



**CITY OF REDONDO BEACH**

**SEWER SYSTEM MANAGEMENT PLAN**

Prepared By:



**AKM CONSULTING ENGINEERS**  
553 Wald  
Irvine, California 92618  
(949) 753-7333



Prepared For:

**CITY OF REDONDO BEACH**  
415 Diamond Street  
Redondo Beach, California 90277

September 2009

## TABLE OF CONTENTS

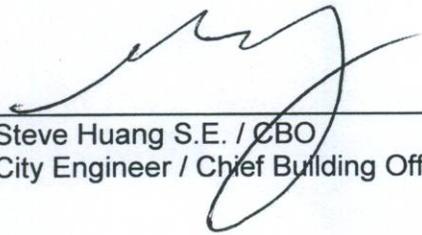
<u>Section</u>	<u>Page</u>
Certification .....	1
1 Introduction.....	2
2 Goals .....	3
3 Organization .....	5
4 Legal Authority.....	9
5 Operation and Maintenance Program.....	11
6 Design and Performance Provisions .....	15
7 Overflow Emergency Response Plan .....	16
8 Fats, Oils, and Grease Program .....	22
9 System Evaluation and Capacity Assurance Plan .....	24
10 Monitoring, Measurement and Program Modifications .....	26
11 SSMP Program Audits.....	27
12 Communications.....	28

**CITY OF REDONDO BEACH  
SEWER SYSTEM MANAGEMENT PLAN**

**Certification**

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

  
\_\_\_\_\_  
Steve Huang S.E. / CBO  
City Engineer / Chief Building Official

9/22/09  
\_\_\_\_\_  
Date

**SECTION 1**  
**INTRODUCTION**

Provision 11 of State Water Resources Control Board Order No. 2006-0003 (Order), Statewide General Waste Discharge Requirements for Sanitary Sewer Systems sets the requirement for the preparation of a Sewer System Management Plan:

- 11. The enrollee 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 Enrollee's office and/or available on the internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.*

The essential elements of the SSMP are detailed in Provision 13 of the Order. The City of Redondo Beach's Sewer System Management Plan is documented in this report, which addresses each element listed in Provision 13 of the Order.

The following sections list each essential element of the Sewer System Management Plan, and describe how the City complied with each.

- Section 2      Goal (WDR Section D.13i)
- Section 3      Organization (WDR Section D.13ii)
- Section 4      Legal Authority (WDR Section D.13iii)
- Section 5      Operation and Maintenance Program (WDR Section D.13iv)
- Section 6      Design and Performance Provisions (WDR Section D.13v)
- Section 7      Overflow Emergency Response Plan (WDR Section D.13vi)
- Section 8      Fats, Oil and Grease Control Program (WDR Section D.13vii)
- Section 9      System Evaluation and Capacity Assurance Plan (WDR Section D.13viii)
- Section 10     Monitoring and Program Modifications (WDR Section D.13ix)
- Section 11     Program Audits (WDR Section D.13x)
- Section 12     Communications Program (WDR Section D.13xi)

## SECTION 2

### GOALS

The Order requires the City to identify the goal of its Sewer System Management Plan. The City must provide a plan and schedule to properly manage and maintain all parts of the sanitary sewer system.

#### **Compliance:**

The mission of the City of Redondo Beach is to effectively and efficiently manage the sanitary sewer system throughout all areas of the City in order to protect the health, safety, and welfare of the public, property, and environment.

The goals of the City's SSMP are:

1. Prevent sewer system overflows by:
  - a. Performing systematic and timely condition evaluation of all sanitary sewer mains to ensure a high level of system serviceability is maintained at all times.
  - b. Performing sewer system repairs and replacement to the greatest degree possible prior to street surface reconstruction.
  - c. Implementing effective sewer mainline cleaning/flushing program to ensure full capacity of collection system is maintained to the furthest extent possible.
  - d. Performing timely repairs and replacements of sewer collection system as identified by system evaluation.
  - e. Maintaining pump station Supervisory Control and Data Acquisition (SCADA) system to ensure timely response to pump station failures so that sewer system overflow does not occur, and to provide system operational data to make timely and appropriate decisions on equipment repairs and replacements.
  - f. Providing sufficient emergency electric power generation to ensure no pump station will cause a sewer system overflow due to the loss of electrical power from service provider.
  - g. Performing routine pump station system maintenance to ensure system does not fail to operate due to foreseeable mechanical, electrical, and control equipment malfunction.
  - h. Performing systematic and timely evaluation of pump station systems (condition and capacity) to ensure a high level of system serviceability is maintained at all times.

