City of South Pasadena
Public Works Department

SANITARY SEWER MANAGEMENT PLAN

July 2009

Prepared by
John L Hunter and Associates
13310 Firestone Blvd., A-2
Santa Fe Springs, CA 90670
(562)802-7880

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I. Introduction and Background

On May 2, 2006 the State Water Resources Control Board (SWRCB) adopted new regulations aimed at reducing the number of overflows from sanitary sewer throughout the state. This order applies to any municipality or agency that owns and operates more than one mile of sanitary sewer collection system.

The SWRCB order identified major causes of sanitary sewer system overflows (SSOs) as including: grease blockages, root blockages, sewer line flood damage, manhole structure failure, vandalism, pump station mechanical failures, power outages, excessive storm or groundwater inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor caused damage.

The SWRCB order further requires each operator of a sanitary sewer collection system to develop a **Sewer System Management Plan** (SSMP).

The SSMP must include:

"provisions to provide proper and efficient management, operation and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO . . ."

The goals of this SSMP are to implement a program that works towards achieving the prohibitions contained within the SWRCB's order of:

1. Preventing any SSO that results in a discharge of untreated or partially treated wastewater to the waters of the United States (ie: that could enter the storm drain system), and

2. Preventing any SSO that creates a nuisance (as defined by the California Water Code Section 13050 m).

This will include ensuring that:

1. The sanitary sewer system will be properly managed, operated and maintained to minimize sanitary sewer overflows and their impacts on receiving waters and public health.

2. When SSOs occur, the corresponding response will be prompt and all feasible steps will be taken to mitigate impact from the overflow, and

3. Reporting, recordkeeping and, when appropriate, public notification are adequate.

Definition of an SSO

"Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of untreated or partially treated wastewater that reach the waters of the United States;
(ii) Overflows or releases of untreated or partially treated wastewater that do not reach the water of the United States; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system."

Timetable

The specific goals and tasks in the overall development of the SSMP are contingent upon the population tributary to the city's sanitary sewer system. For cities with populations between 10,000 and 100,000 the schedule is:

Obtaining a Waste Discharge Identification number (WDID)	November 2, 2006
Begin Reporting overflows	January 2, 2007
SSMP Development Plan and Schedule	November 2, 2007
Goals and Organization Structure	November 2, 2007
Legal Authority	May 2, 2009
Operation and Maintenance Program	May 2, 2009
Overflow Emergency Response Program	May 2, 2009
FOG Control Program	May 2, 2009
Design and Performance	August 2, 2009
System Evaluation and Capacity Assurance Plan	August 2, 2009
Monitoring, Measurement, and Program Modifications	August 2, 2009
SSMP Program Audits	August 2, 2009
Communication Program	August 2, 2009
Final SSMP, incorporating all of the SSMP elements	August 2, 2009

II. Organization

The City of South Pasadena Public Works Department's Sewer Division provides primary responsibility for ongoing maintenance and operations of the City's sanitary sewer system. Over 25,824 residents discharge into the city-owned sewers. The system consists of approximately 53 miles of gravity sewer lines which ultimately flow into larger trunk lines which are owned and operated by the Sanitation Districts of Los Angeles County.

The city's annual budget for operations and maintenance is over $530,000. There are currently 12 personnel with primary responsibility for management, administration, operations and maintenance.

Organizational Chart

An organization chart showing the structure and relationships of the administrative, management, operations and maintenance are shown on Figure 1. Organization for reporting SSO's is shown on Figure 2. Organization Element Supporting Documents can be found in Appendix B.

