SANITARY SEWER MANAGEMENT PLAN

PREPARED BY

CITY OF ORANGE

PREPARED FOR

STATE WATER RESOURCES CONTROL BOARD

ORDER NO.2006-003-DWQ

GENERAL WASTE DISCHARGES REQUIREMENTS

Updated May 2020

SSMP UPDATE LOG SHEET

DATE	REV. No.	By	Revisions
January 12	1	G. Estrada	Title change, update org chart, sewer maps, other minor changes
May 2013	2	G. Estrada	Update SSMP text, Overflow Emergency Response Plan, org charts, ordinances, maps, sewer master plan,
May 2014	3	G. Estrada	Updated org charts and maps, City Council Certification
November 2017	4	G. Estrada	Update Public Works Organization, maps, spill guide
May 2020	5	Frank Sun	Update Public Works Organization, add definitions, update Operations and Maintenance Program, update Overflow Emergency Response Plan

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DEFINITIONS

Authorized Inspector – the individual responsible for notifying regulatory agencies that an SSO has occurred. This person is also responsible for reporting the spill to the state online database and ensuring that the SSO affected area has been cleaned.

Collection System - The system of pipes, sewer lines, or other conveyances owned by the City and located within the City's boundaries used to collect and convey wastewater to Reclamation Plant No. 1 in Fountain Valley or Treatment Plant No. 2 in Huntington Beach ("the Facility"), excluding sanitary sewer laterals and satellite systems.

Condition Assessment - A report that comprises inspection, rating, and evaluation of the existing condition of the Collection System. Inspection is based upon closed circuit television ("CCTV") inspections of sewer lines, manhole inspections, inspections for structural defects, and inspections of pipe connections at the manhole. After CCTV inspection occurs, pipe conditions are assigned a grade, such as the Pipeline Assessment and Certification Program ("PACP") rating system developed by the National Association of Sewer Service Companies.

Condition Assessment Cycle - A Condition Assessment of the entire sewer system that requires each gravity sewer line to be CCTV'd every ten years, but does not require all sewer lines to be on the same CCTV schedule. Accordingly, each gravity sewer line will be on its own cycle, where such CCTV will occur at least every ten years or more frequently, if necessary.

Full Condition Assessment - A Condition Assessment, (excluding Surface Water Condition Assessment(s) which are defined below) of all sewer lines in the Collection System, except sanitary sewer laterals.

Onsite Supervisor - the onsite supervisor is an individual at a sewer spill who is of the highest rank within Orange Streets and Sanitation Division. This person is responsible for directing the operations, gathering information and ensuring that the SSOERP and SSOP are adhered to.

Sanitary Sewer Overflow - a sanitary sewer overflow (a.k.a. sewer spill, sanitary sewers spill, sewer overflow) is any overflow, spill, release, discharge or diversion of untreated or partially untreated from a sanitary sewer system. Sanitary sewer overflows include: (i) overflows or release 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 (not a building lateral). Wastewater backups into buildings caused by a blockage or other malfunction of the building lateral that is privately owned is a sanitary sewer overflow when sewage is discharged off a private property into streets, storm drains, or waters of the State.

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 sanitary sewer overflows.

Surface Water Condition Assessment - A Condition Assessment of sewer lines in the Collection System, (excluding sanitary sewer laterals) located within 200 feet of a surface water.

Significantly Defective - A sewer pipe is considered Significantly Defective if its condition receives a Structural or Operation and Maintenance grade of 4 or 5 based on the PACP rating system or an equivalent

rating system developed by the City. The PACP assigns grades based on the significance of the defect, extent of damage, percentage of flow capacity restriction, and/or the amount of pipe wall loss due to deterioration. Grades are assigned as follows:

5 - Most significant

4 - Significant

3 - Moderate

2 - Minor to moderate

1 - Minor.

Surface Waters - Refer to the Santa Ana River, Santiago Creek, and Handy Creek, those portions of which are located within the City of Orange.

SEWER SYSTEM MANAGEMENT PLAN

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.

The City of Orange recognizes the importance of protecting ocean water quality by preventing sewer spills and is supplementing its existing sewer system management program with the requirements of the State regulations

II. ORGANIZATION

THE SSMP MUST IDENTITY:

A. The name of the responsible or authorized representative as described in Section J of the Order.

All signed reports required by the WDR are signed by representatives of the City of Orange identified as Legally Responsible Officials. The names and their responsibility are shown in the table below.

Name	Title	Responsibility
Rick Otto	City Manager	Overall program responsibilities
Christopher Cash	Public Works Director	Carrying out WDR Activities
Mike Carney	Environmental Program Mgr.	FOG Program, SSO reports

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

The City of Orange Public Works Department is responsible for implementing the Sanitary Sewer Management Plan (SSMP). A set of organization charts that includes names and telephone numbers of sewer maintenance personnel is contained in Appendix A along with their individual responsibilities for implementing this SSMP. The charts also outline the lines of authority for administrative and field staff.

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 California Emergency Management Agency (CALEMA) (formally State Office of Emergency Services (OES)).

Public Works Engineering Division's Surface Water Quality Section is responsible for oversight of the reporting process. Depending on the time of day in which SSOs occur, calls for the reporting of SSOs occur in two ways as reported in Section VI and the Sewer System Overflow Emergency Response Plan included in Attachment B. During normal working office hours, calls of SSOs are reported to the Public Works Maintenance Division at 714-532-6480. After normal working hours including weekends and holidays, calls are forwarded to the City's Public Works Water Division where the Water Plant Operator takes all information and forwards the information to the on-call Public Works supervisor. At that point City work crews are dispatched to the site along with an Environmental Compliance Specialist, who provides reports

to the state and affected regulatory agencies including the Orange County Health Care Agency, and procedures outlined in the Sanitary Sewer Overflow Emergency Response Plan are followed.

III. LEGAL AUTHORITY

Each Enrollee must demonstrate their sanitary sewer system uses 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, storm water, 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 laterals 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.

The City of Orange's legal authority for items A-E is established by the following: (responses listed in corresponding order to the items above)

1. OCSD Ord. 37 (This is an Orange County Sanitation District ordinance that covers the City of Orange and can be found in Appendix C.)

This is a general ordinance for the Orange County Sanitary District which treats all of the wastewater from the City of Orange. The ordinance contains requirements on what can be disposed of in the sewers, prohibited discharges, authority to carry out ordinance and enforcement.

2. City of Orange Specifications and Standard Plans, Standard Specifications for Public Works Construction (See Appendix C for specific sections) and Design and Construction Requirements of Sanitary Sewers.

Design of sewers in the City's collection system is based on the requirements contained in Design and Construction Requirements of Sanitary Sewers by the Orange County Sanitation District. It contains design requirements such as maximum peak flow allowed, minimum velocity, depth of cover, land use density, manhole spacing, materials and other criteria used in designing sewers within the City. While not formally incorporated into the City's municipal code, it is used by the various divisions involved in the design of sewers. The City of Orange Standard Plans Series 200 provides information on constructing sewer manholes and other elements related to sanitary sewers.

Through its municipal code, the City has adopted the Standard Specifications for Public Works Construction more commonly known as the Green Book. This document, particularly sections 306 and 500 are used in the construction of City sewers. Section 306 Underground Conduit Construction covers sewer pipe construction and includes information on excavation, trenching, bedding, joints, backfill, air pressure tests, water pressure tests and other items related to the installation and acceptance of underground pipes. Section 500, Pipeline Rehabilitation, includes information on various lining methods that can be used to rehabilitate underground pipes.

3. OMC 13.56

Most laterals in the City of Orange are privately owned. It is the responsibility of the owner to maintain the private lateral in good working condition free of obstructions (OMC 13.56.050). In cases where a sewer

lateral is required to be maintained by the City, an easement is recorded that contains provisions for access, maintenance and inspection by the City.

4. OMC 13.66 Fats, Oils and Grease Control Regulations and OCSD Ord. 37

The fats, oils and grease (FOG) requirements are contained within Section 13.66 of the Orange Municipal Code. The FOG requirements allow the City to require grease capturing devices for food service establishments if there is a possibility that the facilities may discharge excessive grease into the sewer system. The Municipal Code contains requirements for design, construction and enforcement. Separately, a document titled Fog Program has been prepared that provides information on the implementation of the FOG Program to reduce discharges of fats, oils and grease into the City's sewer system. The Municipal Code is included in Appendix C and the FOG Program can be viewed on the City's SSMP website.

5. OMC 13.66 and OMC 13.64 Industrial Waste

The City uses OMC 13.66 (FOG requirements) and OMC 13.64 (Industrial Waste) to prohibit the discharge of waste that may be harmful or obstruct flow within the sewer system.

IV. OPERATION AND MAINTENANCE PROGRAM

The SSMP must include those elements listed below where appropriate and applicable to the Enrollee's system:

A. Maintain up-to- date maps of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities:

The City of Orange collection system has been mapped including all gravity lines and manholes, pump facilities and storm water conveyance systems. These maps are stored within the City's geographic information system (GIS) and are maintained and updated as needed. Attributes available for viewing within the GIS system include pipe size, material, year built, pipe identifier, slope, invert, manhole number and other attributes. Storm water conveyance facilities are also stored in a GIS database and include information such as pip size, material, catch basin and their identifier and other information. A copy of these maps can be found in Appendix E.

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 and frequent cleaning and maintenance targeted at known problem areas. The preventive maintenance program should have a system to document scheduled and conducted activities, such as work orders.