- i. Conducting timely capacity evaluation of entire wastewater collection system to ensure adequate dry weather flow capacity is provided for customer service demands, and surplus capacity is provided for inflow and infiltration during wet weather.
  - j. Cost effectively minimizing the sources of inflow and infiltration.
  - k. Providing all necessary training of personnel to ensure they have the skills and knowledge to operate and maintain the system to the highest standards.
  - l. Implementing the fats, oils, and grease (FOG) control program to minimize the entry of these substances into the collection system
  - m. Establishing proper legal authority for implementing the above
  - n. Maintaining the necessary level of funding and staffing for providing proper operation, maintenance, and repair of the system as detailed in the Operation and Maintenance Program; and providing adequate capacity as detailed in the System Evaluation and Capacity Assurance Plan through periodic reviews of the rate structure.
  - o. Installing citywide “smart manhole cover” devices to monitor the sewer system’s operation and provide a real time warning and notification of any upsets, thereby preventing potential overflows.
2. Minimize the impact of SSO’s that do occur by preparing a proper Overflow Emergency Response Plan, training staff in its implementation, and implementing the plan when needed.

The Redondo Beach City Council approved the SSMP schedule on October 16, 2007.

**SECTION 3**  
**ORGANIZATION**

The Order requires that the City identify:

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

**Compliance:**

The Redondo Beach City Council approved the SSMP Organization document on October 16, 2007.

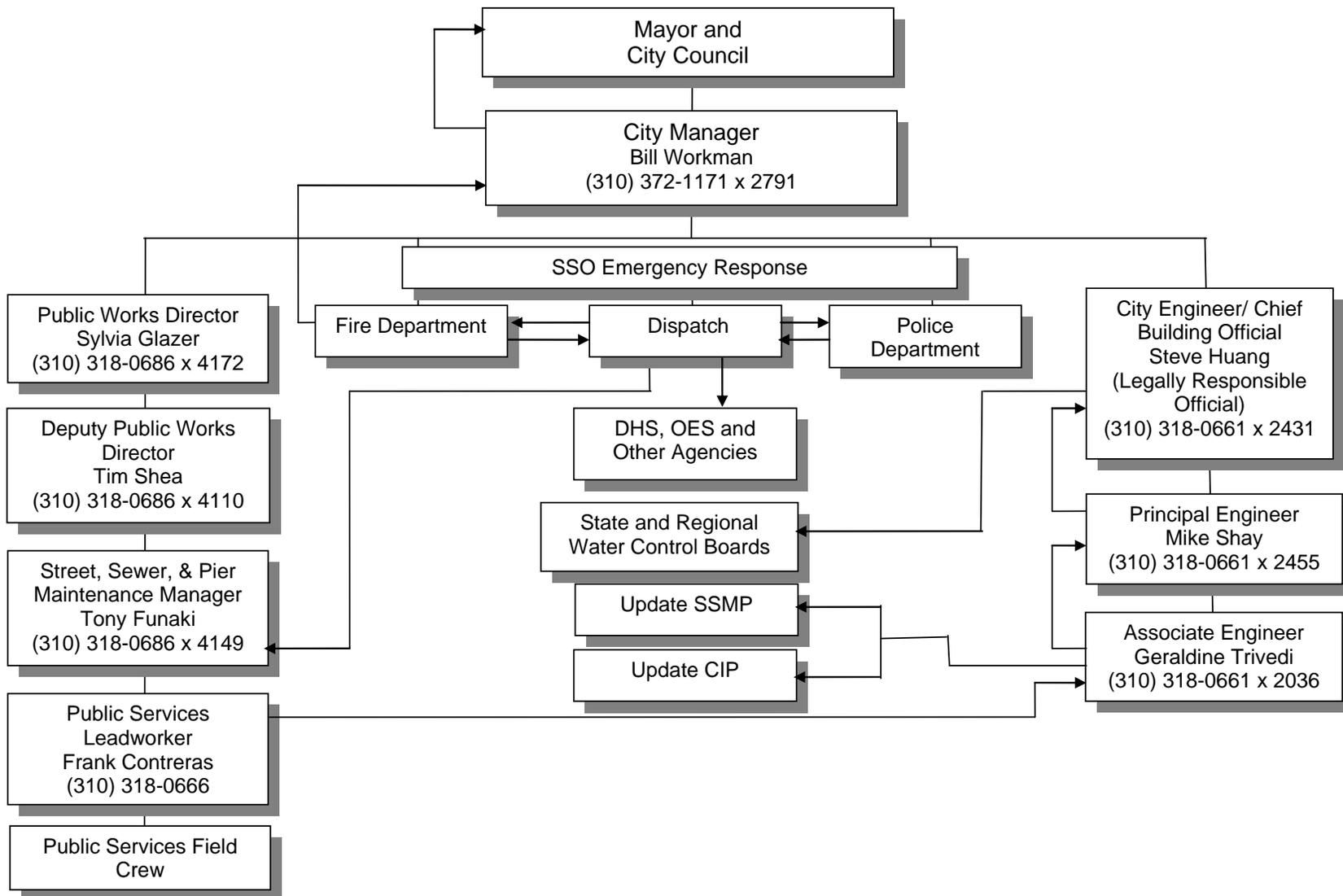
**Legally Responsible Official**

The City of Redondo Beach's Legally Responsible Official is the City Engineer / Chief Building Official.