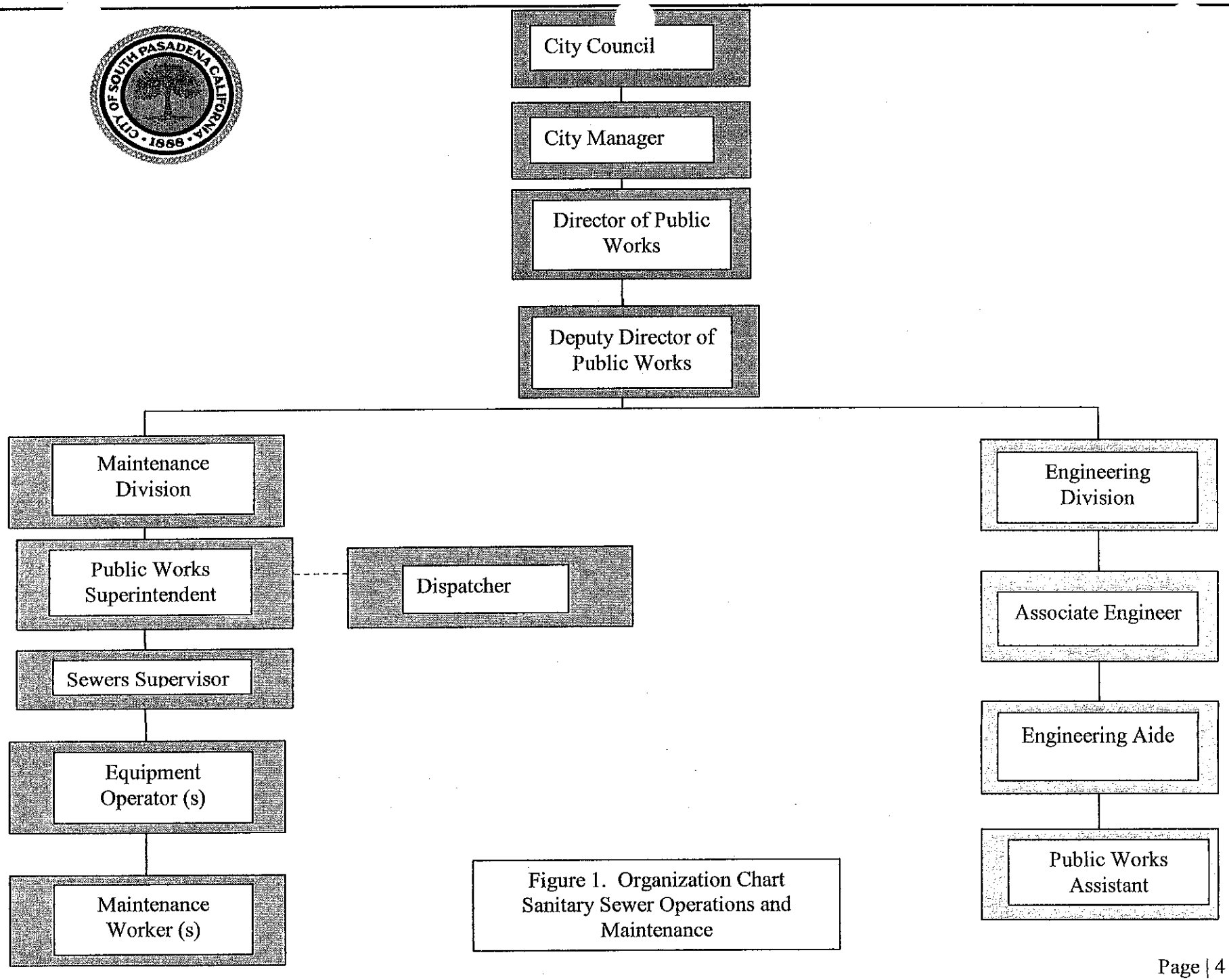

Figure 1. Organization Chart
Sanitary Sewer Operations and Maintenance

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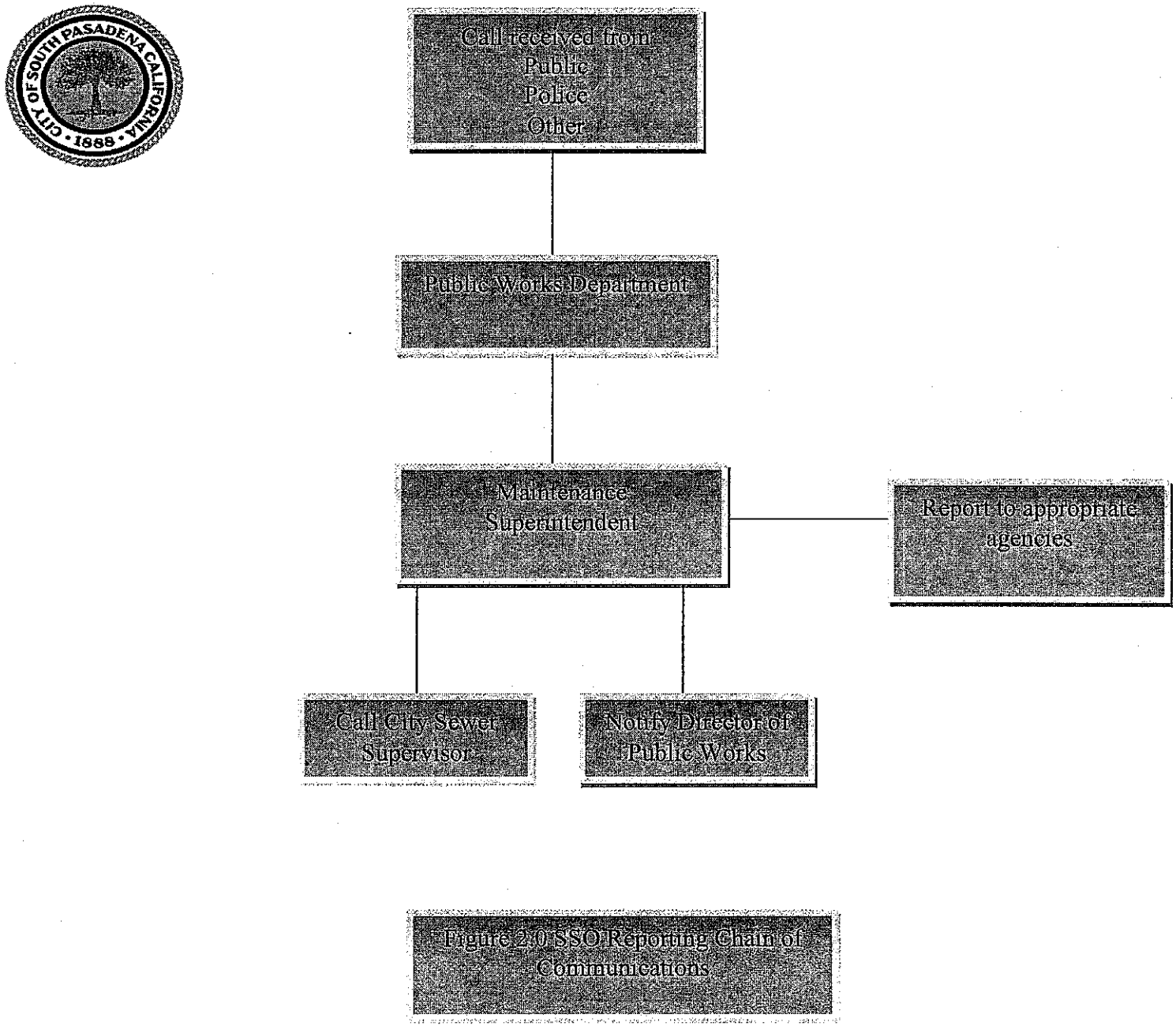

Figure 2.0 SSO Reporting Chain of Communications

Description of Responsibilities

The responsibilities (in respect to the SSO program) of each position shown on the Organization Chart (figure 1) are:

City Council	Responsible for establishing new laws and amending existing regulations.
City Manager	The chief executive officer of the City.
Director of Public Works	Directs and administers the City's sewer maintenance program within the scope of the City Council's direction.
Deputy Director of Public Works	Responsible for carrying out the tasks assigned by the Director Public Works.
Public Works Superintendent	Responsible for the day-to-day operation and maintenance of the sanitary sewer collection system. Also responsible for supervision of the field crews.
Sewers Supervisor	Responsible for carrying out the tasks assigned by the Public Works Superintendent, including assigning specific tasks to crews.
Equipment Operator(s)	Operates heavy equipment in the field.
Maintenance Workers	Conduct maintenance activities, including sewer cleaning and regular inspections of the sanitary sewer system.
Dispatcher	Receive complaints and requests for investigation from various sources and refer to appropriate staff.
Project Manager	Responsible for identifying and managing development of sewer capital improvement projects.
Associate Engineer	Responsible for conducting engineering reviews of the sanitary sewer system and approving designs for new and repaired sewer lines.
Engineering Aide	Conducts field inspections to ensure proper construction of new and repaired sewer lines
Public Works Assistant	Supports engineering efforts, including budget assistance, correspondence and reports.

III. Legal Authority

The SSMP must include the legal authority, through a sanitary sewer system use ordinance, service agreements, or other legally binding procedures, that provide 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 connection 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 blockage; and (e) enforce any violation of its sewer ordinance.

In May 2009 the City of Pasadena updated its sewer ordinance to better reflect the SSMP requirements (Appendix C). The following table highlights the sections from the City of South Pasadena Municipal Code pertaining to the SSMP requirements.