The City of Orange has historically had a Preventive Maintenance Plan, which included cleaning of the City's collection system. Since 2010, to provide increased and dedicated resources to the sewer system, the City has contracted out a vast majority of the cleaning and inspection. This includes routine cleaning and inspection as well as the more frequent "hot spots" cleaning. The city has been divided into 5 sections based on their primary servicing requirements where areas of greater need would be emphasized such as industrial/commercial areas and areas where sewer pipe grades were minimal. The oldest sections of the city will be inspected annually. Residential areas and areas where sewer pipe grades are in excess of minimal scour velocity will be cleaned less frequently (every two to three years) and other areas inspected every five years. Until a specific cause is identified and eliminated, hot spots will be monitored and cleaned as needed, typically every three or six months depending on suspected cause and buildup in the pipe.

The City of Orange will implement mechanical root control methods when roots are determined to be the cause of buildup in the pipe. Chemical root control is not allowed.

The City of Orange will continue to monitor and adjust schedules to facilitate optimal operation of the collection system and proper allocation of limited resources. Cleaning and CCTV inspection will be on the schedule identified in Appendix F. A listing of the existing hot spots can be found in Appendix G.

In addition, the City of Orange has two sewer pump stations, which are serviced and inspected monthly under a contract. See Appendix D.

Manhole inspections are conducted during field visits and documented using the form in Appendix D.

C. Develop a rehabilitation 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 inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation 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 replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure needs. The plan shall include a time schedule for implementing the short and long-term plans and a schedule for developing the funds needed for the capital improvement plan.

The City of Orange will utilize the CCTV inspection program as outlined in (B) above. This program identifies structural deficiencies in the City's collection system. Prioritization along with short and long-term strategies for rehabilitation of any structural deficiencies found through the inspection program will be addressed in the City's capital improvement program. This is a comprehensive budgeting program, which looks forward seven years and is updated annually. Items related to deficiencies identified in the City's Master Plan of Sewers are discussed in Section 6 of the latest plan dated August 2012.

By February 2025, for all sewer lines in the Collection System located within two hundred (200) feet of Surface Waters, the City of Orange will:

1. Repair or replace all gravity sewer lines previously found to be Significantly Defective;
2. Begin a Surface Water Assessment to prioritize the review, rating, and repairs of gravity sewer lines located within 200 feet of a surface water.
3. Sewer pipe segments containing defects with a PACP rating of 3 that are not repaired or replaced within five (5) years after completion of the Surface Water Condition Assessment are to be re-CCTV'd every ten (10) years to ascertain their condition. If the City determines the sewer pipe segment has deteriorated and needs to be repaired or replaced, the City shall complete such repair or replacement within five (5) years after the last CCTV cycle.

For the remainder of the Collection System, the City will implement the Condition Assessment Cycle and re-inspect all gravity sewer lines, manholes, pump/lift stations, and pipe segments at least every ten (10) years. This program of re-inspection will begin one (1) year following completion of the Full Condition Assessment.

D. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be a properly trained.

Administrative and Field Staff attend training as available. California Water Environment Association (CWEA) certification training for Field staff is conducted on a regular basis. Attainment of the following certification grades will be the goal of the City of Orange.

Position	Level	Cert. Type
Maintenance Division Manager	Grade 4	Collections
Assistant Field Services Manager	Grade 3	Collections
General/Sanitation Supervisor	Grade 2	Collections
All Field support staff	Grade 1	Collections
Environmental Compliance Specialist	Grade 1	Collections
Environmental Scientist	Grade 3	Collections
Environmental Program Manager (Surface Water Quality)	Grade 3	Collections
Contract personnel are trained on an as-needed basis.		

E. Provide equipment and replace part inventories, including identification of critical replacement parts.

The City of Orange has or has on order general maintenance equipment necessary to perform minor sewer construction, maintenance, and inspection work. The City maintains a limited supply of sewer pipe, clamps, manhole covers and emergency pumps and hoses stored at the City's Corporation Yard. In addition, as part an emergency response cooperative, the City is able to contact other local wastewater agencies to obtain emergency repair parts.

V. DESIGN AND PERFORMANCE PROVISIONS

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

As noted in Section III B, design of the City's sewer collection system is based on the Orange County Sanitation District's document Design and Construction Requirements of Sanitary Sewers. The document contains design requirements such as maximum peak flow allowed, minimum velocity, depth of cover, land use density, manhole spacing, materials and other criteria used in designing sewers within the City.

Construction specifications for construction and performance of its new sewer lines and the rehabilitation of existing sewer lines are through the Standard Specifications for Public Works Construction (Green book) as modified internally to meet City requirements. The Green Book sections most commonly used in the construction of City sewers are sections 306 and 500.

Section 306 Underground Conduit Construction covers sewer pipe construction and includes information on excavation, trenching, bedding, joints, backfill, air pressure tests, water pressure tests and other items related to the installation and acceptance of underground pipes. Section 500, Pipeline Rehabilitation, includes information on various lining methods that can be used to rehabilitate underground pipes. These sections are contained in Appendix C.

In addition, the City of Orange Standard Plans Series 200 provides information on constructing sewer manholes and other elements related to sanitary sewers. Copies of these plans are contained in Appendix C.

B. Procedures and standards for inspecting and testing installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.

Inspection and testing standards of new sewers and rehabilitation of existing sewers are in accordance with Section 306 of the Green Book as noted in Section V.A above. Applicable sections are contained in Appendix C.

VI. OVERFLOW EMERGENCY RESPONSE PLAN

Each Enrollee shall develop and implement an overflow emergency response plan that describes measures to protect public health and the environment. At a minimum, this plan must include the following:

A. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner.

The City of Orange maintains a 24-hour, 7-day per week emergency callout program. Call-in numbers are published for SSOs occurring during normal business hours and after close of business. Notification procedures are in accordance with the State WDR Order as identified in the City's Sanitary Sewer Overflow Emergency Response Plan included in Appendix B.

B. A program to assure on appropriate response to all overflows.

The City of Orange has developed a Sanitary Sewer Overflow Emergency Response Plan (SSOERP) that identifies how the City responds to SSOs during normal and after business hours. The plan identifies specific activities conducted at the SSO site, reporting of SSOs to regulatory agencies and roles assigned to specific individuals. This plan can be found in Appendix B.

C. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other state law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who receive immediate notification.

As noted above, the City's SSOERP identifies reporting responsibilities and to whom notifications are made and the time frames for reporting SSOs. The Santa Ana Regional Board receives notification of all SSOs regardless of their category designation within 24 hours. The California Emergency Management Agency (CAL-EMA) (formerly, the State Office of Emergency Services (OES)) and the Orange County Health Care Agency receive notification of an SSO within the first 2 hours of an SSO.

D. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the emergency response plan and are properly trained.

City of Orange staff has regular meetings and training. Following each public response to a sewer overflow, staff meetings are held where response procedures are evaluated and future actions discussed to maximize efficiency in the response. Appropriate information is then related to the entire sewer response team through

subsequent staff meetings and training, typically accomplished at the next monthly all-hands safety meeting. Contract staff receive printed materials for review and guidance from City staff to ensure optimum performance.

E. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.

City of Orange staff is trained in emergency operations response. Meetings are held frequently to ensure staff is properly trained to respond to all situations including the use of traffic control. If deemed necessary, staff is also trained on when to seek support from other City departments such as Police or Fire Department.

F. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerator or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The City of Orange's goal is to contain all SSOs and prevent discharge to surface waters to the maximum extent practicable. As noted above, meetings are held following public spills and response procedures evaluated. Any changes recommended are utilized in future spill responses. These efforts are undertaken to ensure timely and maximum efficiency in minimizing spills to Waters of the United States.

Water bodies within the City of Orange are primarily engineered flood control channels that are fenced off from the public. This minimizes any public contact with potential sewer overflows. In addition, 91% of all creeks and channels discharge to the Santa Ana River, which is earthen bottom with sandy soils that allow rapid infiltration of all nuisance water flowing in storm drain pipes further reducing the impact to the public.

VII. FOG CONTROL PROGRAM

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

A. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

The City of Orange has provided a poster and two informational DVDs to all City restaurants on the proper disposal of FOG and kitchen best management practices. When a new restaurant opens in the City it receives a poster and DVD containing appropriate best management procedures for kitchen practices to ensure it adheres to proper FOG disposal. In addition, the City currently uses its local newsletter Our Orange and website to reach residents and inform them of the need for proper FOG disposal. FOG brochures are also available at the City's Public Works counter.

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

Each City of Orange restaurant is responsible for the proper disposal of FOG generated within its facility. If necessary and requested by the facility, the City provides a list of acceptable FOG disposal operators.

Operators can dispose of their FOG at the Orange County Sanitary District facilities located in Fountain Valley.

C. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.

The City of Orange adopted Ordinance 17-04 its Fats, Oils and Grease Control Regulations Applicable to Food Service Establishments on November 9, 2004 to control the discharge of FOG into the City's sanitary sewer system. The ordinance was codified into its municipal code in Chapter 13.66. The ordinance contains information on how to reduce the impact of FOG on the sewer system through the use of kitchen best management practices. A copy of the ordinance can be found in Appendix C

D. Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, and maintenance requirements, BMP requirements, recordkeeping and reporting requirements.