**Organization Chart and Explanation**

The organization chart provided on the following page illustrates the lines of authority for City officials and staff responsible for implementing the SSMP measures. The City Manager establishes the overall SSMP policies and procedures, oversees the allocation of resources, delegates responsibility, and establishes the organization and funding plan.

## SEWER SYSTEM MANAGEMENT PLAN (SSMP) ORGANIZATION CHART



The City Departments with primary responsibility for the SSMP are the Engineering & Building Department and the Public Works Department. The table below identifies the position within these departments with corresponding SSMP activity and responsibility. The responsibilities included are O for Oversees, P for Participates, D for Develop & Update, and I for Implements.

<b>SSMP Activity</b>	<b>City Engineer</b>	<b>Director Public Works</b>	<b>Engineering &amp; Building Staff</b>	<b>Public Works Staff</b>
Goals	O	P	D	P
Organization	O	P	D	P
Legal Authority	O	P	D	P
Modifications to Municipal Codes	O	P	D	P
Operation and Maintenance Program				
Maintaining Map of System in GIS	O		D	P
Preventative Maintenance Plan	P	O	P	D/I
Areas of Interest Management		O		D/I
Areas of Interest Investigations	O	P	I	I/P
Routine CCTV Inspections		O		I
Design and Performance Provisions				
Standards for Inspection & Testing	O		D/I	
Standards for New Sewers System Components	O		D/I	
Standards for Rehabilitation & Repairs	O		D/I	
Construction Standards & Specifications	O		D/I	
Overflow Emergency Response Plan	P	O	D	D/I
Fats, Oils and Grease Program	O	P	D/I	I/P
Inspections	O		D/I	
Enforcement	O		D/I	P
Public Education & Outreach	O	P	D/I	P
System Evaluation and Capacity Assurance Plan				
CIP	O	P	D/I	P
Funding Plan & Rate Structure	O	P	D/I	P
Evaluation of System Hydraulic Capacity	O		D	
Evaluation of System Condition (CCTV)	O	P	D/I	P
Monitoring, Measurement and Program Modifications	O	O	D/I	D/I
SSMP Program Audits	O	P	P	P
Communications	O	P	D/I	P

## **The chain of communication for reporting SSOs**

Detailed procedure for responding to an SSO is contained in the City of Redondo Beach's Sanitary Sewer Overflow Emergency Response Plan that was approved by City Council on May 22, 2007. The original plan was developed and approved in 2001 and was updated in 2007 to reflect current resource response and regulatory requirements. The plan is again undergoing revisions to include new regulatory reporting and notifications requirements and clarify City staff roles and responsibilities.

The Order requires that all sanitary sewer overflows "that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program" be reported to appropriate regulatory agencies and other potentially affected entities, such as health agencies, Regional Water Quality Control Boards, water suppliers, etc.

The SSO Reporting Chart included in the Overflow Emergency Response Plan Section illustrates the chain of communication for reporting SSOs from receipt of an SSO notification. The SSO reports are prepared by the Responsible Staff Person who responds to the SSO. The overflow will be reported on the Sanitary Sewer Overflow Report Form, which is included in the Overflow Emergency Response Plan and requires information that needs to be entered into the Online SSO Database through California Integrated Water Quality System (CIWQS).

## SECTION 4

### LEGAL AUTHORITY

The Order requires that:

*Each Enrollee must demonstrate, through sanitary sewer system use ordinance, 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 ordinance.*

The Order 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.

#### **Compliance:**

The City has established legal authority by:

- Adopting the City of Redondo Beach Municipal Code Title 5, Chapter 4 Wastewater System.
- Adopting its Engineering and Public Works Department's Standard Plans and Specifications

The City is in the process of developing and obtaining approval on revisions to its Municipal Code Title 5, Chapter 4 Wastewater System.

The revised code will strengthen the City's ability to address issues and concerns associated with Fats, Oils and Grease (FOG) and private property building sewer laterals.

## SECTION 5

### OPERATION AND MAINTENANCE PROGRAM

*The Order 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.*

#### **Compliance:**

#### **General Information**

An Operation and Maintenance Program (O&MP) is intended to ensure that the planning, execution, funding, and revision of the maintenance activities related to the sewer collection system are executed in adherence with the prescribed guidelines in Order No. 2006-0003. The prime focus of a portion of this Order, and prime focus of this document, is on the prevention of sewer spills. The O&MP is required not only to maintain the value and usefulness of the sewer collection system, but also to prevent obstructions and failures that could lead to sewer spills and could cause other private and/or public property damage.