SSMP Legal Authority Sections	*South Pasadena Municipal Code Chapter 30:*
Section "A"	Sections: 30.2, 30.6 and 30.7
Section "B"	Sections: 30.4 and 30.5
Section "C"	Section: 30.3
Section "D"	Sections: 30.20-30.37
Section "E"	Sections: 30.50-30.54

IV. Operation and Maintenance Program

The Public Works Department reviews its sewer system operations and maintenance program to incorporate measures that will include the following:

A. 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, that are appropriately applicable to the city;
B. Description of routine preventative operation and maintenance activities by staff and contractors, including a system for regular maintenance and cleaning of sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance program will have a system to document scheduled and conducted activities, such as work orders;
C. 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 will 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 will be focused 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 will include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plans will include a time schedule for implementing short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
D. Training will be provided on a regular basis for staff in sanitary sewer system operations and maintenance, and contractors will be required to be properly trained; and
E. An equipment and replacement part inventory, including identification of critical replacement parts.

V. Design and Performance

a) Design Standards

The City is fully built-out, and design of new sewer system lines is not a regular or on-going occurrence. However, when these do occur, either due to capacity upgrades, repair and replacement or in-fill development, the City requires plans to be prepared by a licensed engineer. The city then thoroughly reviews the plans to ensure adherence to generally accepted standards such as:

Los Angeles County Specifications,
Standard Plans and Specifications for Public Works Construction.

b) Inspection Procedures

The City's Public Works inspectors and other engineering personnel are experienced in sewer line and manhole construction. They shall receive ongoing training as appropriate to remain aware of the latest regulations standards and technologies. They should also be familiar with the requirements for public construction contained within the "Green Book".

VI. Overflow and Response Plan and Reporting Protocol

Introduction

The City's sewage system is maintained by the Sewer Division of the Public Works Department. The system is designed to transport sanitary sewage to Trunk Sewers operated by the Sanitation Districts of Los Angeles County for further transportation, treatment and eventual discharge. Failure at any point within either the City's or the County's system can result in a spill of raw sewage which could threaten public health and contaminate the environment. The same threat-scenario is true of spills that may originate from private disposal systems (septic tanks and/or cesspools) or private property (blocked or failed private property sewer laterals).

Purpose

To reduce the potential impact of City sanitary sewage system operations on storm water quality, 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 are notified when there is a threat to public health.

Scope

These operational procedures are applicable for all sanitary sewer pipes owned by the City. In addition, the "Spill Response" provisions shall also pertain for all private facility or other agency discharges that threaten to enter the City's storm drainage system or other receiving waters.

SEWAGE SPILL RESPONSE PROCEDURES

General Response Procedures

The four fundamental phases of all responses to a sanitary sewer spill are: **CONTAIN, REPORT, CONTROL, and CLEANUP.**

The first personnel on scene are to contain the spill to keep it from entering the storm drainage system or other receiving waters. This may be done in any number of ways including the use of sand or soil dikes, sand bags, or by plugging the outlet pipe of a catch basin.

After the spill is contained or if the spill enters the storm drainage system or receiving waters, appropriate regulatory agencies must be notify as soon as possible but not delay the containment.

Once the spill is contained and the appropriate agencies have been notified, it needs to be brought under control. That is, the impacted line must be relieved (the blockage removed) or bypassed (pumped to the next flowing manhole) if the line has failed.

The fourth and final step of the response is the cleanup. All surfaces touched by the spill must be washed down, disinfected and the run-off contained and removed for proper disposal.

Spill Response forms are located in Appendix E.

Initial Spill Response Procedures

1. The Maintenance Superintendent or designee thereof shall be immediately dispatched to the site to take control of the scene as the Incident Commander. Field crews will be immediately prepared to respond with all available equipment including diking materials, vacuum truck and traffic control equipment.

2. The Incident Commander (the most high ranking, appropriate, city employee or designee) shall assess the magnitude of the spill by estimating the gallons per minute of the flow or by the accumulation of spillage AND whether the spill has been contained or not.

For any sewage spill that results in a discharge into a drainage channel or a surface water, the discharger shall, as soon as possible but not later then two hours after becoming aware of the discharge, notify the State Office of

Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board (RWQCB).

3. Based on his/her assessment of the situation, the Incident Commander shall declare the spill either a Category I or Category II spill in accordance with the following parameters:

Category I – Blockage or restriction causing an overflow of 1,000 gallons or more, OR entering an environmentally sensitive area, OR entering the storm drain system and not captured.

Notification Requirements:
Office of Emergency Services- (800) 852-7550 (Call Immediately)
Los Angeles County Health Department- (626)430-5420 or (213)974-1234 (24 hours) (Call within 15 minutes of spill)
Los Angeles County Public Works- (888)253-2652
Regional Water Quality Control Board- (213)576-6600 (Call within 2 hours of spill)
State Water Resources Control Board (https://ciwqs.waterboards.ca.gov/)

Category II – Blockage or restrictions causing a flow which is contained prior to entering the storm drain system AND has a cumulative overflow of less than 1,000 gallons.