Ordinance 17-04 requires all new food service facilities (FSEs) to install grease interceptors or grease traps as necessary to control the discharge of FOG into the sanitary sewer system. FSEs that are upgraded or have operational changes may also be required to install grease interceptors or grease traps if they trigger certain requirements in the ordinance. In addition, existing FSE may be required to install new grease control devices if it is determined that they are discharging an excessive amount of grease and it is contributing to sanitary sewer overflows. The ordinance also contains BMP, recordkeeping and reporting requirements. A copy of the ordinance can be found in Appendix C.

E. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance.

Ordinance 17-04 provides authority to inspect grease producing facilities and contains enforcement provisions that include Civil and Criminal penalties to ensure those discharging FOG into the sanitary sewer system can be prosecuted. The City of Orange currently contracts with the Orange County Health Care Agency to inspect all of the City's restaurants to ensure proper best management practices are being implemented and FOG is not being discharged. City staff are used to inspect grease interceptors and grease traps every 3 to 6 months as needed based on the amount of FOG generated.

F. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.

The City of Orange has produced a list of hot spots associated with FOG discharges. Hot spots are cleaned regularly every 3 to 6 months to minimize wastewater overflows. These hot spots can be found in Appendix G

G. Development and implementation of source control measures for all the sources of FOG discharged to the sanitary sewer system for each section identified in F. above.

As noted in A above, all grease producing facilities are provided with education and training material on the proper disposal of FOG. Where specific sources have been identified, attempts are made to remove the FOG source through education, additional BMP training or installation of grease capturing devices. Where the source cannot be identified, the area is targeted for outreach through flier distribution of door hangers or educational letters. The area may also be added for frequent cleaning. All of this is considered instrumental in reducing wastewater overflows from hot spot areas. Based on the frequency of sewer spills the previous years, the program seems to be successful.

VIII. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

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

A. Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

The City of Orange completed an update to its Master Plan of Sewers in August 2012. Included in that plan is a complete capacity analysis of the collection system. The plan identifies deficient segments within the system along with the recommended upgrades. These recommendations will be evaluated and included in the City's CIP program as needed. A copy of the new Master Plan recommendations are contained in Appendix H.

B. Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in A above to establish appropriate design criteria.

The City of Orange utilizes the County Sanitation Districts of Orange County design criteria to design and assess the capacity of its collection system. This criterion is the basis for analysis of its existing sewer collection system contained in the City's Master Plan of Sewers.

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.

A capital improvement program is a part of the Master Plan of Sewers and is contained in Appendix H. Separately, the City has prepared another document Sanitary Sewer Rehabilitation and Replacement Plan that contains the latest information on the CIP.

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 described in section D.14.

The City's proposed sewer sections for improvement are included in Appendix H and the Sanitary Sewer Rehabilitation and Replacement Plan as noted above.

IX. MONITORING, MEASURING, AND PROGRAM MODIFICATIONS

The Enrollee shall:

A. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.

The City of Orange will evaluate its activities annually to ensure that its resources are used effectively and targeted to minimize sewer spills. This includes the review of sewer spill locations, causes of spills, cleaning and videoing frequency of its sewer system, capital improvement program and hot spot and sewer deficiency locations. This information will be contained in its GIS system for rapid visual assessment or contained in spread sheets where information can be tracked accurately. Once compiled, the information will be reviewed annually with the goal of reducing sewer spills and future work will be prioritized accordingly.

B. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.

The SSMP will be reviewed annually and each program element assessed. Where changes are needed, the SSMP will be revised. In addition, where resources or changes are deemed more crucial to a particular part of the program, those changes will be implemented following the annual review noted in paragraph A above.

C. Assess the success of the preventive maintenance program.

The maintenance program will be evaluated on an annual basis to ensure resources are applied where deemed necessary. This includes the review of all relevant factors noted in paragraph A above.

D. Update program elements, as appropriate, based on monitoring or performance evaluations.

The City of Orange will review and update the program elements of the SSMP annually in accordance with (A), (B), and (C) and this paragraph to assess and measure their effectiveness and update as necessary.

E. Identify and illustrate SSO trends, including: frequency, location, and volume.

As part of the annual review of the SSMP program elements, the City of Orange will look for trends, frequency, locations and volumes to assess changes to its maintenance program.

X. SSMP PROGRAM AUDITS

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

The City of Orange will undertake the audit of the SSMP as specified.

XI. COMMUNICATION PROGRAM

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

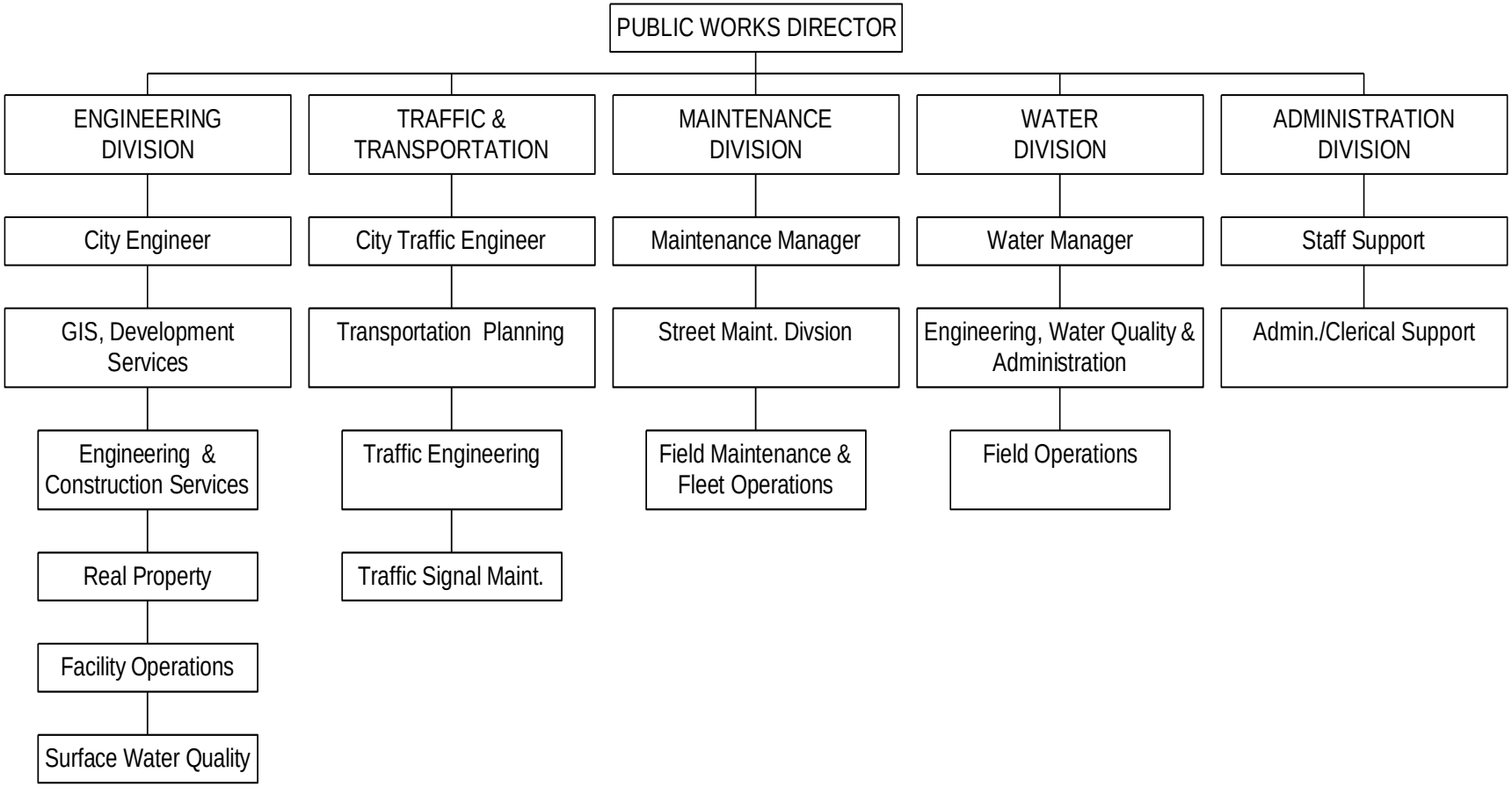
The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

The City of Orange has established a website that describes the SSMP and posted companion documents. Input from interested parties is solicited via the website.

