

OVERFLOW EMERGENCY RESPONSE PLAN

6-1 Waste Discharge Requirements

Order No. 2006-0003 requires that at a minimum, the Overflow Emergency Response Plan must include:

- (a) *Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;*
- (b) *A program to ensure appropriate response to all overflows;*
- (c) *Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially effected 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 (Monitoring and Reporting Program). 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 wastewaters 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 the impact of the discharge.*

6-2 Compliance

The City's Sanitary Sewer Overflow Emergency Response Plan (SSSSOERP) document includes the procedures for overflow tracking, overflow response, post response, updating the plan, and staff training.

For a system of the City's size (32 miles), an average of about one (1) spill per year is considered an indication of a well-maintained system. The City's most-recent recorded spill was on August 8, 2013 and its volume was estimated as 10 gallons. It is recommended that the locations of historical spills are tracked in the City's GIS database. The City addressed the Overflow Emergency Response Plan requirements of Order No. 2006-0003 through Element 6 of its 2009 SSMP document and the SSOERP document.

a. Initial Notification Procedures

Order No. 2006-0003 requires that at a minimum, the SSOERP must include, "*Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;*"

Overflows are reported to the City's Public Works office during business hours. After hours, overflows are diverted to the Seal Beach Police Department. A City staff member, (Senior Water Operator during business hours or On-Call System Operator after-hours)", will be at the site within one (1) hour of the time reported.

The City's website includes the numbers for City Hall, the Maintenance Yard, and the Police Department. To expedite the response to a spill, it is recommended that the City's website be updated to clearly identify the telephone number(s) that a resident should call in the event of an SSO.

Once the City Staff confirms the spill, he/she will notify the appropriate agencies of the SSO event. The emergency contact list is included in the City's SSOERP document, which lists the agencies and telephone numbers of all constituents that may need to be contacted during an SSO event.

The contact list includes the following:

- Regional Water Quality Control Board
- Orange County Health Care Agency (Business hours and after hours)
- State Office of Emergency Services
- City Director of Public Works
- Contractors
 - JIMNI Systems, Inc.
 - Doty Bros.
 - Empire Pipe Cleaning and Equipment, Inc.
 - National Plant Services, Inc.
 - Rain-for-Rent
 - Charles King Co.
- Orange County Fire Department
- Orange County Public Facilities and Resources Department (Currently Orange County Flood Control Division)
- Truesdale Laboratories (Laboratory)
- John L. Hunter & Associates (Environmental Consultant)
- Nearby Sewer Agencies
 - Sunset Beach Sanitary District
 - Rossmoor/Los Alamitos Area Sewer District
 - Orange County Sanitation District (OCSD)
 - Leisure World
 - City of Long Beach

The notification procedure has been organized into a procedural chart in the Organization element of the City's SSMP document, prepared in 2007. It is recommended that the City include an updated version of this figure in the SSOERP report as well.

For all SSMP documents, it is recommended that the City update all references of the Orange County Public Facilities and Resources Department to the Orange County Flood Control Division.

b. SSO Response

Order No. 2006-0003 requires that at a minimum, the Overflow Response Plan must include, "*A program to ensure appropriate response to all overflows.*"

The City's SSOERP breaks the on-site response plan into the following:

- Notification of Responsible City Staff
 - During business hours
 - During after hours
- Dispatch of Response Crew and Initial Notification
 - Verify whether the spill is from a City sewer
 - Private property spill procedure
 - Nearby agencies notification procedure
 - Contact appropriate agencies of SSO
- Overflow Containment
 - Spills on public right of way
 - Spills entering a storm drain system
 - Spills originating from a sewer pump station
 - Spills reaching any of the storm water pump stations within the City limits
- Overflow Correction
 - Overflow from a Manhole
 - Overflow due to failed pipe
 - Overflow from a forcemain
 - Overflow caused by a power failure at the sewer pump station
 - Overflow caused by a mechanical failure at the sewer pump station
- Clean-up
- Reporting

It is recommended that the City include a sewer overflow response procedure flow chart in its SSMP document and/or SSOERP document, which illustrates the tasks that must be completed during an SSO

event. The flow chart should illustrate each step, from the initial sewer overflow notification to the final spill reporting to the appropriate agencies. When the City updates its SSOERP, it is recommended that the City develop specific response procedures for each of its sewer pump stations.

c. Notifying the Appropriate Regulatory Agencies

Order No. 2006-0003 requires that at a minimum, the Overflow Response Plan must include, “*Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially effected 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 (Monitoring and Reporting Program). 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;*”

The SSOERP document includes the procedure to notify the Responsible City Staff who will in turn notify the appropriate agencies of an SSO event. It is recommended that the SSOERP report include a contact list of the City’s maintenance staff. The contact list should include the Senior Water Operator and On-call System Operators.

The SSOERP document includes details of the procedures for contacting the appropriate agencies in the event of an SSO. The contact information for the following agencies is included in the SSOERP document:

1. Regional Water Quality Control Board
2. Office of Emergency Services
3. Orange County Health Care Agency
4. Orange County Public Facilities and Resources Department (Orange County Flood Control Division)

Currently, the City reports the SSOs, electronically, to the State Water Resources Control Board, as instructed by the Waste Discharge Requirements. The City reports SSOs to the California Integrated Water Quality System (CIWQS) website (<http://ciwqs.waterboards.ca.gov/>), where it is automatically added to the Statewide Sanitary Sewer Overflow Database.