Notification Requirements:
Los Angeles County Health Department-(626)430-5420
State Water Resources Control Board (https://ciwqs.waterboards.ca.gov/)

There is a potential **Private Lateral Sewage Discharge** scenario which would be the result of an overflow on private property NOT caused by a blockage in the public sewer system. In this event, it is the property owner/operator's responsibility to mitigate the spill; however, city crews may wish to consider assisting the property owner/operator within the bounds of resource availability and public service limitations. In this event, the Health Department should be notified and the State Water Resources Control Board may be notified at the option of the City.

Category I Spill Response Procedures

1. Berm the sewage flow, block all drainage inlets and set up to start pumping to the closest clear manhole as soon as possible.

2. Request assistance of other agencies and/or contract firms for additional pumps to stabilize the situation.

3. Make all notifications as specified (within two hours of the spill).
   Office of Emergency Services
   Los Angeles County Health Department
   Los Angeles County Public Works (Flood Control)
   Regional Water Quality Control Board

4. Determine the generation point of the spill (City line, County Sanitation Trunk line, or private property). If City generated, clear the restriction and proceed to Step 7. If County generated, contact County Sanitation Districts at (562) 437-6520 and proceed to Step 5. If generated from private property, contact the property's occupant of their responsibility to control the discharge and proceed to Step 6. If the occupant refuses to comply, contact Code Enforcement at (626) 403-7360 and the County Health Department at (213) 974-1234.

5. Sanitation District Spills – City staff should continue to maintain containment of the spill until County crews arrive. Once County crews are on scene, the County is responsible for clearing the blockage and for cleanup, but the Incident Commander maintains responsibility for ensuring that the area is returned to its natural state. At the discretion of the City's Incident Commander, City crews may be required to assist in these operations. Proceed to Step 7.

6. Private Property Spills – City staff should continue to monitor the spill, how the spill is contained, and how materials are disposed of. Ensure proper containment and cleanup. At the discretion of the Incident Commander, City crews may be required to assist in containment and cleanup of a spill on private property, with all costs being back-charged to the responsible party (ies). If the spill should reach the public right-of-way, it is then the City's responsibility to ensure that the spill is contained and that proper cleanup measures are completed. Proceed to Step 7.

7. Take photographs of the spill and include them for review by the NPDES Coordinator and Department Head. If the spill did not generate from private property but has entered private property, a

copy of the report and photos must be forwarded to Risk Management. Request permission of the occupant of the private property before taking any pictures on private property. Confine pictures to only the areas affected by the spill.

8. Determine the cause of the spill. Describe what caused the problem and what actions were taken to correct the situation. This information is required for Department records. If the spill occurs in a business area, or if it is suspected to have been the result of a commercial or business activity, request that the Department Head contact the City's Storm Water consultant at (562) 802-7880 to assist with the investigation.

9. Cleanup the spill area and remove containment. Leave the area as clean as practicable. Emphasis should be placed on removing all materials that are in or around the contaminated area. Wash down, disinfect and remove all run-off from all surfaces that were in contact with the spill.

Under no circumstance is disinfectant-contaminated water allowed to enter a catch basin. All such water must be removed from the site (i.e. vacuumed up) and properly disposed of. It is acceptable procedure to rinse a spill as long as a vacuum truck is downstream to collect all waste water. Be extremely cautious with the use of chlorine, as any residual chlorine on surfaces could be washed by landscape or other water sources into receiving waters long after the clean-up effort has concluded.

10. Check and clear downstream manholes. It is possible that debris may accumulate at the next downstream manhole following a backup. Always check the lower manhole to ensure that the line is flowing properly.

11. The Incident Commander must fill out a Sewer Spill Report form (Appendix E).

12. Contact Police Dispatch at (626) 403-7270 and request assistance with traffic control, if needed.

<u>Category II Spill Response</u>

1. Contain the spillage immediately. If appropriate, sand bag catch basin inlets. If necessary, set up the bypass pump.

2. Notify Health Department at (626) 430-5420 and State Water Resources Control Board (https://ciwqs.waterboards.ca.gov/)

3. Complete Steps 4 through 12 of Category I Response.

Spill Response Follow-up

1. File completed Spill Report Form (Appendix E) and photographs with the NPDES Coordinator.

2. Prepare the attached spill response form which includes, but not limited to, the following information:

   a. estimated volume of spill and amount that was discharged to surface waters, i.e. into storm drains and/or channels.
   b. a discussion of the circumstances that caused the spill.
   c. a discussion on the impacts to public health or environment resulting from the spill and corrective actions taken to mitigate the effects.