APPENDIX A

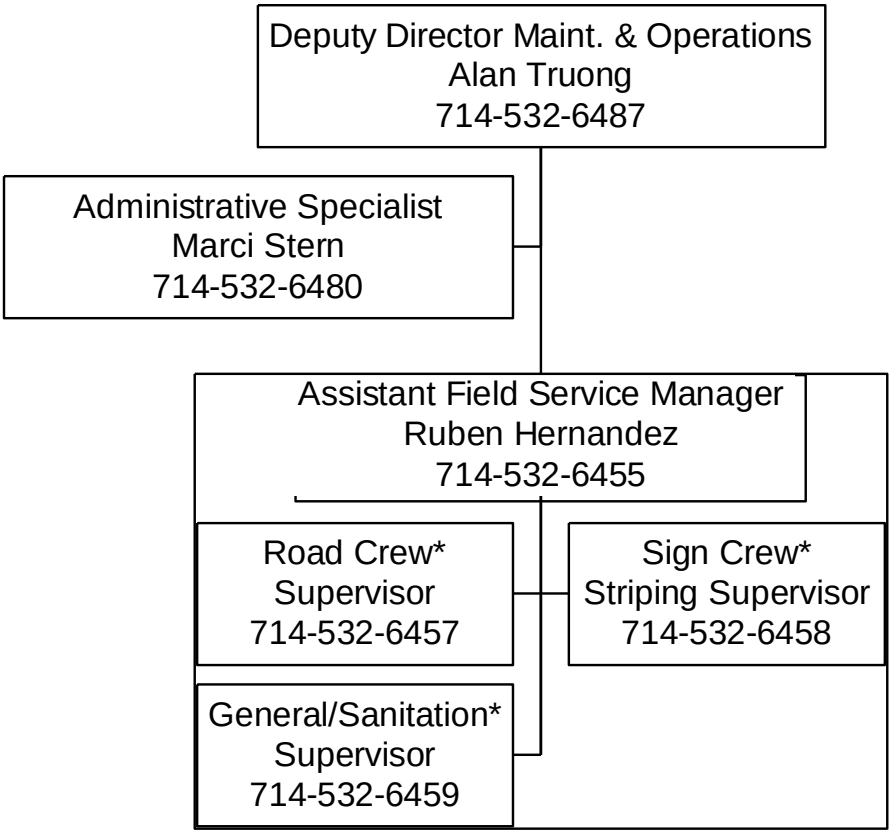
PUBLIC WORKS ORGANIZATION

CITY OF ORANGE
PUBLIC WORKS DEPARTMENT
2020 Organization Chart



PUBLIC WORKS DEPARTMENT

Maintenance Division & SSO Response
2020 Organization Chart



* Under each supervisor are lead workers, maintenance workers, equipment operators or other personnel necessary to carry out the unit's duties. In the case of Sweeping, this includes street sweepers.

SSMP RESPONSIBILITY

Name	Title	Telephone No. (714)	Responsibility	SSMP Section D13 of WDR Order
Chris Cash	Public Works Director	714-744-5545	Legally Responsible Official	Overall responsibility X
Alan Truong	Senior Maintenance Manager	714-714-5568	Operation and Maintenance Program (Sewer line cleaning & videoing, maintenance and repair, personnel training, SSO response, monitoring)	IV b,c,d,e VI d,e,f IX
Frank Sun	Deputy Director/ City Engineer	714-744-5529	Capital Improvement Projects/Design (new sewer design and repair, system capacity assessment)	V VIII
Mike Carney	Environmental Program Manager	714-744-5557	FOG Control Program SSMP Communication SSO trends	VI a,b,c VII IX d,e XI
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.

APPENDIX B

SANITARY SEWER OVERFLOW EMERGENCY RESPONSE PLAN

SANITARY SEWER OVERFLOW EMERGENCY RESPONSE PLAN

PREPARED BY

CITY OF ORANGE

PREPARED FOR

STATE WATER RESOURCES CONTROL BOARD

ORDER NO.2006-003-DWQ

GENERAL WASTE DISCHARGES REQUIREMENTS MAY 2, 2009

Updated November 2017

Updated May 2020

Sanitary Sewer Overflow Emergency Response Plan

Foreword

The City of Orange is pleased to submit the Sewer System Management Plan's (SSMPs) Sanitary Sewer Overflow Emergency Response Plan (SSOERP) in accordance with the time schedule detailed in Order-2006-003-DWQ (Order) Section D.15. The SSOERP generally follows the chronological stepwise procedures for receiving information on a possible sewer spill, dispatching response staff, performing required field work and reporting on these activities. This document satisfies the requirements of Section D.13 (vi) of the Order and Order WQ 2013-0058-EXEC.

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I. AUTHORITY

A. The State Water Resources Control Board (SWRCB) issued Order No. 2006-003-DWQ (commonly referred to as Sewer Waste Discharge Requirements for the State (Sewer WDR)) to the City of Orange and other collection agencies throughout the State on May 2, 2006. On July 30, 2013 the State issued an update to Order 2006-003-DWQ's Monitoring and Reporting Program WQ 2013-0058-EXEC. The intent of the Order and modified Monitoring and Reporting Program is to ensure the collection agencies within the State provide adequate and appropriate system capacity, adequate maintenance and operation, emergency sewers spill response and legal authority to reduce or eliminate discharges of wastewater to the waters of the State.

B. The City of Orange owns and operates the sanitary sewer collection system within the City limits. As the operator of the sewer collection system, the City of Orange has the right and responsibility to properly fund and maintain the system and respond to spills as prescribed in the Sewer WDR.

C. In the case of spills caused by private entities, the Orange Municipal Code (OMC) provides the legal authority to enforce violations. Applicable sections include the following:

- OMC Chapter 7.01.030A (2) prohibits the discharge of pollutants including fecal coliform, fecal streptococcus or enterococcus.
- OMC Chapter 7.01.030A (2) makes it unlawful for any person to "place or deposit any human or animal excrement… on public or private property within the City…" or to "discharge to any natural outlet…any sewage.."
- OMC Chapter 13.56 prohibits discharges to the sanitary sewer system "causing obstruction to the flow in sewers…"
- OMC Chapter 13.64.040 prohibits discharge of "industrial waste into or upon any area in the City."

The City of Orange is responsible for utilizing the aforementioned Municipal Codes to control and prevent future spills from occurring from private property. This responsibility is prescribed in part in the Enforcement Consistency Guide developed by the County of Orange and required by Order No. R8-2002-0010 (commonly known as the MS4 NPDES Permit). Additionally, the City of Orange is required, in the Legal Authority Section [D.13.(iii)(d)] of the Sewer WDR, to develop and implement the legal

authority to "limit fats and greases and other debris that may cause blockages in the sewage collection system."

II. GENERAL

The Sanitary Sewer Overflow Emergency Response Plan (SSOERP) is designed to ensure that every report of a sewer overflow is immediately dispatched to the appropriate crews so the report can be confirmed and the effects of the overflow controlled or minimized with respect to impacts to public health and the beneficial uses of the waters of the State. The SSOERP also includes provisions to ensure safety pursuant to the directions provided by the Orange County Health Care Agency (OCHCA), and the Occupational Health and Safety Agency (OSHA) and that notification in writing is made to the appropriate local, state and federal authorities (Regional Water Quality Control Board (RWQCB), OCHCA, and California Office of Emergency Services (OES).

A. Objectives

The primary objectives of the SSOERP are to protect public health, the environment, beneficial uses of the receiving waters, satisfy conditions of the Sewer WDR discharge requirements and minimize liability and potential enforcement actions or third-party lawsuits involving the City of Orange.

Additional objectives of the SSOERP are as follows:

- Provide appropriate customer service;
- Protect wastewater treatment plants and collection system personnel;
- Protect the collection system, wastewater treatment facilities, and all appurtenances;
- Protect private and public property beyond the collection and treatment facilities; and
- Provide clearly documented policies, procedures and guidelines for City staff to reference and follow.

This plan shall not supersede existing emergency plans or standard operating procedures (SOPs) unless directed by the Public Works Director or the Maintenance Division Manager and shall, in most cases, refer to these plans and will work in conjunction rather than conflict with them. The existing plans referenced have been reviewed and are consistent with the objectives of this plan.

B. Organization of Plan

The key elements of the SSOERP are addressed individually as follows:

Section III. Notification Procedures, Call Routing and Dispatch

Section IV. Overflow Containment Correction and Cleanup
Section V. Reporting
Section VI. Follow-up Procedures
Section VII. Update, Distribution and Training
Section VIII. Definitions

C. SANITARY SEWER OVERFLOW TRACKING

Four mechanisms will be employed to track sanitary sewer overflows (SSOs). These are listed as follows:

- Initial Report - This report is the initial summary of information typically received from citizens or City staff. Receipt of a report initiates dispatch of City crews. The procedures for report taking and information distribution are compiled in Section III below of the SSOERP.
- 2 hr, 24 hr and 3-Day and 15 Day Report - This reporting requirement (required by the revised Order WQ 2013-0058-EXEC of the Monitoring and Reporting Program) requires that within 2 hours of being notified of a spill, the City must notify the Orange County Health Care Agency (OCHCA) along with the Santa Ana Regional Board and OES if the spill is 1000 gallons or more. In addition, a certification is required within 24 hours to the Santa Ana Regional Board that OES and the OCHCA have been notified of a Category 1 spill. A draft report is due to the State within three business days of the date when the spill is brought to the attention of the City of Orange. A final report is due within calendar 15 days.
- Monthly Reporting - This report (required by section B.4. of the revised Monitoring and Reporting Program) is a summary of all Category 2 and 3 spills occurring within a calendar month. Information on the completion, distribution and tracking of these reports can be found in section V of the SSOERP.
- Annual Review - The number of SSOs within the City of Orange will be evaluated annually to assess problem or hot spot areas and appropriate changes to the cleaning and maintenance program will be implemented.

III. NOTIFICATION PROCEDURES, CALL ROUTING AND DISPATCH

This section establishes the procedures for the City of Orange to communicate internally, mobilize and respond to any condition which may cause or contribute to an unpermitted

discharge of wastewater. There is a response to each reported spill caused by public or private facilities which occur on public or private property. This plan considers a wide range of potential system failures that could create an overflow to surface waters, onto land, into groundwater, or into buildings.

A. Receipt of Information Regarding a Sewer Overflow

An overflow may be detected by City of Orange employees or by others (i.e. business owners, residents, etc.). The Maintenance Division in the Department of Public Works is responsible for accepting all phone calls regarding possible sewer overflows during business hours, and is responsible for responding to these notifications 24 hours a day. After hours, a notification system is established with the City's Water Division, which immediately directs any reports to the 24-hour on- call Maintenance Division supervisor who dispatches the crews, calls the Authorized Inspector (AI), who makes the notifications to the regulatory agencies and compiles the spill report. Additional information is provided below on the reporting procedures followed by City of Orange staff.