The O&MP is accomplished by following industry-accepted guidelines in the training and implementation of sewer maintenance practices as well as the design, construction, testing and routine inspection and repair or replacement of particular sewer system components, and

ensuring proper funding for these activities as well as best allocating these resources for the repair and replacement of damaged or deficient sewer lines or appurtenant structures.

Through the development and implementation of this O&MP for the City of Redondo Beach, it is anticipated that the City will continue to improve the existing efforts in the area of preventative maintenance in order to prevent sewer spills to “Waters of the State”, which may impact public health and the beneficial uses of the receiving waters.

### **Objectives**

The goal of the O&MP is to protect public health, the environment, and the beneficial uses of the receiving waters.

Additional objectives of the PMP are as follows:

- Provide high levels of customer service through the prevention of blockages due to obstructions, construction-related damage or sewer line collapse;
- Protect the safety and health of collection system staff and the public through the prevention of sewer spills;
- Protect the safety and health of collection system staff through the implementation of a validated training program for staff, and re-establishing safety programs, trainings and precautions (primarily focused on traffic control, personal protective equipment and confined space entry);
- Maintain the sanitary sewer collection system and appurtenant structures through monitoring and repair of the system in a cost-effective manner considering routine degradation and appropriate repair/replacement;
- Protect public and private property beyond the collection system and treatment facilities (prevent flooding due to sewer obstructions, or sink holes and related damage due to pipe failure);
- Assist City staff and the public in understanding the operation and maintenance of the sanitary sewer collection system by providing clearly documented policies, procedures and guidelines for City staff and the public to reference and follow; and
- Comply with the Preventative Maintenance aspects of the Order.

The City’s O&MP includes the following items. In addition, City staff is currently working on updates and clarifications to improve the O&MP.

- The City has developed a GIS map of its sanitary sewer system, showing all sewer facilities and stormwater conveyance facilities.
- The City performs routine operation and maintenance activities in order to provide a high level of service to its customers, extend the useful life of its assets, and prevent overflows. These activities include a cleaning program, a CCTV inspection program, pump station maintenance, equipment maintenance, and repair and replacement. The

City's entire sewer collection lines are cleaned once every year and frequent maintenance areas are cleaned two to four times per year. Pump stations are inspected weekly.

- The City completed CCTV inspections for the entire gravity system in 1997. Rehabilitation of gravity sewer lines followed nearly annually up until 2007 when the system was again CCTV inspected. The condition of the inspected system was evaluated to identify the structural deficiencies. The structural deficiencies were prioritized and initial recommendations were made for structural replacement and rehabilitation. Additional rehabilitation of gravity sewers took place in 2008.
- The City is currently updating its Wastewater System Master Plan. The scope of work includes a reevaluation of the condition of the gravity sewers based on the 2007 CCTV inspections and develop a comprehensive Rehabilitation and Replacement Program to be incorporated in the City's Wastewater Capital Improvement Program as well as the Operation and Maintenance Plan.
- Condition assessment and improvement recommendations for the City's wastewater pump stations were completed in 1994 as a part of its latest Wastewater System Master Plan. Since then, four pump stations have been rebuilt and four others have had repairs and/or rehabilitation.
- The updated Wastewater System Master Plan will include an updated evaluation of the current conditions of the sewer pump stations. Recommendations will be incorporated in the City's Wastewater Capital Improvement Program as well as the Operation and Maintenance Plan.
- The City funds sewer related activities through its Wastewater Enterprise Fund. In 2003, the City approved Ordinance No. 2924-03 that established a Wastewater Sewer User Fee based on a Wastewater Rate and Financial Plan Study report. In 2004, the City issued revenue bonds totaling \$10,335,000 which included a rate covenant that requires, in any Fiscal Year, the Wastewater Enterprise to produce Rate-Based Net Revenues equal to at least 1.20 times the Installment Payments coming due and payable during such Fiscal Year. In 2008, the City approved Ordinance 3018-08 that raised the Wastewater Sewer User Fees to its current levels. The new fees help to fully support the completion of sewer collection system rehabilitation projects, the operation and maintenance of the system, meet bond rate covenant requirements, and comply with regulatory requirements. The established fees also include an annual increase to account for inflation.
- Currently, the City maintenance staff receives on the job training that includes training for safety, confined space entry, record keeping, pump station operation and maintenance, gas sampling, lockout-tag out, and overflow emergency spill response. In the future, the City intends to supplement this training with the California Water Environment Association's (CWEA) training program.

The City will require contract staff and contractor staff who will perform flow monitoring, CCTV inspection, maintenance, repair, or replacement on the collection system,

including the pump stations and force mains, to possess adequate level of training and certifications appropriate for their duties.