3. Determine cause of blockage and ascertain whether line(s) need to be placed on a higher maintenance schedule or if capital repairs are needed.

TIMEFRAMES FOR SSO ONLINE REPORTING

Category I

The initial online SSO report should be reported as soon as possible but no later than three business days.

Final certified report with in 15 calendar days of SSO conclusion of response and remediation.

Category II

Final certified report due before end of the following month.

Private Laterals

Report at enrollee's judgment, should follow same reporting procedure as category II plus liable party contact information.

No Spills During Month.

Report due before end of the following month.

Outside Resources Contact List

1. **Environmental Consultant:**
   John L. Hunter & Associates
   13310 Firestone Boulevard, Suite A-2
   Santa Fe Springs, CA 90670
   Phone: (562) 802-7880
   FAX: (562) 802-2297

2. **Sewage Spill Response Companies**

   Quality Jet Rooter
   Whittier, CA
   Contact: Tom Perez
   (323) 707-0002 cell
   (800) 661-1287 office

   Easy Flow Pipe Cleaning LLC
   Rancho Cucamonga, CA
   Contact: Adam Wilson
   (909) 563-8212 cell
   (909) 385-1017

   Plumber Depot
   Gardena, CA
   Contact: Mike Martin
   (310) 259-5542 cell
   (310) 851-5715

Outside Agency Notification Numbers

A. L.A. County Notification

1. **When sewage enters storm drain system:**
   L.A. County Department of Public Works
   Flood Maintenance Division
   Contact: Hansen Yard West
   Phone: (818) 896-0694 or (1800) 675-4357 24hrs.

2. **If spill is originating from a Sanitation District Trunk Line**
   Sanitation Districts of Los Angeles County
   Phone: (562) 437-6520
   After hours: (562) 437-6520

3. Los Angeles County Health Department
   Phone: (626) 430-5420
   After hours: (213) 974-1234

4. Long Beach Department of Health
   Phone: (562) 570-4000

B. Adjacent City Notifications and Mutual Assistance

1. City of Los Angeles
   Phone: (323) 342-6006
   After hours: (213)485-5391

2. City of Alhambra
   Phone: (626) 570-5061
   After hours: (626) 570-5168

3. City of San Marino
   Phone: (626) 300-0793
   After hours: (626) 300-0720

4. City of Pasadena
   Phone: (626)744-4158
   After hours: (626) 744-4000

5. L.A. County Department of Public Works
   Flood Maintenance Division
   Contact: East Yard
   Phone: (626) 446-5227
   After hours: (800) 6754-357

C. State Office of Emergency Services
   State Office of Emergency Services
   Hazardous Spills Notification
   Phone: (800) 852-7550

D. Regional Water Quality Control Board
   Phone: (213)576-6600 (only available 8am to 5 pm weekdays)

SEWAGE SPILL PREVENTATIVE AND CORRECTIVE PROCEDURES

Routine Sewer Maintenance

1. A maintenance schedule shall be established for all city sewer lines in accordance with and sufficient to meet the goals of this program.

2. While conducting routine sewer maintenance activities, visually inspect the worksite to identify any of the following potential problems:

   a. cracked/deteriorating pipes
   b. leaking joints/seals at manholes
   c. chemical erosion of manhole channel, inlets or outlets
   d. evidence of sewage stacking in the manhole
   e. line generally flowing at or near capacity

3. Any potential problems noted are to be documented using a Service Request form and reported to the Maintenance Superintendent before the end of the work day.

4. The Maintenance Superintendent will be responsible for prioritizing and scheduling all repairs that may be practicable given budgetary constraints. Any repairs that may exceed budgetary constraints or other departmental authority shall be forwarded to the Director of Public Works for budgetary consideration. Repairs shall be prioritized in accordance with the following parameters:

   a. problems causing overflows or which may cause an imminent overflow are to be scheduled immediately. These repairs may be temporary until scheduled or capital improvements may be completed.

   b. problems that do not require immediate attention and are feasible to be performed within staff and budgetary constraints shall be scheduled as soon as practicable.

   c. problems requiring line rehabilitation, installing bypass lines, constructing new pump stations, etc., require capital improvements, which must be forwarded through management to the City Council for funding authorization.

SANITARY SEWER AND STORM DRAIN CROSS-CONNECTION PROCEDURES

1. To ensure that cross-connections between the City's sanitary sewer and storm drain systems do not occur, the City maintains detailed records of the alignments of both systems and when they were constructed.

2. No connections to either system are allowed without a permit being first obtained from the City's Public Works and/or Building and Safety Departments. Each such permit issued shall contain the following information:

   a. line to which the connection was made
   b. location of connection on the line
   c. depth of the connection at property line
   d. when the connection was made

3. All connections to either system are inspected by a City inspector to ensure that all of the above information is accurate and that the connection is made in accordance with established standards. Building Inspectors are responsible for inspecting all on-site connections, while Public Works inspectors are responsible for inspecting all connections within the public rights-of-way.

4. After approval of the connection inspection, the applicable inspector permanently files the inspection card and/or permit in the appropriate City file for perpetual maintenance.

VII. FOG (Fats, Oil and Grease prevention) Program

Background

The discharge of wastewater from businesses can cause sewer stoppages and related environmental pollution if not properly managed. The discharge of wastewater from restaurants has the potential to cause sewer stoppages. Recognizing that blockages caused by food service establishments could result in SSOs and have an adverse impact on public health and the environment, the City Council enacted a FOG Control Ordinance (Number 2186) effective May, 2009. See Appendix C.

Public Outreach Component

While the discharges from businesses can contribute to the SSOs, residential discharges can also contribute. In order to help reduce the number of overflows from residents, a series of public outreach articles have been distributed through the press to educate the general public. These articles have also been posted online. See Appendix F.

Legal Authority to prohibit FOG

The City's sewer use ordinance (SPMC 30.21) provides legal authority to prohibit illegal discharges that can contribute to FOG blockages, and help to prevent sanitary sewer overflows (SSOs).

Grease Removal Devices

Grease removal devices such as grease traps and grease interceptors are required for all food service establishments including all new construction of FSE's and those undergoing a significant remodel.

FOG Inspection Program

The City has hired a consultant to help with the restaurant inspections. The restaurants will be evaluated annually to determine compliance of the City's FOG ordinance. Compliance points addressed during the inspection will include grease control device condition, grease control device maintenance, grease handling and disposal, recycling and disposal practices and education and training practices. All inspected restaurants will be permitted under the FOG wastewater discharge program.

Priority sewer line cleaning

A list of priority line cleaning is attached in Appendix G. These sites have a history of at least one FOG restriction/blockage. The city sewer crew inspects and maintains these lines on a more frequent schedule. Furthermore FSE's that are found to be contributing to the blockages will be inspected more frequently to check the maintenance frequency of their grease removal devices, and if they are not equipped with grease removal device they will be required to install one. For sewer line sections that are found to be in residential areas, mailers will be sent to residents advising them to dispose of their waste FOG appropriately.

VIII. System Evaluation and Capacity Assurance Program

A sewer system capacity study is being prepared by the city 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. This plan will include the following:

(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 SSO's that escape from the system) associated with similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

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

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

(d) **Schedule**: The city will develop a schedule of completion dates for all portions of the capital improvement program developed in (a-c) above. This schedule will be reviewed and updated consistent with the SSMP requirements.

IX. Monitoring, Measurement, Modification Program

Records of SSO related activities will be kept and analyzed from time to time to determine if the SSO program as outlined by this SSMP are effective. (See Appendix H)

X. SSMP Program Audits

The SSO regulations require the city to conduct at a minimum an internal audit every two years. This audit will determine the level of effectiveness of the city's effort to meet the goals of the SSO program, as well as identifying any deficiencies of this SSMP. Appendix I contains a log of audits.

This audit must be kept on file at the City Hall and City Yard, until a subsequent audit is completed.

XI. Communication Program

This SSMP will be available for public review in the Public Works Department and it will also be available on the City's webpage in order to provide the public the opportunity to provide input to the City as the program is being developed and implemented.

XII. Certification

This SSMP must be certified by the Director of Public Works and presented to the City Council at a public hearing. The State Water Resources Control Board must also be notified of the certification.

This SSMP must be made readily available to the Regional Water Quality Control Board and the Los Angeles County Sanitation Districts upon request.

This SSMP is a living document and must be updated and revised as future conditions necessitate. In addition, it is statutorily required to be reviewed, updated and re-certified every five (5) years.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, and those persons directly responsible for gathering information, the information submitted, 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 for knowing violations."

Certified by City of South Pasadena:

BY: 

Matthew Sweeney, P.E.

Director of Public Works

TITLE

1/2/09

DATE

APPENDIX A

State Water Resources Control Board
Order 2006-003 (*legal requirements*)

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

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

2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.

4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.

6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.

7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.

8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.

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

10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.

11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

prescriptive WDRs for sanitary sewer systems. Upon issuance or reissuance of a Regional Water Board's WDRs for a system subject to this Order, the Regional Water Board shall coordinate its requirements with stated requirements within this Order, to identify requirements that are more stringent, to remove requirements that are less stringent than this Order, and to provide consistency in reporting.

REGULATORY CONSIDERATIONS

12. California Water Code section 13263 provides that the State Water Board may prescribe general WDRs for a category of discharges if the State Water Board finds or determines that:

    - The discharges are produced by the same or similar operations;
    - The discharges involve the same or similar types of waste;
    - The discharges require the same or similar treatment standards; and
    - The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

    This Order establishes requirements for a class of operations, facilities, and discharges that are similar throughout the state.

13. The issuance of general WDRs to the Enrollees will:
    a) Reduce the administrative burden of issuing individual WDRs to each Enrollee;
    b) Provide for a unified statewide approach for the reporting and database tracking of SSOs;
    c) Establish consistent and uniform requirements for SSMP development and implementation;
    d) Provide statewide consistency in reporting; and
    e) Facilitate consistent enforcement for violations.

14. The beneficial uses of surface waters that can be impaired by SSOs include, but are not limited to, aquatic life, drinking water supply, body contact and non-contact recreation, and aesthetics. The beneficial uses of ground water that can be impaired include, but are not limited to, drinking water and agricultural supply. Surface and ground waters throughout the state support these uses to varying degrees.

15. The implementation of requirements set forth in this Order will ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each region and take into account the environmental characteristics of hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect

water quality in the area, costs associated with compliance with these requirements, the need for developing housing within California, and the need to develop and use recycled water.

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

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

18. California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
    a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
    b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
    c. Occurs during, or as a result of, the treatment or disposal of wastes.

19. This Order is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.

20. The action to adopt this General Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt

this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

21. The Fact Sheet, which is incorporated by reference in the Order, contains supplemental information that was also considered in establishing these requirements.

22. The State Water Board has notified all affected public agencies and all known interested persons of the intent to prescribe general WDRs that require Enrollees to develop SSMPs and to report all SSOs.

23. The State Water Board conducted a public hearing on February 8, 2006, to receive oral and written comments on the draft order. The State Water Board received and considered, at its May 2, 2006, meeting, additional public comments on substantial changes made to the proposed general WDRs following the February 8, 2006, public hearing. The State Water Board has considered all comments pertaining to the proposed general WDRs.

IT IS HEREBY ORDERED, that pursuant to California Water Code section 13263, the Enrollees, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

A. DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
   (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
   (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
   (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

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

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

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

4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is http://ciwqs.waterboards.ca.gov. This online database is maintained on a secure site and is controlled by unique usernames and passwords.

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

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

7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
   a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
   b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
   c. Occurs during, or as a result of, the treatment or disposal of wastes.

B. APPLICATION REQUIREMENTS

1. Deadlines for Application – All public agencies that currently own or operate sanitary sewer systems within the State of California must apply for coverage under the general WDRs within six (6) months of the date of adoption of the general WDRs. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after the date of adoption of this Order must apply for coverage under the general WDRs at least three (3) months prior to operation of those facilities.

2. Applications under the general WDRs – In order to apply for coverage pursuant to the general WDRs, a legally authorized representative for each agency must submit a complete application package. Within sixty (60) days of adoption of the general WDRs, State Water Board staff will send specific instructions on how to

apply for coverage under the general WDRs to all known public agencies that own sanitary sewer systems. Agencies that do not receive notice may obtain applications and instructions online on the Water Board's website.

3. Coverage under the general WDRs – Permit coverage will be in effect once a complete application package has been submitted and approved by the State Water Board's Division of Water Quality.

C. PROHIBITIONS

1. Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

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

D. PROVISIONS

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

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

   (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
   (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
   (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
   (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.

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

4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into

flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

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

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

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

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

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

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

   (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
      - Proper management, operation and maintenance;
      - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);
      - Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
      - Installation of adequate backup equipment; and
      - Inflow and infiltration prevention and control to the extent practicable.

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

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

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

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

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

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

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

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

11. The Enrollee shall develop and implement a written Sewer System Management Plan (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.

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

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

Sewer System Management Plan (SSMP)

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

(ii) **Organization**: The SSMP must identify:

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

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

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

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

(a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

(b) Require that sewers and connections be properly designed and constructed;

(c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

(d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and

(e) Enforce any violation of its sewer ordinances.

(iv) **Operation and Maintenance Program.** The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

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

(c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

(d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and