The SSOERP document describes the reporting procedures per the requirements of Order 2002-0014. It is recommended that the City update its reporting procedures to satisfy the current Waste Discharge Requirements (Order No. 2006-0003) and amendment (Order No. WQ2013-0058-EXEC), which includes new reporting guidelines for the updated CIWQS website. The SSOERP document and Sewer Overflow Procedure flow chart should reflect these updates.

The reports should also identify the “Legally Responsible Official”, who is responsible for updating the City’s SSO reports on the CIWQS website.

d. Training

Order No. 2006-0003 requires that at a minimum, the SSOERP document must include, “Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained.”

The SSOERP document includes requirements to provide annual training regarding the SSO response procedures. The training includes office training that is to be conducted by the Field Services Manager and Senior Water Operator, and field training that is to be conducted by the Senior Water Operator. The topics regarding the City’s SSO response training are detailed in Table 6-1.

**Table 6-1
Office Training Tasks**

City Staff	Training Task
Responsible Staff Person	1. Review OERP
	2. Review Flowcharts
	3. Review Checklists
	4. Review Maps
	5. Review Procedures for Calculating and measurement of spilled and recovered sewage volumes; washdown water used and recovered
	6. Review Preparation of Sanitary Sewer Overflow Report
	7. Review Post-Response activities
Public Works Administration and Police Department Personnel	1. Receiving a Call
	2. Recording Information on the proper forms
	3. Notification of the Responsible Staff Person, during business hours and after hours
Response Crews	1. Safety Procedures
	2. Securing of the impacted Site
	3. Procedures for Containing the Overflow
	4. Methods of Eliminating the Cause of the overflow
	5. Use of maps included in the Plan for implementing overflow containment
	6. Response to emergencies involving each pump station
	7. Cleanup Procedures
	8. Restocking of Supplies
	9. Post Response recommendations

The Maintenance Services Manager is responsible for scheduling and documenting training sessions for

City staff. It is recommended that the City document changes to the training program or schedule in the SSOERP and SSMP documents.

The training program should be updated to incorporate the requirements of the amended MRP.

e. Additional Response Activities

Order No. 2006-0003 requires that at a minimum, the SSOERP document must include, "*Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.*"

The SSOERP document states that traffic and crowd control may be necessary to contain the SSO. Currently the City's police department will be contacted to perform traffic and crowd control, as necessary.

The SSOERP document includes an additional list of post response activities. The post response activities were developed to:

1. Use the information gathered from the sewer system overflow reports to plan preventative and routine inspection and maintenance activities
2. Formulate repair and replacement projects which will minimize future overflows in the SSO location
3. Ensure that the equipment and response procedure are ready to handle the next overflow emergency with the most efficiency as possible.

f. Prevention of Discharge Wastewaters to Surface Waters and Impact on Environment

The SSOERP document includes the procedures to minimize the impact of a sanitary sewer overflow. In the event that a sewer overflow reaches waters of the State, the City shall adhere to the monitoring requirements of Orange County Health Care Agency.

6-3 Amended Monitoring and Reporting Program (Order No. WQ 2013-0058-EXEC)

Order 2013-0058-EXEC revised the spill categories, and requires more detailed monitoring and reporting of SSOs, particularly Category 1 spills that equal or exceed 50,000 gallons. The City should develop standard operating procedures for all types of potential failures that may lead to spills of this size. The City staff should be trained and be knowledgeable on the procedures for water quality monitoring and sampling. These procedures should be included in the Overflow Emergency Response Plan elements of the SSMP.

6-4 Summary of Recommended Updates

The following items are recommended to be added and/or updated in regards to the City's Overflow Emergency Response Plan:

Initial Notification procedures (Element 6, Section a)

1. Document the locations of historical spills in the City's GIS database.
2. Provide SSO reporting procedure with telephone number on the City's website.
3. Include the notification procedure procedural chart in the SSOERP report.
4. Update all references of the Orange County Public Facilities and Resources Department to the Orange County Flood Control Division in all SSMP Documents

SSO Response (Element 6, Section b)

5. Include a sewer overflow response procedure flow chart in its SSMP document and/or SSOERP document, which illustrates the tasks that must be completed during an SSO event. The flow chart should illustrate each step, from sewer overflow initial notification to the final reporting to the appropriate agencies.
6. Develop specific response procedures for each of the City's sewer pump stations, during next SSOERP update.
7. Update SSOERP document per the requirements of the amended MRP

Notifying the regulatory agencies (Element 6, Section c)

8. Include a contact list of the City's maintenance staff, including the identification of the Senior Water Operator and the On-call System Operators
9. Update its reporting procedures to satisfy the current Waste Discharge Requirements (Order No. 2006-0003) and amendment (Order No. WQ2013-0058-EXEC). The SSOERP document and Sewer Overflow Procedure flow chart should reflect these updates.
10. Identify the "Legally Responsible Official" for updating the CIWQS website

Training (Element 6, Section d)

11. Update the training program and/or schedule, as necessary, including the requirements of the amended MRP

SECTION 7

FATS, OILS, AND GREASE CONTROL PROGRAM

7-1 Waste Discharge Requirements

Order No. 2006-0003 requires:

Each Enrollee shall evaluate its service area to determine whether a FOG (Fats, Oils, and Grease) 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 program and schedule for a public education outreach program that promotes proper disposal of FOG;*
- (b) A plan and a 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, Best Management Practices (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.*

7-2 Compliance

The City's FOG Control Program consists of the FOG Control Manual and the City's Municipal Code (§ 9.25), which together satisfy the requirements of Order No. 2006-0003. The FOG Control Program was subsequently updated via Ordinance No. 1639.