1. During Business Hours:

a. Upon receiving a SSO complaint via the Maintenance Division call-in number of 714-532-6480, or the City of Orange's 24 hour emergency call in number of 714-538-1961, or via an employee's city-issued cell phone, the Public Works Street Maintenance Division (general crew) and/or supervisor is dispatched immediately to investigate and mitigate any problems at the SSO location.

b. The on-site supervisor (OSS) visually determines if the SSO is exiting from a private sanitary sewer lateral, publicly owned (City of Orange) sanitary sewer line or a privately owned sewer line of another agency such as the Orange County Sanitation District (OCSD).

c. Depending on the type of SSO, public, private or other, procedures are followed in accordance with Section IV below.

2. After Working Hours Procedure:

a. Upon receiving a potential SSO complaint via the emergency call number of 714-538-1961, the water plant operator places a call to the on-call Supervisor (OS), the OS contacts the on-call Equipment Operator (EO) and maintenance worker (OMW) for immediate response to the reported SSO location to mitigate any problems which may exist and the OS alerts the on-call AI that a potential SSO has been reported.

b. The EO and OMW visually determines if the SSO is exiting from a private sanitary sewer lateral, publicly owned (City of Orange) sanitary sewer line

or a privately owned sewer line, such as the Orange County Sanitation District (OCSD) or other agency.

c. Depending on the type of SSO, public, private or other, procedures are followed in accordance with Section IV below.

IV. OVERFLOW CONTAINMENT, CORRECTION AND CLEANUP

The failure of any element within the wastewater collection system that threatens to cause or causes a sewer overflow will trigger an immediate response to isolate and correct the problem. Personnel are immediately dispatched to any site where there is a report of a possible sewer overflow and in most circumstances the City of Orange will handle all response actions with its own equipment and maintenance forces. However, situations may arise, which due to their magnitude or unusual nature, require additional crews or equipment. This is particularly true of situations where sewer pipes are broken or have failed in some way and an on-call contractor is needed to affect emergency repairs. Mutual aid is available from neighboring cities through a "handshake agreement" and the Orange County Sanitation District through a written statement to this effect.

. The objectives of these response procedures are to protect public health and the environment. The details of the procedures to achieve these objectives are generally summarized below and complete procedures identified in the following paragraphs for public, private and other SSOs that are brought to the attention of the City of Orange.

- Sanitary sewer spills are immediately contained to the greatest extent possible with all available equipment and resources.
- If additional support is required or mutual aid is needed, these requests are made by the Maintenance Division Manager.
- Perimeters are established and signs are posted as needed (cones, tape, traffic signs, etc.).
- If the spill is the result of a blockage, break or deficiency and is a public sewer line, every effort is made to either clear the blockage or begin emergency repair efforts.
- If the spill is the result of a blockage, break or deficiency in a private sewer line, the responsible party is contacted immediately and containment continues until the blockage is cleared or the private property owner assumes all containment responsibilities.

- At the first opportunity or following clearing of the blockage or reasonably permanent containment (i.e. bypass, or holding tank), cleanup procedures are put in place.
- During cleanup procedures or at an earlier stage if possible, downstream containment/cleanup procedures are employed.

Response During Normal Business Hours

A. SSO from City Owned Collection System

1. If the SSO is determined to be from a city-owned sewer line the OSS places a call via the city-issued cell phone or through the Maintenance Division Secretary at 714-532-6480, to an AI for immediate response to the SSO location and the following procedures are followed:

    a. SSO reaching the public right-of-way.

        i. The general or sanitation crew determines the appropriate location to place berm(s), dam(s) or dike(s) either near the SSO source or in the street curb to prevent the SSO from entering the storm drain. Additionally, the covering of the catch basin with sandbags or other available means may be necessary if deemed appropriate.

        ii. If the SSO site requires a lane closure, the general crew will close the lane and place barricades to keep vehicle and pedestrian traffic away from contact with spilled sewage. The crew will use traffic controls and arrow board(s), following the most up-to-date WATCH handbook guidelines.

        iii. The general or sanitation crew determines the wastewater levels and blockage point, if any, inside City sewer lines by removing the sewer manhole covers in the surrounding area and performing a visual inspection. The general or sanitation crew then attempts to remove the sewer blockage once it is found. If necessary, the OSS may also call a private contractor or another agency for assistance.

        iv. Upon arrival at the SSO, the AI is briefed by the OSS or other response personnel and ensures containment berms have been placed at appropriate locations. The AI then determines the overflow rate; through visual inspection and/or the SSO calculation chart (Attachment 2), the AI uses the city-issued cell phone to immediately call the OCHCA at 714-433-6419. The City will assist the OCHCA in determining whether the SSO poses a risk to health or the environment, and conduct any sampling it may deem appropriate.

            1. If there has been an impact to the storm drain/catch basin and the spill is 1000 gallons or greater, the AI will contact OES at (800) 852-7550 using the City-issued cell phone within 2 hours of

becoming aware of the discharge and the RWQCB as soon as possible at 951-782-4130, but no later than twenty-four (24) hours regardless of the actual spill amount.

2. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO for inclusion in the report to the state's CIWQS online reporting system.

v. If the SSO has reached or has the potential to reach the storm drain, based on size and location, the OSS or AI places a call via the city-issued cell phone, the handheld radio or through the Maintenance Division Secretary at 714-532-6480, to a sweeper vacuum truck operator for immediate response to the SSO location.

   1. Upon arrival on the scene the sweeper vacuum truck operator will attempt to park over the manhole or as close to the SSO discharge point as possible and vacuum the overflow into the truck. The truck operator will remain until the blockage is cleared; is relieved by an additional sweeper vacuum truck; is directed to move or is directed to leave by the OSS or AI.

   2. Before leaving the site, the sweeper vacuum truck operator will recover all SSO wastewater/fluids/discharges, including, to the extent practicable, those that have entered a storm drain pipe or drainage channel.

   3. The sweeper vacuum truck operator will transport all liquids and any contaminated earthen materials to the City of Orange Public Works Corporation Yard at 637 W. Struck Ave.

vi. If deemed necessary, the OSS may place a call via the city-issued cell phone, the handheld radio or through the Maintenance Division Secretary at 714-532-6480, to a sewer line jetting truck operator for immediate response to the SSO location.

   1. Upon arrival, the jetting truck operator requests any assistance needed to enable the operator to fill the hose lines from a nearby fire hydrant and remove the manhole cover; then drives to the manhole that will be the entry point for clearing the line and begins to clear the blockage.

   2. Upon clearance of the blockage and discussion of the cause of the blockage with the OSS and/or AI, a determination will be made on whether any adjacent sewer lines need to be cleaned immediately.

      a. If immediate cleaning is decided upon, then the jetting truck operator will drive to locations identified for cleaning and begin cleaning the lines.
      b. If it is determined that the lines in the adjacent area do not need to be cleaned immediately, then the lines will be scheduled for

cleaning as soon as possible.

c. After final cleaning of the lines the jetting truck operator returns to the Public Works Corporation Yard at 637 W. Struck and releases the remaining tank water into the designated wash area.

vii. Upon clearing of the sewer line or elimination of the overflow the general crew will remove any uncontaminated berm(s), all traffic controls, response tools, and remain on site until cleared to leave by the OSS or AI.

viii. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for tracking purposes, this information will be compared to the information compiled by the OSS as well.

ix. The AI performs a final inspection of the area and everyone leaves.

B. SSO from a Privately Owned Sewer Line

1. If the SSO is determined to be from a private sanitary sewer lateral the OSS places a call via the city-issued cell phone or through the Maintenance Division Secretary at 714-532-6480, to an AI for immediate response to the SSO location and the following procedures are followed:

   a. SSOs on private property.

      i. The responsible party (RP) will be identified and contacted by the AI and informed that the City of Orange provides initial response and cleanup; however, the RP is required, per the Orange Municipal Code, to eliminate the blockage in their lateral or sewer line, cleanup all SSOs on public and private property, and reimburse the City of Orange for all incurred costs during the SSO response. Additionally the RP will be made aware that the OCHCA will be contacted immediately to inform them of the potential threat to human health. The City will assist the OCHCA in determining whether the SSO poses a risk to health or the environment, and conduct any sampling it may deem appropriate.

      ii. The AI informs the RP that the City of Orange response crews will remain on-site until the RP has a plumber working on-site and has a cleanup crew working on-site with the ability to contain and isolate the SSO area and remove and adequately dispose of all SSO.

      iii. If the private property spill involves a restaurant or multi-unit dwelling and the owner is non-responsive, and a significant amount of time has passed, the AI with the OCHCA can make the determination to shut off the water to the location. The AI will contact the Water Division at 714-538-1961 via the city-issued cell phone and request a shutoff.

         1. If the shutoff involves a multi-unit apartment, then an attempt to

notify each tenant will be made by OCHCA and/or the AI as agreed to on-site

2. If the shutoff involves a restaurant's water service, the OCHCA will be the lead agency in discussing the matter with the restaurant.

iv. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO.

v. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for billing purposes, this information will be compared to the information compiled by the OSS as well.

vi. When the AI determines that all work has been completed satisfactorily, the OSS in agreement with the AI will instruct all remaining city crews to leave the site.