- The City has an up-to-date equipment and replacement parts inventory list that will be included in the Operation and Maintenance Program document.

## SECTION 6

### DESIGN AND PERFORMANCE PROVISIONS

The Order requires that the City has:

- (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.*

#### **Compliance:**

The City utilizes the “Standard Specifications for Public Works Construction” or “Greenbook” specifications for general construction and inspection of sewer facilities as required in the City’s Municipal Code Title 7 Public Works, Section 7-2.01 standard specifications and standard plans for public work construction. In addition, supplemental City approved design criteria, specifications and standards have been produced by City staff to require a clean-out be installed at private property lines.

The “Greenbook” is a readily available document, which is utilized by the majority of public agencies in Southern California and throughout the United States. Due to the size and yearly update, it is not included in this Plan. The City’s supplemental specifications to the “Greenbook”

## SECTION 7

### OVERFLOW EMERGENCY RESPONSE PLAN

The Order requires that at a minimum Overflow 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 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.*

#### **Compliance:**

The City has certified its Sewer Overflow Emergency Response Plan (SOERP) document on May 22, 2007. The SOERP is currently being revised and updated to reflect recent modifications and additions to various agency reporting and notification requirements and to clarify various items included in the existing SOERP. Staff training in the established procedures will be conducted at least once per year.

#### **Sewer Overflow Emergency Response Plan**

**Purpose:** To reduce the potential impact of City sewage collection system operations on storm water quality and receiving waters, to the maximum extent practicable, by ensuring that:

- 1) Sewage system overflows or leaks do not enter the storm drainage system,
- 2) Potential and actual sanitary sewage blockages are remediated and suspected cross-connections are investigated, and,
- 3) Public health officials and Regional Water Quality Control Board Officials are notified when there is a threat to public health and/or receiving waters.

**Application:** This applies to all officers and employees of the City of Redondo Beach.

**Scope:** These operational procedures are applicable for all sanitary sewer lines and pump stations owned by the City. In addition, the “Overflow Response” provisions shall also pertain to all private facility or other agency discharges that threaten to enter the City’s storm drainage system or other receiving waters.

**Procedure Overview:**

Typically, a sewer overflow problem is first reported by a resident who observes a sewer overflow. This call comes in to the City through one of two means:

1. The Public Works phone line (310) 318-0686 or the after-hours emergency number (310) 379-5411
2. Police Dispatch (9-1-1)

A representative of the Fire Department, Public Works Department, or both, will respond to all reported discharges and perform an initial assessment. This will include a determination of whether the overflow is on public or private property.

Discharges that are determined to be caused by activities on City property, or to which the responsibility cannot be established, will be directed to the Public Works Department Sewer Division for immediate control, containment and cleanup.

Discharges that are determined to be caused by activities on private property that have the potential of reaching City property will also be directed to the Public Works Department Sewer Division for immediate control, containment and cleanup.

For all other overflows on private property, the Fire Department Incident Commander and/or Public Works Department Manager or his/her designee will contact the responsible party for immediate and proper removal of the sewage under applicable Federal, State, regional and local codes and regulations. If the responsible party refuses or is unable to comply, staff will contact the City of Redondo Beach Code Enforcement at (310) 318-0611 x 2418, and the County Health Department at (310) 519-6050, as appropriate.

Actions to alleviate discharges will be performed by Public Works staff in the following order:

1. Control, contain, and/or minimize the discharge.
2. Identify and notify the responsible party.
3. Collect information, estimate discharge volumes and capture photo documentation.
4. Begin cleanup of the discharge.
5. The Fire Department shall notify all applicable Federal, State, regional and local agencies.

6. Inform the Engineering & Building Department for an assessment and recommended course of action if the problem cannot be corrected through normal maintenance efforts.

Private property owners will be billed for all City costs, including overhead, associated with the response or cleanup of a spill caused as a result of activities on their property.

### **Detailed Sanitary Sewer Overflow Response Procedures**

**Notification:** Notification of a sewage overflow on public or private property typically will be received by telephone, either through the Police Dispatch (9-1-1) or through the Public Works Department. A call received via 9-1-1 will result in Fire Department response who will then contact the Public Works Department for trained sewer response overflow crews assistance if needed. Non-emergency calls received through the 9-1-1 Dispatch Center or Public Works Department will initiate dispatch of trained response crews to the site where the overflow will be evaluated. Based on the scope of the problem and assessment of an emergency situation, appropriate City departments will be notified.

Dispatch obtains all relevant information available regarding the overflow including:

- Time and date call was received;
- Specific location;
- Description of problem;
- Time possible overflow was noticed by the caller;
- Caller's name and phone number;
- Other relevant information that will enable the Public Works Department and/or Fire Department to quickly locate, assess and stop the overflow.