The City implemented its FOG Control Program in December 2004 establishing the required legal authority in Section § 9.25 of its Municipal Code and preparing a FOG Control Manual. The FOG Control Manual was last updated in August 2015.

a. Education and Outreach

Order No. 2006-0003 requires the City to manage, "*An implementation program and schedule for a public education outreach program that promotes proper disposal of FOG*".

The FOG Control Manual describes how the City has partnered with the County of Orange and the Orange County Sanitation District to provide educational materials to Food Service Establishments (FSEs), including posters and brochures to educate people on Fats, Oil and Grease (FOG) Best Management Practices (BMPs). FSEs are also provided with a copy of the FOG Control Manual and a FOG control training DVD.

The FOG Control Manual references websites that provide additional information regarding FOG and FOG control measures. It is recommended that the City provide public educational materials regarding proper FOG control measures directly on the City website. The website should also include a link to a PDF of the FOG Control Manual.

The City should also consider increasing the public outreach efforts, which include but are not limited to: mail stuffers regarding proper FOG disposal, announcements in City newsletters, and public awareness at appropriate City events.

b. FOG Disposal

Order No. 2006-0003 requires the City to implement, *“A plan and a 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”*.

The current FOG Control Manual requires the following:

- FSEs must clean their grease interceptor once the FOG and solids occupy 25 percent of the interceptor's capacity.
- It is recommended that the FSEs inspect their grease interceptor every three (3) months at minimum.
- The inspections shall consist of taking a core sample of the solids layer to estimate the thickness of the FOG and settled solids layers.
- Cleaning must be performed by a licensed waste hauler with an approved license from an authorizing agency.

While licensed waste haulers will generally dispose of the collected grease wastes in the appropriate manner, it is recommended that the City also document the approved locations for FOG and wash water disposal (Orange County Landfills, OCSD treatment facilities, etc).

c. Legal Authority

Order No. 2006-0003 requires the City to possess, *“The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG”*.

The Municipal Code is accessible through the City's website. It includes the FOG Ordinance (Section 9.25 and Ordinance No. 1639) which provides the City legal authority to regulate discharges to the sewer system and identify measures to prevent SSOs and blockages caused by FOG.

Section 9.25.020 Prohibitions, requires FSEs to obtain a Fats, Oils, and Grease Wastewater Discharge Permit, which creates an agreement between the FSEs and the City to regulate the FSE's FOG discharges. It is also stated that waste removed from grease control devices, waste failing to comply with the FOG Control Manual, or waste that violate the Sewer WDRs is prohibited from being discharged to the sewer system.

The Municipal Code provides the adequate legal authority to meet the requirements of Order No. 2006-0003.

d. Grease Removal Devices

Order No. 2006-0003 requires the City to possess, "*Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, Best Management Practices (BMP) requirements, record keeping and reporting requirements.*"

Chapter 9.25 Fats, Oil and Grease Management and Discharge Control of the City's Municipal Code sets the legal authority to require FSEs to install, operate and maintain grease interceptors. The FOG Control Manual is supplemental to the FOG Ordinance and describes in detail the FOG control program, kitchen best management practices, grease interceptor requirements, public education, and permits and enforcements.

Installation Requirement for Grease Removal Devices – FSEs are required to install, operate and maintain an approved type and adequately sized grease interceptor per the FOG Ordinance (Municipal Code, Section 9.25.035).

Design Standards for Grease Removal Devices – The FOG Control Manual states that each new grease interceptor needs to comply with the criteria of the current Uniform Plumbing Code (Appendix H). The City's Standard Plan 925 S-19 identifies the minimum requirements for the design of a grease interceptor.

Maintenance Requirements for Grease Removal Devices – The FOG Ordinance (Section 9.25.105) provides the City the legal authority to require grease interceptors to be "*maintained in efficient operating condition in accordance with the FOG Discharge Manual*". The FOG Control Manual includes procedures to inspect and clean its grease interceptors. This document recommends that FSEs inspect their grease interceptors at minimum, once every three (3) months, and clean the interceptor when the solids occupy 25% of the storage volume.

Best Management Practices - Best Management Practices must be implemented per the FOG Ordinance (Municipal Code, 9.25.030). Requirements are included in the FOG Control Manual.

Record Keeping and Reporting - The City's FOG Control Manual requires the FSEs to maintain a written record of every time a grease interceptor is inspected and cleaned with the following:

- Date of maintenance
- Company and person performing maintenance
- Estimated volume of FOG removed
- Signature of manager or FSE designee

It is required that inspection and cleaning records be maintained on the premises for a period of at least two years and be made readily available to City staff for review and inspection.

e. FSEs Inspections

Order No. 2006-0003 requires the City to possess the, “*Authority to inspect grease producing facilities, enforcement authorities, and whether the enrollee has sufficient staff to inspect and enforce the FOG ordinance.*”