C. SSO from Other Privately Owned Sewer Line

1. When the OSS determines that the SSO has occurred from a privately owned sewer line such as OCSD or other government agency, the following procedures are followed in addition to the procedures outlined in Section B above:

   a. The AI will determine the responsible agency and will contact them via the city-issued cell phone for a request for response to the SSO location.

   b. The response crews and AI will remain on-site, until the agency arrives and is prepared for their response procedures.

   c. The City of Orange will offer any assistance the responding agency may need before leaving the site.

   d. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO.

   e. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for billing purposes, this information will be compared to the information compiled by the OSS as well.

Response After Normal Business Hours

D. SSO from City Owned Collection System

1. If the SSO is determined to be from a city-owned sewer line, the on-call supervisor (OS) or on-call Equipment Operator (EO) and maintenance worker (OMW) places a call to the water plant operator at 714-538-1961 via the city-issued cell phone or handheld radio and requests that the on-call AI be contacted for immediate response to the SSO location, and requests any

additional personnel as needed and the following procedures are followed:

a. SSO reaching the public right-of-way.

i. The EO and OMW determines the appropriate location to place berm(s), dam(s), or dike(s), either near the SSO source or in the street curb to prevent the SSO from entering the storm drain. Additionally, the covering of the catch basin with sandbags or other available means may be necessary if deemed appropriate.

ii. If the SSO site requires a lane closure, the OMW will close the lane and place barricades to keep vehicle and pedestrian traffic away from contact with spilled sewage. The OMW will use available traffic controls, following the most up- to-date WATCH handbook guidelines.

iii. The EO and OMW determines the wastewater levels and blockage point, if any, inside City sewer lines by removing the sewer manhole covers in the surrounding area and performing a visual inspection.

iv. Upon arrival, the AI ensures that containment berms have been placed at strategic locations to prevent the spill from entering the storm drain system or receiving waters. The AI determines the overflow rate; through visual inspection or spill chart (Attachment 2) and places a call to Control 1 at 714-628-7008 who will contact the on-call OCHCA personnel. The City will assist the OCHCA in determining whether the SSO poses a risk to health or the environment, and conduct any sampling it may deem appropriate. The following procedures are followed

1. If the SSO enters the storm drain and/or catch basin and the spill is 1000 gallons or more the AI will notify OES within 2 hours of arriving at the spill site. Regardless of the spill size, the AI will contact the RWQCB within 24 hours.

2. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO for inclusion in the report to the state.

v. If the SSO has reached or has the potential to reach the storm drain, based on size and location, the OS or AI places a call via the city-issued cell phone or the handheld radio, to the water plant operator at 714-538-1961, to contact the on-call sweeper vacuum truck operator for immediate response to the SSO location.

1. Upon arrival on the scene, the sweeper vacuum truck operator will attempt to park over the manhole or as close to the SSO discharge point as possible and vacuum the overflow into the truck. The truck operator will remain until the blockage is

cleared, is relieved by an additional sweeper vacuum truck, is directed to move, or is directed to leave by the OS or AI.

2. Before leaving the site, the sweeper vacuum truck operator will recover all SSO wastewater/fluids/ discharges, including, to the extent practicable, those that have entered a storm drain pipe or drainage channel.

3. The sweeper vacuum truck operator will transport all liquids and any contaminated earthen materials to the City of Orange Public Works Corporation Yard at 637 W. Struck Ave.

vi. If deemed necessary, the OS/AI may place a call via the city-issued cell phone or the handheld radio to the water plant operator at 714-538-1961, with a request to contact the current on-call sewer line jetting truck operator/company for immediate response to the SSO location.

1. Upon arrival, the jetting truck operator requests any assistance needed to enable the operator to fill the hose lines from a nearby fire hydrant and remove the manhole cover; then drives to the manhole that will be the entry point for clearing the line and begins to clear the blockage.

2. Upon clearance of the blockage and discussion of the cause of the blockage with the AI, a determination will be made on whether any adjacent sewer lines need to be cleaned immediately.

3. If immediate cleaning is decided upon, then the jetting truck operator will drive to locations identified for cleaning and begin cleaning the lines.

4. If it is determined that the lines in the adjacent area do not need to be cleaned immediately, then the lines will be scheduled for cleaning as soon as possible.

5. After final cleaning of the lines the jetting truck operator returns to the Public Works Corporation Yard at 637 W. Struck or the jetting truck company returns to their place of business and releases the remaining tank water into a designated wash area.

vii. Upon clearance of the sewer line or elimination of the overflow the OMW will remove any uncontaminated berm(s), all traffic controls, response tools, and remain on site until cleared to leave by the AI.

viii. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO for inclusion in the report to the state.

ix. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for tracking purposes, this information will be compared to the information compiled by the OS as well.

x. The AI performs a final inspection of the area and everyone leaves.

xi. The AI will place a call via the city-issued cell phone or handheld radio to the water plant operator at 714-538-1961 and indicate the time at which the entire response crew has completed work at the SSO location.

E. SSO from a Privately Owned Sewer Line

1. If the SSO is determined to be from a private sanitary sewer lateral the OMW places a call via the city-issued cell phone or the handheld radio, to the water plant operator at 714-538-1961 for a request to contact the on-call AI for immediate response to the SSO location and the following procedures are followed:

   a. SSO on private property

      i. The responsible party (RP) will be identified and contacted by the AI and informed that the City of Orange provides initial response and cleanup; however, the RP is required, per the Orange Municipal Code, to eliminate the blockage in their lateral or sewer line, cleanup all SSO on public and private property, and reimburse the City of Orange for all incurred costs during the SSO response. Additionally the RP will be made aware that the OCHCA will be contacted immediately to inform them of the potential threat to human health. The City will assist the OCHCA in determining whether the SSO poses a risk to health or the environment and conduct any sampling it may deem appropriate.

      ii. The AI informs the RP that the City of Orange response crews will remain on-site until the RP has a plumber working on-site and has a cleanup crew working on-site with the ability to contain and isolate the SSO area and remove and adequately dispose of all SSO.

      iii. If the private property spill involves a restaurant or multi-unit dwelling, the owner is non-responsive, and a significant amount of time has passed, the AI with the OCHCA can make the determination to shut off the water to the location. The AI will contact the Water Division at 714-538-1961 via the city-issued cell phone or handheld radio and request a shutoff.

         1. If the shutoff involves a multi-unit apartment, then an attempt to notify each tenant will be made by OCHCA and/or the AI as agreed to on-site.

         2. If the shutoff involves a restaurant's water service the OCHCA will be the lead agency in discussing the matter with the restaurant.

      iv. The AI, when conditions allow, will take pictures showing the location and travel path of the SSO.

v. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for billing purposes, this information will be compared to the information compiled by the OS as well.

vi. When the AI determines that all work has been completed satisfactorily, the AI will instruct all remaining city response crews to leave the site.

F. SSO from Other Privately Owned Sewer Line

1. When the AI determines that the SSO has occurred from a privately owned sewer line such as OCSD or other government agency, the following procedures are followed in addition to the procedures outlined in Section B above:

    a. The AI will determine the responsible agency and will contact them via the city-issued cell phone for a request for response to the SSO location.

    b. The response crews and AI will remain on-site, until the agency arrives and is prepared for their response procedures.

    c. The City of Orange will offer any assistance the responding agency may need before leaving the site.

    d. The AI takes inventory of the response staff, vehicles, supplies, and time spent at the SSO location for billing purposes, this information will be compared to the information compiled by the OS as well.

A Flow Chart is attached at the end of this SSOERP showing the steps necessary to comply with this procedure.

V. REPORTING

For each sanitary sewer overflow, reports are made in accordance with the procedures outlined in the Monitoring and Reporting Section of the sewer WDR as listed below.

Reporting Procedures

1. The responding AI will be responsible for adhering to these reporting requirements.

    a. Upon returning to the office the AI will complete a City of Orange Spill Report (Attachment 1) for each spill. In completing the spill report the AI shall identify the spill category based on the following:

        i. A Category 1 spill is defined as all discharges of wastewater resulting from a failure in the City's sanitary sewer collection system that: reach a surface water and/or reach a drainage channel tributary to a surface

water; or discharge that reaches the MS4 and is not fully captured and returned to the sanitary sewer system.

ii. A Category 2 spill is defined as a spill resulting from a failure of the City's sanitary sewer system equal to or greater than 1000 gallons that does not reach a surface water or drainage channel or the MS4.

iii. A Category 3 spill is defined as all other discharges resulting from a failure of the City's sanitary sewer system.

iv. Private Lateral Sewage Discharge (PLSD) is defined as sewage discharges that are caused by blockages or other problems within a privately owned lateral.

b. A copy of the report will be faxed to the OCHCA at 714-433-6481and the RWQCB at (951) 320-6362 using the fax machine with the phone number of 714-532-6444 in the Street Maintenance Division office.

c. The SSO information will be taken from the Spill Report Form and used to input the following information into the California Integrated Water Quality System (CIWQS), the State's SSO Online Database, at http://ciwqs.waterboards.ca.gov/:

i. The method for calculations used for estimating total spill volume, spill volume that reached surface waters, and spill volume recovered, as recommended by the State Water Resources Control Board ("State Board") and sanitary sewer collection industry (e.g., the California Water Environmental Association/Southern Collection System Committee);

ii. For Category I and II SSOs, a good faith effort to ascertain an accurate estimate of the start time of the SSO based upon direct observation and witness inquiry, rather than setting the start time of the SSO as the time the call was received reporting the SSO, or the time the SSO was reported. The City shall attempt to contact adjacent residents or business owners to more accurately establish the SSO start time, duration, and flow rate, if such start time, duration, and flow rate have not been otherwise reasonably ascertained; and,

iii. Taking of photographs of the manhole flow at the SSO site using photographic evidence that may aid in establishing the spill volume. To the extent feasible, photographs shall be taken with a camera that date and time-stamps the photographs. If not possible, the City will use another method to provide the location, date, and time the photographs were taken.