**Incident Response:** Fire Department and/or Public Works Department will respond to all reported sewage overflows to identify the responsible party for the overflow and implement control, containment, and clean-up procedures for sewage that has been discharged into the public right of way or private property.

**Assessment Process:** Fire Department Incident Commander and/or the Public Works Department Manager or his/her designee will investigate the incident and determine if the sewer overflow is on public or private property. Based on this investigation, the Incident Commander will classify the overflow using the following criteria:

There are three characteristics that determine the classification of an overflow:

- Ownership of the facilities causing the overflow
- The extent of the overflow (i.e. private property only, street, storm drain and/or ocean)
- The volume of wastewater overflow

If the overflow is on City property, or has the potential of reaching City property, the Public Works Department Sewer Division will respond. Notification schedule: Public Works Administration Office at (310) 318-0686 from 7:00 A.M. to 5:00 P.M. and after-hours call the Police Department at 310-379-5411 (dispatch). The Sewer Crew will be paged to respond. The Fire Department shall be responsible for immediately notifying applicable State, regional and local agencies by phone, facsimile and certified mail/return receipt. The Engineering & Building Department shall be responsible for immediately notifying the Regional Water Quality Board. These agencies and telephone numbers are noted at the end of this Action Plan.

If the overflow is on private property, Public Works will respond and the responsible party will be contacted for proper removal of the sewage. The responsible party shall be advised that the substance must be removed immediately under the applicable Federal, State, regional and local codes and regulations. If the responsible party refuses to comply or cannot comply, Redondo Beach Code Enforcement at (310) 318-0611 x2418 and the County Health Department at (310) 519-6050 will be notified.

The Fire Department Incident Commander shall immediately notify Federal, State, regional and local agencies by phone, facsimile and certified mail/return receipt as appropriate. The City may initiate cleanup if deemed appropriate to protect the public health, safety and welfare.

**Incident Action Plan:** This section describes specific actions to be performed by the Fire Department or Public Works Department sewer maintenance personnel:

**SSO Overflow Control, Containment, and Clean-Up:** If the initial assessment indicates City property is involved, or has the potential of being affected, Public Works Sewer Division will respond. The objectives of their actions will be to:

- Protect public health, environment and property from sewage overflows and restore surrounding area back to normal as soon as possible;
- Establish perimeters and control zones with appropriate traffic control devices, and vehicles;
- See that the appropriate regulatory agencies are immediately with preliminary overflow information and potential impacts;
- Contain the sewer overflow to the maximum extent possible including preventing the discharge of sewage into surface waters; and
- Minimize the City's exposure to any regulatory agency penalties and fines.

The Fire Department and or Public Works Department will handle all response actions.

The steps, in order of priority, are:

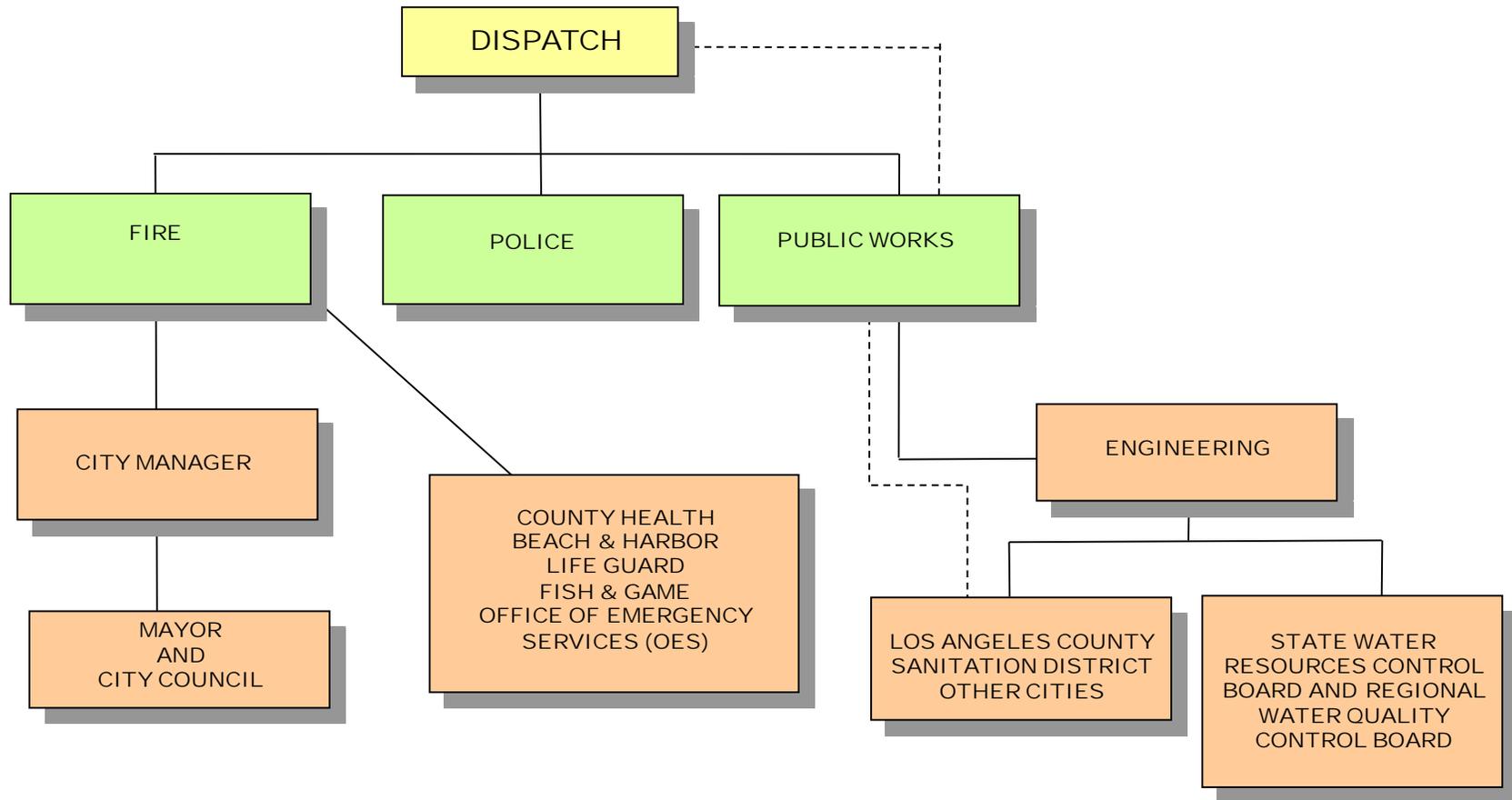
1. Contain and control the discharge.
2. Identify and notify the responsible party;
3. Collect information, estimate overflow volumes and capture photo documentation;

4. Begin cleanup of the overflow;
5. Notify the Redondo Beach Director of Public Works and Redondo Beach Fire Chief, and;
6. Notify all applicable Federal, State, regional and local agencies by phone, facsimile and certified mail/return receipt immediately or as soon as possible thereafter.

**Documentation Procedures:** Each sewer overflow incident must be documented by completing the Sewer Overflow Report form and report according to Los Angeles County policy. Once the form is completed it is to be submitted to the Engineering & Building Department for review and further action if warranted. The City's Engineering & Building Department will then be responsible for submitting all written or web-based reports required by other agencies and will maintain all sewer overflow incident documentation.

# City of Redondo

## Sewer Overflow Response & Flow Chart



## SECTION 8

### FATS, OILS, AND GREASE CONTROL PROGRAM

The Order requires:

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

- (a) An implementation 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, 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.*

#### **Compliance:**

The City complied with this requirement by:

- The City of Redondo Beach's Municipal Code Title 5, Chapter 4 Wastewater System includes provisions and provides the legal authority to implement a FOG Control Program as outlined above.
- The City is currently developing and obtaining approval on revisions to the City of Redondo Beach's Municipal Code Title 5, Chapter 4 Wastewater System in order to strengthen the City's ability to address issues and concerns associated with Fats Oils and Grease and private property building sewer laterals.

- Implementing a Fats, Oils, and Grease Control Program. The program includes an inventory of approximately 300 FSEs each visited twice per year to conduct education, determine compliance with the code, and take any necessary enforcement actions to gain compliance.
- Identifying sections of the sewer system subject to grease blockages and including these sections in its Hot Spot cleaning program
- Funding and implementing the Clean Bay Restaurant Certification Program. Through the Clean Bay Restaurant Certification Program, FOG Control awareness and improved compliance have been achieved through outreach and enforcement actions.
- The City utilizes the California Fats Oils and Grease Workgroups Grease Hauling and Rendering Companies List for acceptable disposal and hauling providers of FOG generated within its service area.
- The City is working with the State of California in achieving hauler compliance with the “Licensed waste haulers” requirement (registered to do so by the State in accordance with California Code of Regulations, Title 23, Waters, Chapter 3, and Subchapter 1).
- The current Municipal Code Title 5, Chapter 4 Wastewater System (5-403.5) includes a requirement for the installation, design standards, maintenance, and record keeping of sand, grease, and oil gravity separation interceptors for a restaurant or other similar establishments discharging grease waste.
- The current Municipal Code Title 5, Chapter 4 Wastewater System (5-403.5) includes a requirement for semi-annual on-site inspections. The revised code will maintain this requirement. The Clean Bay Restaurant Certification Program also includes inspections of Food Service Establishments (FSE) for minimum compliance with FOG and water quality regulations.
- The City maintains an “Areas of Interest” list and map which includes sections of the system subject to FOG build-up and blockages. The “Areas of Interest” are scheduled for more frequent cleanings and monitoring which occur two to four times per year.
- FOG Control public education is primarily conducted through the use of the restaurant inspection program; however additional outreach takes place throughout the year. The additional outreach may include, presentations to various local committee and/or working groups, public presentations to City Council & the Public Works Commission, information included on the City’s web site, and various distributed brochures posters and handouts.

In 2002 the City Council modified its wastewater regulations to require that the City Engineer conduct semi-annual inspections of Food Service Establishments (FSEs) to ensure that the required grease removal device installations are being properly maintained. In 2006, following the adoption of the State Water Board’s Order, the City reviewed the existing FOG Control Program and begun the process of establishing a FOG inspection fee in order to enhance the existing program. The City Council approved FOG Control Ordinance No. 2999-07 on April 17, 2007 to establish a fee that would apply to FSEs that generate FOG. The fee is used to pay for the inspections and administration of the FOG Control program for the FSE inspections.

## SECTION 9

### SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The Order 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.*

#### **Compliance:**

The Order requirements listed above are met or will be met by the following:

- Capacity evaluation was conducted in 1994 during the preparation of the City's latest Wastewater System Master Plan. A hydraulic model was developed for the following system elements:
  1. All collection lines greater than 8-inches in diameter
  2. Sewers observed to have operational problems
  3. Sewers projected to be over capacity by the City's previous wastewater planning reports
  4. Sewers that serve large tributary areas
  5. Sewers with a slope of 0.004 or less that serve 300 or more residential units

All sewer pump stations were evaluated on a case by case basis, using the flow information from the hydraulic model.

The City is currently updating its Wastewater System Master Plan. The scope of work includes the development of a hydraulic model of the entire wastewater system. Capacity evaluation of the collection system as well as the pump stations will be conducted.

- The 1994 Wastewater System Master Plan established the City's current wastewater criteria. The criteria will be reevaluated as a part of the update to the Wastewater System Master Plan.
- The 1994 Wastewater System Master Plan identified the portions of the wastewater system with hydraulic deficiencies. Capital Improvement Project recommendations were formulated and prioritized. The total priority pump station and collection system capacity related project costs were estimated at \$7,020,000 (January 1994 dollars).

The update of the Wastewater System Master Plan will include the development of a comprehensive Capital Improvement Program that will include projects to address any capacity related system deficiencies. Project costs will be developed.

- The City funds sewer related activities through its Wastewater Enterprise Fund. In 2003, the City approved Ordinance No. 2924-03 that established a Wastewater Sewer User Fee based on a Wastewater Rate and Financial Plan Study report. In 2004, the City issued revenue bonds totaling \$10,335,000 which included a rate covenant that requires, in any Fiscal Year, the Wastewater Enterprise to produce Rate-Based Net Revenues equal to at least 1.20 times the Installment Payments coming due and payable during such Fiscal Year. In 2008, the City approved Ordinance 3018-08 that raised the Wastewater Sewer User fees to its current levels. The new fees help to fully support the completion of sewer collection system rehabilitation projects, the operation and maintenance of the system, meet bond rate covenant requirements, and comply with regulatory requirements. The established fees also include an annual increase to account for inflation.
- The update to the Wastewater System Master Plan will include a schedule for implementing the developed Capital Improvement Program project recommendations.

## SECTION 10

### MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The Order 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.*

#### **Compliance:**

The City will monitor the effectiveness of its program continuously in order to minimize the possibility of SSO's. Where appropriate, the City may:

- Adjust and enhance the "Areas of Interest" cleaning program
- Revise the education and outreach program material
- Expand the scope of its FOG Program
- Modify legal authority documents
- Modify the design and construction standards
- Update the Capital Improvement Program
- Adjust the rate structure
- Update the SSO reporting and notification policy

The SSMP is a "living document" and is subject to change as standards, procedures, technology, and system evaluation or conditions dictate, as such, changes will be made as necessary to continually improve this document.

## SECTION 11

### SSMP PROGRAM AUDITS

The Order 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.*

#### **Compliance:**

The City will audit its Sewer System Management Plan annually in the month of July, (starting in 2011) identify any deficiencies, and make appropriate adjustments. The audit will examine the following:

- Whether any spill occurred from its system
- Cause of the spill
- Steps needed to be added to the SSMP to prevent re-occurrence
- Capital improvement projects that have been implemented
- Next year's capital improvement program

The SSMP audit will be completed by City staff as directed by the City Engineer.

**SECTION 12**  
**COMMUNICATIONS**

The Order requires that:

*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.*

**Compliance:**

The City will communicate on a regular basis with interested parties on the implementation and performance of its Sewer System Management Plan.

The City will place the SSMP related documents on its Web site, allowing interested parties easy access to the program.