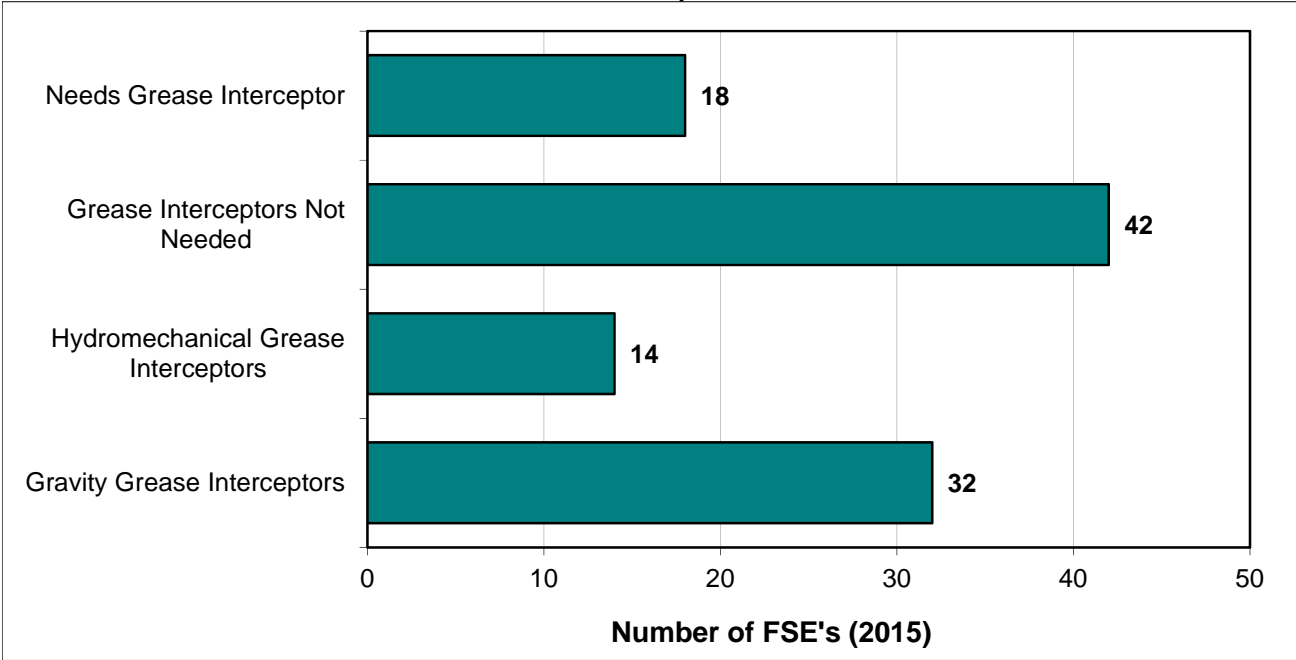
City inspections are conducted to assess the FSE’s compliance with the FOG Wastewater Discharge Permit requirements. Inspections can be implemented any time during operating hours without warning to the food service establishment. Section 9.25.115 and 9.25.120 of the Municipal Code provides the necessary legal authority to inspect FSEs and to enforce any non-compliance to the FOG Control Program. The Director of Public Works (Director) has the legal authority to inspect and sample wastewater discharges of any FSE to ascertain whether conditions of the FOG discharge permit are being met.

The Municipal Code grants the Director the legal authority to inspect a food service establishment’s compliance with the FOG Control Program. The City currently contracts the FOG inspections to Environmental Compliance Inspection Services, who perform grease control device inspections, and kitchen BMP inspections. The inspection reports include but are not limited to the following data:

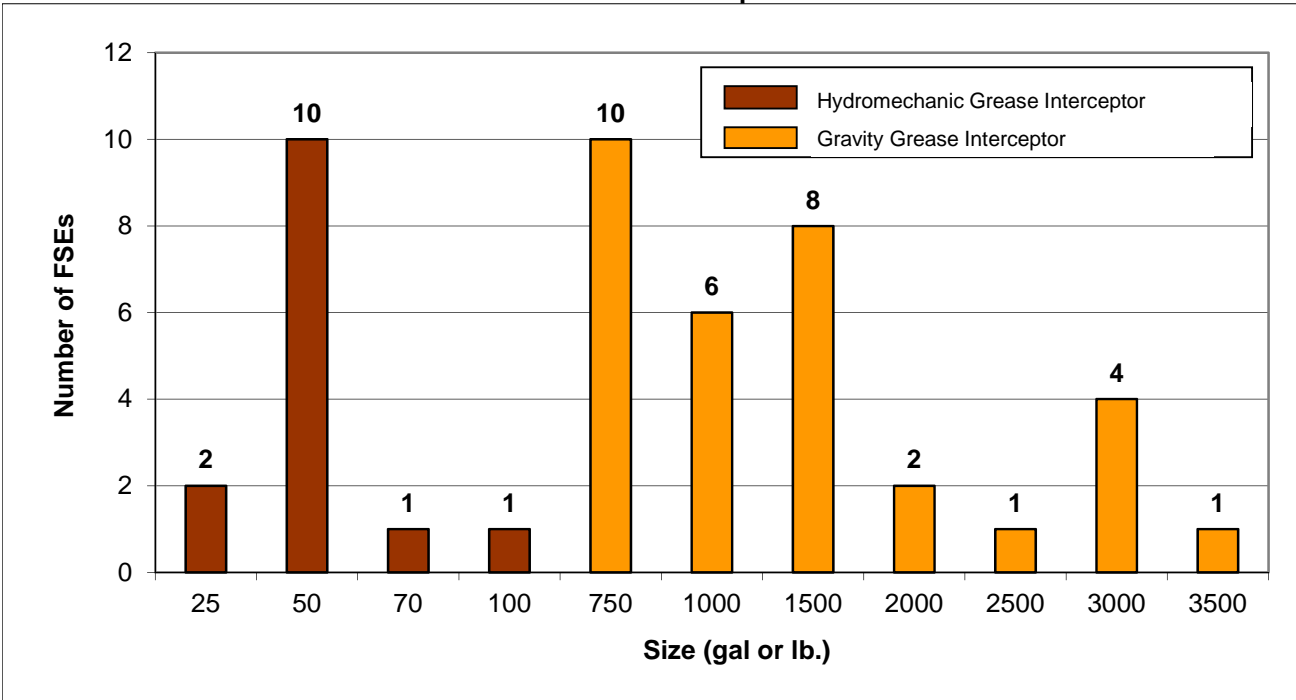
- Facility Name
- Address
- FSE Contact
- Phone Number
- Size of Grease Control Device
- Date of Last Cleaning
- Name of Waste Hauler
- Grease Control Device Compliance Status
- BMP Compliance Status
- Reasons for BMP Noncompliance

As of December 2015, the number of FSEs within the City’s sewer service area is 106 (which includes 42 establishments that do not require a grease control device). The inspection records from Environmental Compliance Inspection Services were reviewed. Figure 7-1 displays the FSE’s grease control device installation status. Figure 7-2 shows the sizes of the grease interceptors.

**Figure 7-1
FSE Grease Interceptor Status**



**Figure 7-2
Size of Grease Interceptor**



According to the FOG Control Manual, the FSE inspections are performed on the schedule included in Table 7-1.

Table 7-1
FSEs Inspection Schedule

Item	No FOG Discharge	FOG Discharge with a Grease Control Device	FOG Discharge without a Grease Control Device
Permit Renewal	None	12 Months	12 Months
BMP Inspection	None	12 Months	12 Months
GI Inspection	None	4 Months	None

The inspection logs show that the BMP Inspections occur annually for establishments that contribute FOG into the City sewer system (FOG Discharges with a Grease Interceptor and FOG Discharges without a Grease Interceptor). The grease control device inspections appear to occur every three (3) months. It is recommended that the City update the FSE Inspection schedule in the FOG Control Manual to reflect the actual inspection schedule. If future CCTV recording indicate that there is increased FOG accumulation, the City shall evaluate the need for more frequent inspections.

After reviewing the inspection reports, it appears that the main reasons the FSEs failed the inspections, were due to outdated training logs and FOG maintenance logs that were not current. FSEs that are in non-compliance were visited a second time by the inspector to determine if the problems have been resolved.

f. FOG Cleaning and Maintenance Schedule

Order No. 2006-0003 requires the City's plan to include, "*An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.*"

The City has identified frequent maintenance sewers that require monthly or quarterly cleaning. It is recommended that the City update its frequent maintenance sewer table and map. It is recommended that the City update summary table to include the reasons for the required frequent cleaning, specifically sewers with FOG accumulation.

The City should provide a map of the frequent maintenance locations with FOG accumulation directly in the FOG Control Program of the SSMP document. This map should include the location of the City's FSE.

As stated in Section 2 of this SSMP Audit report, the City should review and update the monthly and quarterly frequent cleaning list, at least once a year. Additional maintenance for sewers with recorded FOG problems may be determined during this analysis.

g. Source Control Measures

Order No. 2006-0003 requires the City's plan to include, "*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.*"

The City has complied with this requirement by:

- Adopting a FOG Ordinance
- Developing and distributing FOG Control Manuals to all FSEs
- Requiring grease control devices for FSEs
- Inspecting FSE's grease control devices, and BMPs

7-3 Summary of Recommended Updates

One grease related spill has occurred in the City's service area in the past 4 years (8/25/12). This is an indication that the FOG control program has been successful. The following items are recommended to be added and/or updated in the respective sections of the City's FOG Control Program:

Education and Outreach (Element 7, Section a)

1. Provide public educational information regarding FOG control on the City website
2. Provide access to the FOG Control Manual on the City website
3. Increase public outreach efforts

FOG Disposal (Element 7, Section b)

4. Document the approved locations for FOG and wash water disposal (Orange County Landfills, OCSD treatment facilities, etc).

FSE Inspections (Element 7, Section e)

5. Update the FOG Control Manual Inspection Frequency Table to reflect the actual inspection schedule.

FOG Cleaning and Maintenance Schedule (Element 7, Section f)

6. Update frequency cleaning summary table. Include reason for increased cleaning.
7. Update frequency cleaning map.
8. Review and update the monthly and quarterly frequent cleaning list, at least once a year.

SECTION 8

SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

8-1 Waste Discharge Requirements

Order No. 2006-0003 requires:

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

- (a) Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from the 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, under take 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.*

8-2 Compliance

The City's Sewer System Master Plan Update 2005 (Sewer Master Plan) and the City's SSMP document generally meet the requirements for the System Evaluation and Capacity Assurance Plan (SECAP) but both are in need of an update (*currently both are being updated and revised*).

The SECAP was developed as part of the Sewer Master Plan in 2005. A hydraulic model of the City's sewer system was developed and analyses were run to identify sewers that have calculated hydraulic deficiencies. Since the master plan was developed, new sewers have been constructed and most of the pump stations have been rehabilitated. The hydraulic model needs to be updated to account for these changes (*currently being updated as a part of the 2018 Sewer Master Plan*).

a. Evaluation

Order No. 2006-0003 requires that the SECAP include an evaluation consisting of: *“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 the 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;”*

The SECAP was developed as part of the Sewer Master Plan. A calibrated hydraulic model of the City’s sewer system was developed for the capacity analysis. All pipes were included in the model except for laterals and private sewers. Pipe diameters, lengths, slopes and roughness coefficients were entered into the model. Unit flow factors and peaking factors were developed based upon flow monitoring results, Pump Station 35 records, water meter records, and census data. Average flows were assigned to manholes in the model based upon unit flow factors, land use type, and tributary areas. Peak flows were calculated based on the developed peaking factors and implemented in the model. The established d/D criteria were utilized to identify sewers with calculated hydraulic deficiencies.

As previously stated, the hydraulic model needs to be updated to reflect the most current conditions of the City’s sewer system (*currently being updated as a part of the 2018 Sewer Master Plan*).

b. Design Criteria

Order No. 2006-0003 requires, *“The plan must include Design Criteria: where design criteria do not exist or are deficient, under take the evaluation identified in (a) above to establish appropriate design criteria.”*

The City maintains design criteria in the City of Seal Beach Design Plans for Sewer Facilities document. The existing design criteria meet the requirements of Order No. 2006-0003. It is recommended that the City include the design criteria or a note referencing the location of the design criteria, in Element 10 (SECAP) of the SSMP document.

c. Capacity Enhancement Measures

Order No. 2006-0003 requires, *“The plan must include 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.”*

The 2005 Sewer Master Plan included recommendations to improve capacity and condition deficiencies. Capacity deficiencies and pump station improvements were included in the recommended 10-year CIP. Improvements for sewers with condition deficiencies were also identified and included in the 10-year CIP.

The City has a rate structure to support the construction of the capacity and condition improvements recommended by the Master Plan. The City has completed all the capacity improvement projects and the majority of the condition related improvement projects that were recommended in the 2005 Master Plan.

Following an update to the hydraulic model, improvement project recommendations should be developed to address capacity related deficiencies as needed (*currently being developed as part of 2018 Sewer Master Plan*).

d. Schedule

Order No. 2006-0003 requires that *“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”*.

The City of Seal Beach has completed all the capacity improvement projects recommended in the 2005 Sewer Master Plan. The City will develop a new schedule as needed for any new improvement projects identified (*currently being developed as part of 2018 Sewer Master Plan*).

8-3 Summary of Recommended Updates

The following items are recommended to be added and/or updated in the System Evaluation and Capacity Assurance Plan:

Evaluation (Element 8, Section a)

1. Update hydraulic model to reflect current system conditions (*currently being updated as a part of the 2018 Sewer Master Plan*).

Design Criteria (Element 8, Section b)

2. Include the design criteria or a note referencing the location of the design criteria, in Element 10 of the SSMP document

Capacity Enhancement Measures (Element 8, Section c)

3. Following an update to the hydraulic model, develop improvement project recommendations (*currently being developed as part of 2018 Sewer Master Plan*).

Schedule (Element 8, Section d)

4. Develop a new schedule for any new improvement projects identified (*currently being developed as part of 2018 Sewer Master Plan*).

SECTION 9

MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

9-1 Waste Discharge Requirements

Order No. 2006-0003 requires:

- (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.*

9-2 Compliance

a. Relevant Data

Order 2006-0003-DWQ requires that the City, “*Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.*”

The City shall keep updated records of all sewer related documents which include but are not restricted to the following:

- GIS Shapefiles
- CCTV Records
- Maintenance Records
- Frequent Cleaning List
- FSE Inspections
- Sanitary Sewer Overflows

GIS Shapefiles - The City’s Public Works Department, under the guidance of the Director of Public Works, maintains the sewer and storm water shapefiles. It is recommended that the City review the relevant shapefiles and make any necessary updates. These reviews should be conducted annually, at minimum, and should be documented.

CCTV Records – Currently the City’s closed-circuit television (CCTV) inspections are contracted to Empire Pipe Cleaning and Equipment, Inc. whose operators are NASSCO certified. The City should require all contract companies to be certified with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP). All future CCTV inspections should be performed in accordance with the PACP standards. The PACP reporting standards provides the necessary data to monitor the condition of the sewer system.

A summary database of the 2013 CCTV inspections should be developed and included as a part of the City’s updated Sewer Master Plan. Recommendations for rehabilitation and replacement of sewers

should be developed based on the 2013 inspections (*currently being completed as part of 2018 Sewer Master Plan*).

Maintenance Records –The City keeps a record of the sewer and pump station maintenance in hard copy form. As stated in Section 4, it is recommended that the City create an electronic database of the maintenance information

Frequent Cleaning List – The City performs monthly and quarterly frequent cleaning. As stated in Section 4, it is recommended that the City update the list of sewers that require frequent cleaning, annually, at minimum, and create a database for this information.

FSE Inspections – Quarterly and semi-annual FSE inspection data is maintained by the City electronically. Currently, the FSE inspections are contracted to an outside agency, who summarizes the inspections in an excel spreadsheets, that is monitored by the City.

Sanitary Sewer Overflows - The Sanitary Sewer Overflow database is updated continuously on the California Integrated Water Quality System (CIWQS) website.

b. SSMP Monitoring

Order No. 2006-0003 requires the City, “*Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.*”

To monitor the implementation and effectiveness of SSMP elements, the following actions are recommended:

- Goals: Review goals annually and update as necessary
- Organization: Review organization chart annually, update as necessary, and distribute copy to all parties so they are informed of responsibilities related to the SSMP elements
- Legal Authority: Review Municipal Code annually and update as necessary. Consult City staff to determine if any problems occurred due to inadequate legal authority in relation to the sewer system, SSOs, FOG, etc.
- Operation and Maintenance: Review routine and frequent cleaning records quarterly to ensure preventative maintenance goals are being met. Review pump station maintenance logs, annually, to ensure preventative maintenance goals are being met. Update the document incorporating the requirements of the amended MRP.

As stated in Section 4-2c, it is recommended that the City categorize the condition of the sewers and schedule follow up inspections based on these categorizations. The City should review CCTV follow-up inspection records annually to ensure re-inspection schedule is being met for those sewers previously identified with condition deficiencies. The City may pursue alternatives to tie CCTV videos to the GIS map, which will make review of inspection records much easier.

Review training schedules/records annually to ensure maintenance staff has appropriate training

in all areas related to sewer system maintenance and SSOs.

Review Capital Improvement Program annually and reprioritize as necessary.

- Design and Performance Provisions: Review City Design Standards for Sewer Facilities document and standard sewer drawings semi-annually and update as necessary.
- Overflow Emergency Response Plan: Review OERP annually and update as necessary. Consult maintenance staff for recommendations of improvement based on experiences in field and in reporting SSOs when they occurred. Update the document to include the requirements of the amended MRP (Order No. WQ 2013-0058-EXEC) (*currently being updated*).
- Fats, Oil, and Grease Control Program: Review FOG Ordinance and FOG Manual annually and update as necessary. Consult FSE inspector for recommendations of improvements. Review FSE inspection data annually to ensure goals are being met.

Also, map and correlate SSOs with FSE locations and determine what corrective actions are needed, such as adding portions of system to the frequent cleaning list or further education at upstream FSE locations. This task should be done anytime an SSO occurs.

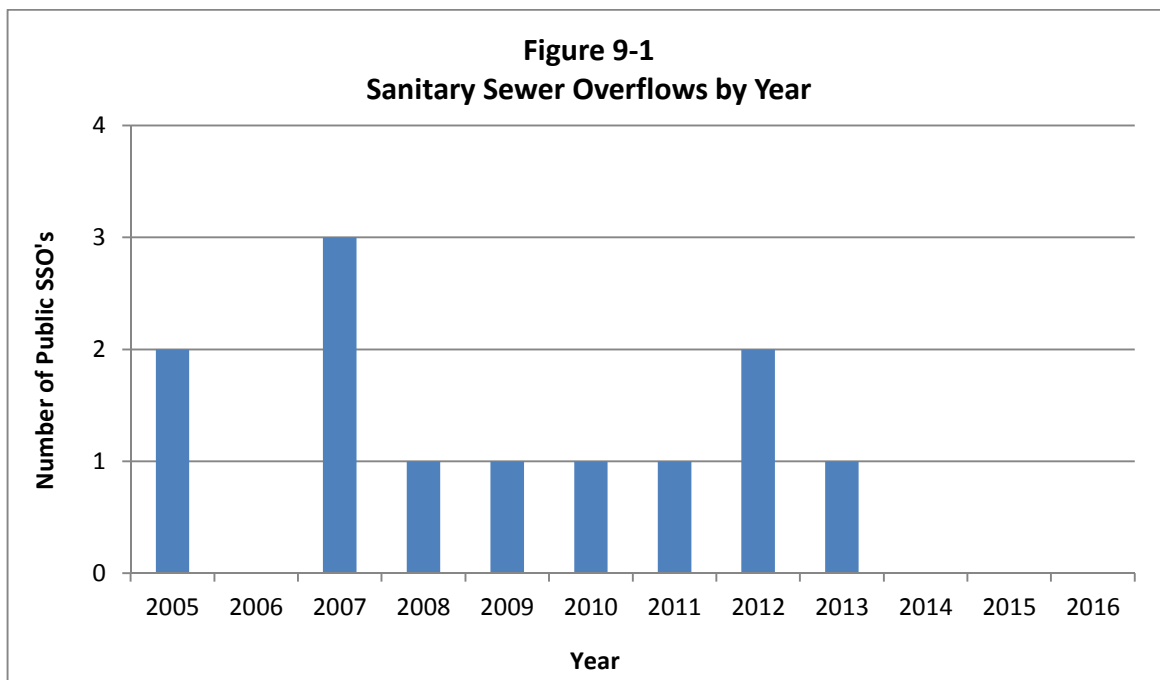
- System Evaluation and Capacity Assurance Plan: Update when significant changes in loading have occurred or are predicted to occur (i.e. future development or redevelopment).
- Communication: Review communication program annually to ensure goals are being met. Review causes of SSOs and increase communication efforts if necessary. For example, a few SSOs were caused by grease in the sewer system. This indicates that the public may need to be further educated on proper FOG control measures.

It is recommended that the City keep records of all SSMP element reviews and insert them into the SSMP document so it is available during the next audit.

c. Success of Preventative Maintenance Program

Order No. 2006-0003 requires the City, “Assess *the success of the preventative maintenance program.*”

The SSO trend is detailed on Figure 9-1. A sewer collection system with less than three (3) spills from the publically owned system (excluding private property spills that do not result from a blockage in the public system) per 100 miles per year is considered an adequate system. For the City’s sewer system (32 miles), this is an average of about one (1) spill per year. As illustrated on Figure 9-1, the number of public SSOs peaked at three (3) spills in 2007, which were generally due to the improvements at Pump Station 35. The City’s public spill history has been within this threshold for the last nine years with no spills in 2014, 2015, or 2016. This is an indication of a very successful preventative maintenance program.



d. Update Program Elements

Order No. 2006-0003 requires the City, *“Update program elements, as appropriate, based on monitoring or performance evaluations.”*

Biennial audits of the SSMP will be conducted to measure program effectiveness. The audit itself is a formal methodology for measuring program effectiveness. Based on the findings of the SSMP audit, the City will modify the SSMP elements accordingly.

The City shall review and update its SSMP document every five (5) year as required by the Waste Discharge Requirements.

e. Identify SSO Trends

Order No. 2006-0003 requires the City, *“Identify and illustrate SSO trends, Including: frequency, location, and volume.”*

The spill history summarizing the SSO location, date, and likely cause of the spill is detailed in Table 9-1.

**Table 9-1
Sewer System Overflows from 2005 to 2016**

Year	Date	Public/ Private	Location	Spill Volume (gal)	Recovered Volume (gal)	Surface Water	Reached Storm Drains ?	Likely Cause
2005	4/9/05	Long Beach	Westminster Avenue	2,200	400	No	Yes	Grease, sand & 2 bricks
	11/3/05	Public	7th St at Marina Dr	180	90	Yes	No	Root Blockage
	11/28/05	Private	16th St	37	37	Street	No	Debris, Paper
2006	1/3/06	Private	3001 Old Ranch Parkway	170	50	OC Flood Control Basin	Yes	Grease
2007	6/19/07	Private	120 Central Ave	30	N/A	None	No	Blocked Lateral
	7/25/07	Public	Sewer Pump Station 35	30	30	None	No	Construction
	8/8/07	Public	Sewer Pump Station 35	392	392	None	No	Construction
	9/1/07	Public	Sewer Pump Station 35	800	640	None	No	Construction
2008	6/4/08	Public	202-1/2 16th St	50	0	None	No	Grease
2009	11/23/09	Public	Bolsa Ave and Island View Dr	280	250	None	Yes	Debris
2010	5/4/10	Public	3000 Beverly Manor	120	120	None	No	Debris
2012	8/28/12	Public	Alley behind 330 Main St.	60	60	None	No	Grease
2012	12/20/12	Public	Electric Avenue and Ocean Avenue	100	100	None	No	Contractor error
2013	10/3/13	Public	Rivers End Café	10	0	No	No	Debris

*No spills recorded 2014 -2016

9-3 Summary of Recommended Updates

The following items are recommended to be added and/or updated in the Monitoring, Measurement, and Program Modifications:

Relevant Data (Element 9, Section a)

- Review and update the sewer and storm drain shapefiles, annually.
A summary database of the 2013 CCTV inspections should be developed and included as a part of the City's updated Sewer Master Plan. Recommendations for rehabilitation and replacement of sewers should be developed based on the 2013 inspections (*currently being completed as part of 2018 Sewer Master Plan*).
- It is recommended that the City create an electronic database of the maintenance information
- It is recommended that the City update the list of sewers that require frequent cleaning, annually, at minimum, and create a database for this information.

SSMP Monitoring (Element 9, Section b)

4. Monitor and document implementation and effectiveness of SSMP elements
5. Based on the findings of the SSMP monitoring, modify SSMP elements accordingly
Update the EORP to include the requirements of the amended MRP (Order No. WQ 2013-0058-EXEC) (*currently being updated*).
6. Keep records of all SSMP element reviews and insert them into the SSMP document so it is available during the next audit.

Update Program Elements (Element 9, Section d)

7. Review and update its SSMP document every five (5) years as required by the Waste Discharge Requirements.

SECTION 10

SSMP PROGRAM AUDITS

10-1 Waste Discharge Requirements

Order No. 2006-0003 requires:

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.

10-2 Compliance

The completion of this report and implementation of recommendations made by this report will fulfill the criteria of the Order No. 2006-0003.

SECTION 11

COMMUNICATION PROGRAM

11-1 Waste Discharge Requirements

Order No. 2006-0003 requires:

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.

11-2 Compliance

The City provides communication to the interested parties through the means detailed in Table 11-1.

**Table 11-1
Communication Program**

Party	Line of Communication
City of Seal Beach Residents and Businesses	City Council Public Meeting
Food Service Establishments	Quarterly Inspections
	Employee Training DVD distributed to All FSE's
	FOG Control Manual
	Permit Documents
Plumbers and Sewer Contractors	Plans, specifications, and standard details available at the Public Counter
City of Los Alamitos	Official Agreement
Leisure World Retirement Community	
Rossmoor/Los Alamitos Area Sewer District	
Sunset Beach Sanitary District	
City of Huntington Beach	

It is recommended that the City develop a communication program to keep the public informed on all SSMP activities. This includes: providing contact information on the website, public outreach at City events, having an opinion drop box, etc.

It is recommended that the City include SSMP related documents on its website. This includes individual SSMP elements, as well as proper FOG disposal techniques, contact information for an SSO, lists of illicit

discharges into the City sewers, etc. The City should consider increasing its communication program, which may include but is not limited to water bill inserts, brochures at municipal facilities, and public service announcements, particularly in informing the customers on lateral ownership and what not to dispose of into the sewer system.

The City should notify the customer of the update, and solicit input. The SSMP will be presented during a public meeting open for public discussion prior to adoption.

It is recommended that the City include copies of any applicable agreements with the City of Los Alamitos, Leisure World Retirement Community, Rossmoor/Los Alamitos Area Sewer District, Sunset Beach Sanitary District, and the City of Huntington Beach in the Operation and Maintenance Program element of the SSMP. It is recommended that the City meet with these agencies annually, to ensure the terms of the agreement are being upheld.

11-3 Summary of Recommendations

The following items are recommended to be added and/or updated in the SSMP, Communication Section:

1. Provide a communication program to keep the public informed on all SSMP activities
2. Provide SSMP related documents on the City website
3. Notify customers of SSMP updates and solicit input.
4. Include sewer agreements from satellite agencies in the SSMP documents
5. Meet with satellite agencies annually