2. **2 Hour, 24 Hour**, **Three (3) Day, 15 Day and Thirty (30) Day Reporting Requirement**:

a. All Category 1 spills shall be reported to the OCHCA and the Santa Ana

Regional Board within 2 hours of becoming aware of such discharge and to OES if equal to or greater than 1000 gallons. In addition, a certification is to be submitted to the Santa Ana Regional Board within 24 hours that OES and OCHCA have been notified of the spill. The phone call placed to the Regional Board within the 2 hour period noted above along with the draft spill report submitted in V.1.c above to the CIWQS system will satisfy this requirement.

b. A draft report of all Category 1 spills shall be submitted to the State's online CIWQS system within 3 business days and a copy of the City of Orange completed Spill Report shall be submitted to the RWQCB.

c. A completed spill report certified by the LRO shall be submitted on the State's online CIWQS system within 15 calendar days.

d. All Category 2 and 3 SSO reports shall be input into CIWQS within 30 days after the end of the calendar month in which the spill occurs.

e. Before the end of the thirty (30) day period, from the end of the previous month, the Category 2 and 3 SSO reports in CIWQS shall be reviewed by the LRO.

f. The LRO will review the Category 2 and 3 spills reports and will certify and electronically submit the report to the State on the online CIWQS database.

3. **Filing Procedures**:

a. The AI files the City of Orange Spill Report Form in the file cabinet in the Environmental Compliance Specialists' office.

VI. FOLLOW-UP PROCEDURES

Following the spill response, cleanup and reporting, oftentimes additional actions must be taken to ensure similar spills do not occur in the future. These actions can include but are not limited to the following:

- Issuance of a Notice of Violation to property owner
- Issuance of a Compliance Order to private property owner
- Issuance of a Cease and Desist order to a private property owner
- Coordination of enforcement action with other agencies (OCHCA)
- Civil and or criminal prosecution
- CCTV of sanitary sewer main
- Increase cleaning frequency of segment of sanitary sewer main
- Regular monitoring of sanitary sewer main

- Repair of sanitary sewer main
- Realignment and/or reconstruction of the sanitary sewer main
- Monitoring and testing

Also applicable to this section are the following guidelines for media notification. Current City policy is that only designated representatives are permitted to provide information to members of the media or their representatives.

VII. UPDATE, DISTRIBUTION AND TRAINING

A. Update of SSOERP

Annual reviews shall be made to the SSOERP. More reviews shall be performed as warranted. If an element of this plan, related document or appendix is revised, a review would be initiated.

In addition to the periodic reviews, a standard annual review shall be made to ensure that the SSOERP is current, correct and applicable. Any changes shall be made within one month of this review, which shall occur on the anniversary date of the initial distribution.

B. Availability to the public

Section D.13.xi of the Order requires the City of Orange to communicate with the public on a regular basis on the development and implementation of the SSMP and hence the SSOERP. The SSMP is posted on the City's website to satisfy this requirement. However, due to the ongoing dynamic nature of the SSOERP the following statement is provided: "*please be aware that this is a living document and is regularly revised. To obtain the latest copy, please contact the Public Works Department of the City of Orange.*

C. Training

This section prescribes the frequency, content and positions responsible for fulfilling the training requirements of the SSOERP.

1. Onsite Supervisor

Training on the SSOERP shall be provided to any staff member holding the position of Onsite Supervisor or directly supervises one or more of these staff members. Training shall be conducted by the Public Works Director or his/her designee. The trainer shall have an intimate knowledge of the SSOERP, City of Orange and its staff, resources, field conditions, policies and procedures as they apply to the sewer system maintenance and emergency response. The topics covered shall include:

- Overview of the Sewer WDR and intent of the SSMP
- Overview of the function and need for the SSOERP
- Review of each section of the SSOERP
- Review of related documents and their procedures
- Discussion and focus on any shortfalls of the OSS or crews in execution of the required actions and procedures and the SSOERP
- Discussion and documentation of any shortcomings and the SSOERP

Training shall be provided annually and-except for the initial training which will be held within one month following the completion of the SSOERP-shall precede the review and update of the SSMP by one month to provide time to review and incorporate changes based on his input.

2. Sanitation Field Crews

Fields staff shall also be trained on an annual basis on proper response procedures. Again this training shall precede the review and update of the SSMP by one month to provide time to review and incorporate any changes based on staff input. New sanitation staff is trained on an individual basis within one month of starting work.

The general training for field staff required by Section D.13.iv.d of the Sewer WDR requiring staff and contractors to be adequately trained will be developed as part of the SSMP. This will focus more on the routine maintenance activities and equipment used in exercising daily or typical duties.

VIII. Definitions

Authorized Inspector – the individual responsible for notifying regulatory agencies that an SSO has occurred. This person is also responsible for reporting the spill to the state online database and ensuring that the SSO affected area has been cleaned.

Collection System - The system of pipes, sewer lines, or other conveyances owned by the City and located within the City's boundaries used to collect and convey wastewater to Reclamation Plant No. 1 in Fountain Valley or Treatment Plant No. 2 in Huntington Beach (“the Facility”), excluding sanitary sewer laterals and satellite systems.

Condition Assessment - A report that comprises inspection, rating, and evaluation of the existing condition of the Collection System. Inspection is based upon closed circuit television ("CCTV") inspections of sewer lines, manhole inspections, inspections for structural defects, and inspections of pipe connections at the manhole. After CCTV inspection occurs, pipe conditions are assigned a

grade, such as the Pipeline Assessment and Certification Program ("PACP") rating system developed by the National Association of Sewer Service Companies.

Condition Assessment Cycle - A Condition Assessment of the entire sewer system that requires each gravity sewer line to be CCTV'd every ten years, but does not require all sewer lines to be on the same CCTV schedule. Accordingly, each gravity sewer line will be on its own cycle, where such CCTV will occur at least every ten years or more frequently, if necessary.

Full Condition Assessment - A Condition Assessment, (excluding Surface Water Condition Assessment(s) which are defined below) of all sewer lines in the Collection System, except sanitary sewer laterals.

Onsite Supervisor - the onsite supervisor is an individual at a sewer spill who is of the highest rank within Orange Streets and Sanitation Division. This person is responsible for directing the operations, gathering information and ensuring that the SSOERP and SSOP are adhered to.

Sanitary Sewer Overflow - a sanitary sewer overflow (a.k.a. sewer spill, sanitary sewers spill, sewer overflow) is any overflow, spill, release, discharge or diversion of untreated or partially untreated from a sanitary sewer system. Sanitary sewer overflows include: (i) overflows or release 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 (not a building lateral). Wastewater backups into buildings caused by a blockage or other malfunction of the building lateral that is privately owned is a sanitary sewer overflow when sewage is discharged off a private property into streets, storm drains, or waters of the State.

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 sanitary sewer overflows.

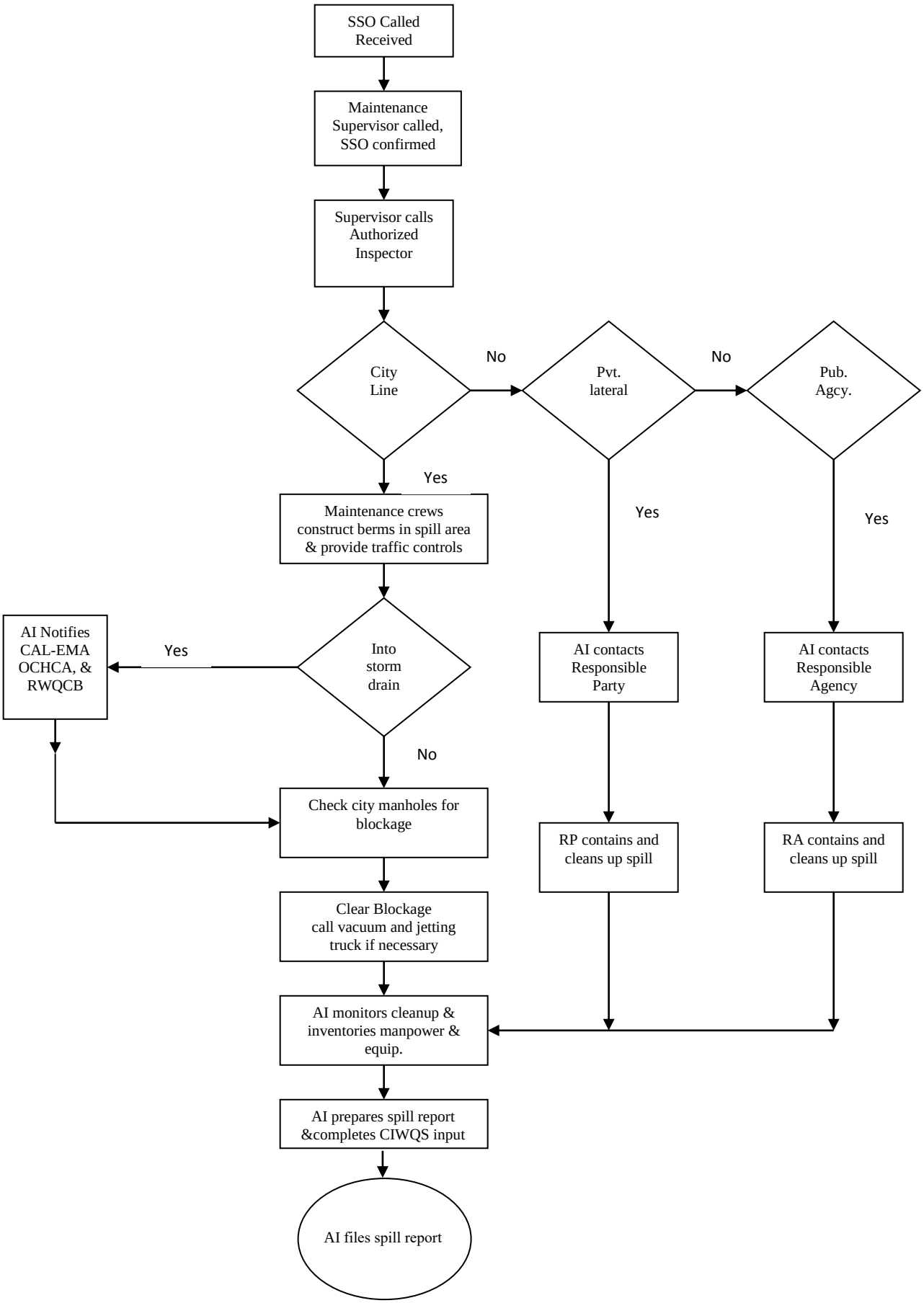
Surface Water Condition Assessment - A Condition Assessment of sewer lines in the Collection System, (excluding sanitary sewer laterals) located within 200 feet of a surface water.

Significantly Defective - A sewer pipe is considered Significantly Defective if its condition receives a Structural or Operation and Maintenance grade of 4 or 5 based on the PACP rating system or an equivalent rating system developed by the City. The PACP assigns grades based on the significance of the defect, extent of damage, percentage of flow capacity restriction, and/or the amount of pipe wall loss due to deterioration. Grades are assigned as follows:

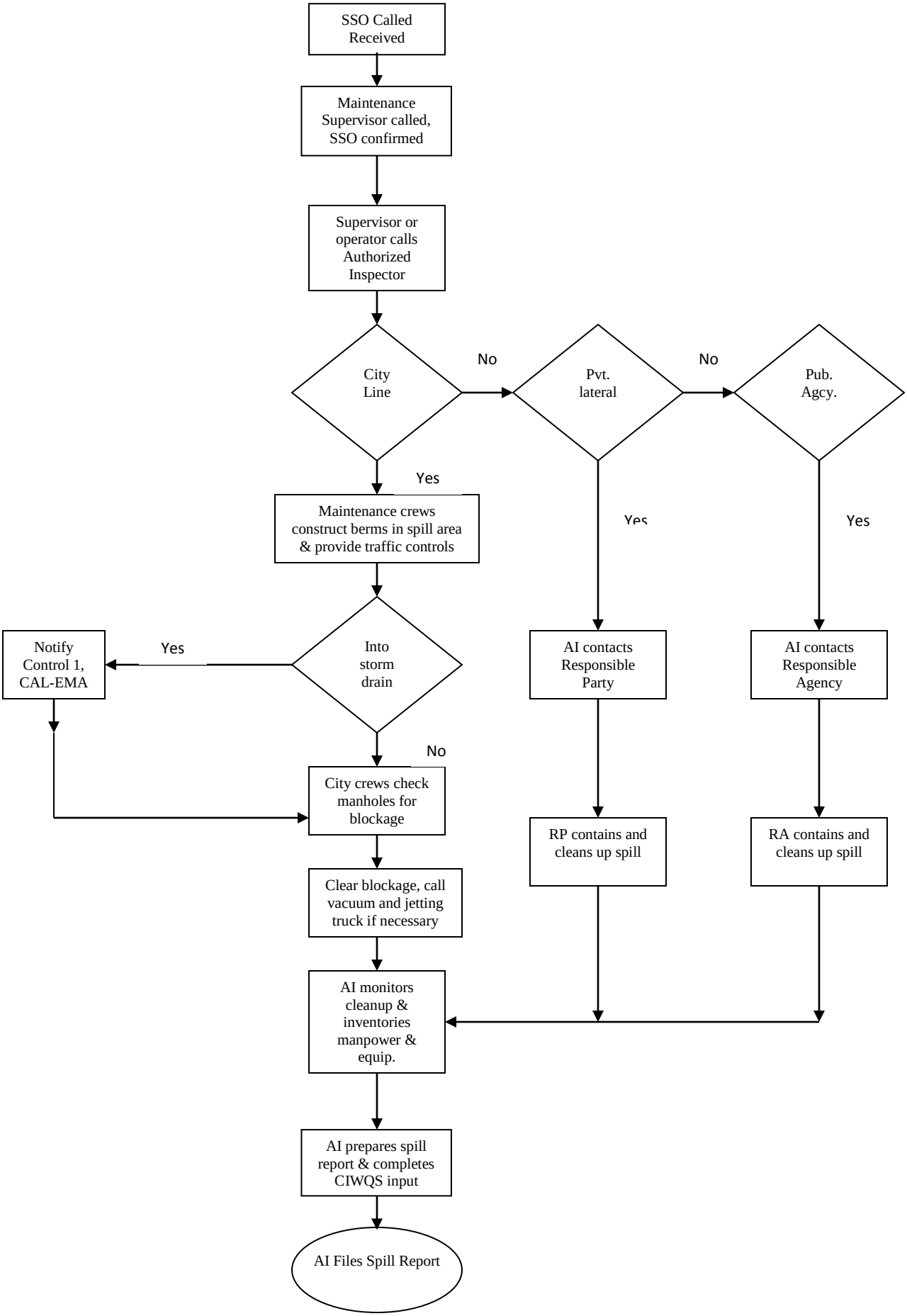
5 - Most significant
4 - Significant
3 - Moderate
2 - Minor to moderate
1 - Minor.

Surface Waters - Refer to the Santa Ana River, Santiago Creek, and Handy Creek, those portions of which are located within the City of Orange.

SSO Response During Normal Working Hours



SSO After Normal Working Hours



ATTACHMENT 1

CITY OF ORANGE
SPILL REPORT

Type of Spill
- ☐ **Sanitary Sewer Overflow**
- ☐ **Hazardous material**
- **Other:** _____

Date of spill: _____20____ Reported by: _____ Phone: _____

Location: _____GIS Coordinates: _____

Time reported: _____ ☐ am ☐ pm Estimated start time of spill: _____ ☐ am ☐ pm

Arrival time: _____ ☐ am ☐ pm Estimated stop time of spill: _____ ☐ am ☐ pm

Response Personnel: _____

_____

Origin of spill: ☐ City sewer line ☐ County sewer line ☐ Private line ☐ Private property flowing into public street

If private ownership; name, address, & phone number of responsible party or property owner: _____

_____ Contact: _____

Est. total spill volume: _____ Est. total volume recovered: _____ Photos taken of the spill? ☐ Yes ☐ No

Method of volume estimation:_____

Did the spill enter a: Catch basin/ storm drain? ☐ Yes ☐ No Storm channel? ☐ Yes ☐ No
If yes, est. volume: _____

Receiving water: ☐ N/A ☐ Santa Ana River ☐ Santiago Creek ☐ Handy Creek ☐ County Channel ☐ Other:_____

Cause of spill: ☐ Grease ☐ Roots ☐ Broken line ☐ Rain inflow ☐ Vandalism: _____ ☐ Other:_____

Date of clean up: _____20____ Time completed: _____☐ am ☐ pm Method of disinfection: _____

Containment: ☐ Earth/ Sand berm ☐ Sandbags ☐ Seal Catch Basin ☐ Other: _____

Cleanup Action taken:_____

_____

Action to Prevent Recurrence:_____

_____

OTHER AGENCIES NOTIFIED: Check all that apply			Date & Time Notified	Contact Person/Additional Info
☐ CONTROL ONE	(714) 628-7008			
☐ OCHCA -	(714) 433-6419	Fax (714) 433-6481		
☐ RWQCB -	(951) 782-4130	Fax (951) 781-6288		
☐ OCPW -	(714) 955-0600	Fax (714) 955-0639		
☐ OCSD -	(714) 593-7025	Fax (714) 962-2591		
☐ DFG -	(916) 445-0045	Fax (916) 323-0774		
☐ Cal EMA -	(800) 852-7550	Fax (916) 845-8910		

Control # _____

Form Completed By: _____ Phone: _____ Fax: _____

Additional Information

Continued from Previous Page

ATTACHMENT 2

CITY OF ORANGE
SPILL VOLUME ESTIMATION SHEET

Spill Volume Method of Estimation (check appropriate box and provide appropriate information for method used below)

San Diego Manhole Flow Rate Chart ☐ CWEA Ruler ☐ Vent or Pick Holes ☐ Eyeball estimate ☐ Measured volume ☐

Spill Start Time: _____ Spill End Time: _____

San Diego Manhole Flow Rate Chart - Describe what picture used and how the determination made, i.e. measured height, how far from spill, etc.

CWEA Ruler - Describe what picture used and how the determination made, i.e. measured height, how far from spill, etc.

Vent or Pick Holes - Identify vent hole diameter, number holes, height, where measured, etc.

Eyeball Estimate – Describe how estimated (spill area, number of 5 gallon buckets, etc.)

Measured Volume – Describe area measured, depth of wastewater and its location, provide sketch below.

Additional Information: