

DRAFT
City of Manteca
Sanitary Sewer Overflow
Response Plan

21 February 2014



Prepared for

City of Manteca
1001 W. Center Street
Manteca, CA 95337

K/J Project No. 1270003.00

CITY OF MANTECA
SANITARY SEWER OVERFLOW (SSO) RESPONSE PLAN

Table of Contents

Introduction to SSO Response Plan 1

Section 1 – Notification to the City 2

Section 2 – Response by City..... 3

Section 3 – Reporting Procedure 9

**Section 4 – Required Notifications
(Not to be confused with Reporting)..... 11**

LIST OF TABLES

Table 1: SSO Posting Decision Process

LIST OF FIGURES

Figure 1: City of Manteca SSO Response Field and Reporting Procedures Flowchart

Figure 2: City of Manteca WQCF Sanitary Sewer Overflow (SSO) Notification List

Figure 3: Existing Collection System and Storm Drainage

LIST OF ATTACHMENTS

Attachment I: Request for Service Form

Attachment II: (Sample) SSO Field Report Form

Attachment III: SSO Flow Estimation Pictures

Attachment IV: Chain-of-Custody Record and Analysis Request

Attachment V: City of Manteca Key Personnel

Prepared by:

Kennedy/Jenks Consultants

Engineers & Scientists

CITY OF MANTECA

SANITARY SEWER OVERFLOW (SSO) RESPONSE PLAN

Introduction to SSO Response Plan

The City of Manteca's (City's) Sanitary Sewer Overflow (SSO) Response Plan presents a documented procedure for:

- identifying a SSO,
- responding to a SSO,
- notifying City, emergency and regulatory officials,
- notifying the public of potential environmental and health hazards, if applicable,
- documenting the SSO event and response,
- reviewing the cause and generating improvements to prevent a future SSO event, and
- developing an implementation plan to prevent a future SSO event

This SSO Response Plan (SSORP) describes the need to mobilize labor, materials, tools, and equipment to correct conditions that may cause or contribute to a non-permitted discharge. The plan applies to a wide range of potential system failures that could create an overflow event. The SSO Response Plan is composed of the following sections: 1) notification, 2) response, and 3) reporting.

This SSORP is an update of the City's previous SSORP, incorporating the changes from the amended State Water Resources Control Board's (SWRCB) Monitoring and Reporting Program (Order 2013-0058-EXEC) to ensure compliance with the Waste Discharge Requirements (WDR).

SSO Classification

Under the newly amended Monitoring and Reporting Program Order No. 2013-0058-EXEC, SSOs are categorized into the following categories described below. However, regardless of the SSO category or of its volume, it does not alter the City's SSO response procedures (containment, control, and recovery) or staff's responsibility to understand and comply with notification and reporting processes.

Category 1

Discharges of untreated or partially treated wastewater of **any volume** resulting from the City's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have

reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g. infiltration pit, percolation pond).

Category 2

Discharges of untreated or partially treated wastewater **greater than or equal to 1,000 gallons** resulting from the City's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

Category 3

All other discharges of untreated or partially treated wastewater resulting from the City's sanitary sewer system failure or flow condition.

Private Lateral Sewage Discharges (PLSDs)

Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the City's sanitary sewer system or from other private sewer assets. PLSDs that the City becomes aware of may be voluntarily reported to the SWRCB CIWQS Online SSO Database.

Section 1 – Notification to the City

Overflows may be reported by City employees, contractors or by the general public. Indications of an SSO could include “dirty” discharge, foul odor, or unusual flooding such as overflowing manholes, cleanouts or pump stations. City employees report problems directly to wastewater maintenance or City staff. Telephone calls from the public are received by plant staff at the City's Wastewater Quality Control Facility (WQCF) and/or the City's police department and routed to the WQCF staff. For the complete chain of communication for responding to SSOs refer to Figure 1, SSO Response Field and Reporting Procedures Flowchart.

After receiving notification of a possible SSO, the City records all relevant information on a Request for Service Form (Attachment I). Relevant SSO information recorded on the Request for Service Form includes:

- Time and date call was received
- Specific location
- Description of problem
- Time possible SSO was noticed by the caller
- Caller's name and phone number
- Observations of the caller (e.g., odor, duration, back or front of property)
- Other relevant information that will enable the maintenance worker to quickly locate, assess, and stop the overflow

Information from the Request for Service Form is used by the plant staff to dispatch the appropriate maintenance worker or crew to the area. Once arriving on the site and the maintenance worker or crew confirms that an SSO is occurring then an SSO Field Report form will be completed as shown in Attachment II.

Standard Operating Practices are followed when an SSO reaches waters of the U.S., for notification procedures refer to Figure 2, City of Manteca WQCF Sanitary Sewer Overflow (SSO) Notification List.

Section 2 – Response by City

Any system failure within the City's service area that causes or threatens to cause an SSO will initiate an immediate response to isolate and correct the problem. Crews and equipment are available 24 hours per day. ***The maintenance worker must use discretion when assisting private property owners, occupants, or other non-City employees, as the City could face increased liability for damages inflicted to private property during such assistance.***

The following procedures have been developed for responding to SSOs. The purpose of these procedures is to ensure that all SSO responses are handled efficiently and effectively and that all regulatory requirements are met. Maintenance workers are required to know and follow these procedures. Figure 1 summarizes the chain of communication for responding to an SSO.

In order to limit public access to and contact with areas affected with SSOs, maintenance workers/supervisor will follow the following response procedures:

- I. Investigate and Assess the Problem
 - A. Plant staff notifies the maintenance worker of potential SSO and issues Request for Field Service for response.
 - B. Maintenance worker arrives on site and performs an investigation and assessment of the overflow. The maintenance worker will take immediate action to establish a perimeter and barricade the overflow in order to contain the area. Once the overflow perimeter has been established appropriate health hazard signs will be posted to protect the public from coming in contact with the overflow. The maintenance worker will determine the extent of the overflow, what additional City Operation & Maintenance (O&M) resources will be needed (spill response vehicle, vactor truck, rodder, backhoe and operator, etc.), what additional contract services may be needed (e.g., construction contractor, CCTV crew, etc.), and if notification of other agencies is required at that time. Pictures and/or video of the SSO and surrounding area will be taken to document the SSO.
 - C. Maintenance worker notifies City staff of recommended response. Maintenance worker will take the lead by following these procedures:
 1. Locate SSO by address, cross street and point of overflow (i.e., manhole, cleanout, pump station, broken or damaged pipe, air/vacuum release valve (AVRV), flow meter structure, etc.)
 2. Determine the current magnitude of the SSO
 - Flooded structure
 - Storm water inlet or exposure to waters of the U.S.
 - Potential for public exposure
 - Potential for other environmental impacts
 - Related problems

- a. Is overflow related to a street collapse?
 - b. Is overflow related to construction work?
 - c. Is overflow related to fats, oil and/or grease (FOG) or other debris?
 - d. Is overflow causing a traffic hazard such as displaced manhole cover or street flooding?
- Provide initial estimate of overflow rate using pictures (refer to Attachment III).
 - If the SSO meets any one or all of the criteria listed below immediately contact designated City staff:
 - Discharged to surface water and/or reaches a drainage channel tributary to a surface water, or
 - Reaches a Municipal Separate Storm Sewer System (MS4)
 - Estimated damage to public and private property. City staff may enter private property for the purposes of documenting structural damage, floor and wall coverings, and personal property.
 - Take photographs and/or videotape of SSO event and response as necessary to document the event.
3. Sampling of receiving waters impacted by the overflow is required by regulatory agencies or at the direction of the Collection System Supervisor, particularly whenever an overflow is greater than 50,000 gallons and reaches a storm drain or surface water. Sampling at appropriate locations such as upstream, at entry point and downstream of overflow location will allow the City to establish and monitor the levels of contamination as well as to establish or compare with the natural background levels of bacteria in the receiving waters. If sampling is to be conducted, the Collection System Supervisor will communicate with the laboratory personnel to establish and complete the sampling regime. The Laboratory Analyst will notify San Joaquin County Department of Environmental Health (DEH) that sampling and monitoring is being conducted, and to verify if additional testing is required. The sampling regime is to be continued until a determination is made that contamination resulting from the overflow event no longer exists and no longer poses a health risk to the public.
- Contact lab personnel and transport sample to laboratory for analysis along with appropriate chain of custody form (Attachment IV). The sample will at least test for Fecal Coliform as a bacterial indicator to comply with the Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins.
4. Begin initial documentation by completing SSO Field Report Form (Attachment II)

II. Coordination with Hazardous Material Response

If a suspicious substance (e.g., oil sheen, foamy residue) or odor (e.g., gasoline) is detected, the maintenance worker will contact City staff before taking further action. The City staff will contact the appropriate Hazardous Materials (HAZMAT) response team, according to City protocol, should site conditions be determined hazardous. The maintenance worker will remain at the perimeter of the area.

PLEASE NOTE: Vehicle engines, portable pumps, and open flames (e.g., cigarette lighter) may cause an explosion or fire if exposed to flammable fluids or vapors. All City personnel will keep a safe distance and observe caution until the proper authority declares the area to be safe for entry.

Cleanup of the hazardous material is supervised by the HAZMAT team. The maintenance worker(s) follows the instructions of the HAZMAT supervisor, but does not participate in the cleanup of the hazardous material. The maintenance worker proceeds with SSO response procedures only after the HAZMAT supervisor determines it is safe to enter the area.

III. Traffic Control

Traffic control may be needed immediately to protect the public or City staff. Typically, immediate traffic control is needed if there is a street collapse or significant depression in the pavement that is related to the sewer, if the manhole is ajar, or if the overflow causes flooding of the street. Traffic control may also be needed to prevent wastewater from being further dispersed and to protect the maintenance worker(s) while containing the overflow and removing the blockage, determining the cause or repairing the problem.

- A. Provide traffic control per City Standards and regulatory standards.
- B. If necessary, contact City police, highway patrol and County of San Joaquin Sheriff to assist with providing proper traffic control.

IV. Contain SSO

Containment of the overflow is the next step. Containment becomes more difficult if the overflow reaches the storm drain system or drainage way since the overflow can rapidly contaminate receiving waters such as creeks, streams, rivers, and other water bodies. Figure 3 – Existing Collection System and Storm Drainage is a guide to use by City maintenance worker(s) to contain the overflow. During dry weather, the storm drain system may be used to store the overflow if it can be plugged downstream of the overflow or if the downstream storm drain pump station can be deactivated.

- A. Options for containing overflow:
 1. Overflow onto ground
 - a. Rubber mats at catch basin or drain inlet.
 - b. Sand bags in gutter.
 - c. Dig trench in earth.
 2. Overflow into storm drainage
 - a. Trace overflow in storm drainage system to downstream end point.
 - b. Plug all affected storm system outlets or block the creek and channels if necessary to contain spill.
 - c. If possible, turn off storm water pump station.

3. Overflow onto private and/or public property
 - a. Confirm SSO not caused by the City sewer system (pump station, interceptor, trunk, main or lateral).
 - b. Notify property owner or resident.
 - c. Suggest private property owner or resident contact local plumber or other appropriate services such as restoration contractor.
- B. Post warning signs around contaminated area
- C. Required equipment for containing overflows:
1. Overflow onto ground and in buildings
 - a. Rubber mats
 - b. Sand bags
 - c. Plastic sheets
 - d. Bypass pumps and pipes/hoses
 - e. Vactor truck
 - f. Spill Response Truck
 - g. Portable emergency generator
 2. Overflow into storm drain
 - a. Plugs
 - b. Bypass pumps and pipes/hoses
 - c. Vactor truck
 - d. Spill Response Truck
 - e. Portable emergency generator
 3. Overflow at pump station
 - a. Emergency generator
 - b. Bypass pumps and pipes/hoses
 - c. Vactor truck
 - d. Spill Response Truck
 - e. Portable emergency generator
 4. Additional warning signs
 - a. If public notification is determined necessary, City Management will determine the need for further public notification through printed or electronic news media or by alternative notification measures (i.e., front door hangers). During the initial investigation and assessment of the SSO the City will barricade the overflow and post the appropriate warning signs (refer to Section 2, paragraph I.B.). Table 1 below describes the procedures to follow for additional public notification:

Table 1: SSO Posting Decision Process

Sanitary Sewer Overflow Response Plan City of Manteca

SSO Posting for a Confirmed Overflow

- 1 Maintenance worker confirms a possible SSO to City staff
 - 2 The maintenance worker provides detailed SSO information to City staff
 - Overflow history at the SSO site
 - Rainfall data, if wet weather related
 - Map identifying the SSO location, surrounding area, and surface waters that may be impacted
 - Maintenance worker provides input on the posting recommendation
 - 3 City staff consults and recommends whether or not to post warning signs.
 - 4 If posting is recommended, warning signs are posted by the maintenance worker at specified locations.
 - 5 City staff decides when the warning signs are to be removed after notification of clean up by the maintenance worker.
-

5. Begin preliminary notifications:

Refer to Figure 2 for SSO reportable procedures, and to the SSO Field Report Form, Attachment II.

V. Correct Cause

The cause of the overflow may be located a considerable distance downstream of the actual overflow in areas with flat terrain. During large storms, overflows may occur because of infiltration and inflow (I/I) of storm water into the sewer system. I/I can greatly increase the flow in the collection system and cause overflows from pipes that are only partially blocked by roots, grease, or debris. However, during very large storms I/I can cause the flow in the collection system to exceed the hydraulic capacity of the pipes or pump stations. Under these conditions, it may not be possible to stop the overflow until the flows recede.

A. Locate cause of overflow

1. Sewer main
 - a. Check flow in manholes.
 - b. Blockage should be between manhole with sluggish flow or surcharging (upstream manhole) and manhole with very little flow or is dry (downstream manhole).

2. Sewer lateral
 - a. Check flow in City cleanout. If cleanout does not have flow, stoppage is located on private property and is not the City's responsibility.
 - b. If there is no existing City cleanout, notify property owner to clear stoppage.
3. Pump station
 - a. Check alarm system for indication of problem. All alarms are telemetered by the SCADA system to the WQCF on Yosemite Road.
 - b. If power failure has occurred, determine if pump station has an emergency generator and if emergency generator is operating. If pump station has an emergency generator outlet, deliver City's portable emergency generator to the site.
 - c. Observe pump station for proper operation.

B. Clear Blockage

1. Within Sewer Main
 - a. Clear line from dry manhole, if possible, with high pressure cleaning or power rodding equipment and vactor truck.
 - b. Determine cause of blockage (if possible) by evaluating sample of debris or material captured downstream of cleaning and/or conduct CCTV inspection.
2. Within Sewer Lateral
 - a. Maintenance worker will rod from City cleanout to eliminate stoppage in City lateral.
3. If blockage cannot be cleared:
 - a. Increase containment or initiate bypass pumping.
 - b. Perform CCTV inspection to determine problem.
 - c. Repair broken sewer line or excavate pipe and remove section with blockage and replace with a new pipe section and flexible couplings.

C. Pump station

1. If pump station does not have power, connect portable emergency generator or portable bypass pump system.
2. Check fuel for emergency generator or bypass pump system.
3. If a pump is not operating properly, activate standby pump system.
4. Investigate force main for possible damage or blockage.
5. Make other repairs as necessary.

VI. Final Volume Estimate

SSO response staff should make every effort to maintain a careful chronology of the events during an overflow event and make every attempt to conduct linear

measurements of the discharge streams and flow velocities in order to effectively quantify the overflow volume. Photo documentation of the overflow event should also become a routine procedure in the overflow documentation process. The final overflow volume is estimated and based on the results additional reporting to regulatory agencies is completed. Final overflow volume will be stored in the City's records.

- A. Estimate final overflow rate using tables and pictures (refer to Attachment III).
- B. Overflow volume can also be estimated by multiplying the overflow duration by the overflow rate.
- C. Enter overflow volume in the SSO Field Report Form.

VII. Initiate Clean-up

Removal and replacement or disinfection of contaminated soil or drainage ways is only performed when directed by the appropriate agencies (e.g., San Joaquin County Environmental Health Department, California Department of Fish and Wildlife, etc.).

- A. Storm drain or drainage way.
 - 1. Pump or vacuum out wastewater
 - 2. Remove debris
 - 3. Wash concrete and contain wash water, pump or vacuum out
 - 4. Remove contaminated soil/plants
 - 5. Remove all plugs/dams used to contain overflow
- B. Street
 - 1. Remove debris
 - 2. Wash pavement and contain wash water
 - 3. Contain and transport wastewater by pumping or vacuuming

VIII. Receiving Water Sampling – See Section 2.I.C.3

Section 3 – Reporting Procedure

Certain overflows are required by law to be promptly reported to regulatory agencies. As described in the MRP, the timeframe for SSO reporting depends on the SSO category:

- Category 1 and Category 2 – Must be reported as soon as: 1) the City has knowledge of the discharge, 2) reporting is possible, and 3) reporting can be provided without substantially impeding cleanup or other emergency issues.
 - Draft reports will be submitted to the SWRCB CIWQS Online SSO Database **within three (3) business days** of the City becoming aware of the SSO.

- A final report will be certified through the CIWQS Online SSO Database **within 15 calendar days** of the end date of the SSO.

Additional Reporting Requirements for Category 1 SSOs

The City will submit an SSO Technical Report in the CIWQS Online Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters.

- Category 3 will be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February will be entered into CIWQS and certified by March 30).
- Private Lateral Sewage Discharges - Reported to the CIWQS Online SSO Database upon the City's discretion.
- No Spill Certification – If there are **no SSOs** during the calendar month, the City will either:
 - Certify, within 30 calendar days after the end of each calendar month a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month; or
 - Certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on.

The designated staff will report as required above and continue with completing and processing the closure report as described below:

- A. Review, complete and sign required reports
 1. Reportable SSO Field Report Form (Attachment II).
- B. Documentation and Data Tracking
 1. Forward a copy of each signed report to the Collection System Supervisor for tracking and SSMP audits.
 2. Assign each SSO Field Report Form with respective CIWQS ID number.
- C. Review the State Water Resource Control Board Monitoring and Reporting Program Statewide General Waste Discharge Requirements for Wastewater Collection System Agencies to confirm the appropriate requirements are satisfied.
- D. Reports and Data Capture

Periodically, SSOs may occur in privately owned laterals. While the City is not legally required to respond to these SSOs, the City will use its resources to cleanup the SSO if it flows onto public property. The Collection System Supervisor and City Staff decide whether or not to bill the owner for these City services.

1. Assure that appropriate documentation has been completed.
2. For "Private Lateral SSOs" provide copies of job-sheets/time-sheets to City staff.

E. Customer Satisfaction

City staff or maintenance worker may follow up in person or by telephone with interested citizen(s) who either reported the overflow or expressed concerns about public health or the environment. Document the discussion in a memo to the file and add SSO CIQWS identification number, date, person contacted, and phone number.

F. Media Notification Procedure

If an overflow affects surface water or private property, media notification may be necessary. The City Public Works Director or City designated representative determines if media notification is necessary. If so, the City will take the following steps:

- The maintenance worker verifies the SSO and reports back to City staff, who then informs the Public Works Director;
- The Public Works Director is the "first line" of response to the media for any SSO;
- Calls received from the media at any time are referred to the Public Works Director; and
- The Public Works Director or City designated representative is the only City representative authorized to be interviewed by the media. No other personnel are authorized to speak on behalf of the City unless authorized by the City Public Works Director.

Section 4 – Required Notifications (Not to be confused with Reporting)

Effective September 9, 2013, an amendment by the SWRCB to the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order No. WQ 2013-0058-EXEC was issued. The revised WDR stipulated the following notifications requirements be included in this SSORP:

For any Category 1 SSO **greater than or equal to 1,000 gallons** that results in a discharge to a surface water, either directly or by way of a drainage channel or MS4, the City will, as soon as possible, **but not later than two (2) hours** after:

- The City has knowledge of the discharge,
- Notification is possible, and
- Notification can be provided without substantially impeding cleanup or other emergency measures,

notify the California Office of Emergency Services (OES) and obtain a notification control number.

SSO Tracking

All complaints, confirmed SSOs, and sanitary sewer system repairs will be recorded into the City's CMMS database for Request for Service.

Staff and Contractor Personnel Awareness/Training

For construction projects that involve excavation in and around existing wastewater facilities, the appropriate City Staff and contractor personnel will be made aware of and follow the SSORP procedures by:

- During the design process for sewer related projects the response plan will be part of the specifications.
- For sewer related projects a pre-construction meeting will be held to emphasize important issues related to the project. One of the key points will be review of the SSO Response Plan.
- Initial Training Program – City Operation and Maintenance Department for the Collection System and WQCF will review the SSO Response Plan and be trained to complete a SSO Field Report Form, notification procedure, protection procedures for City Staff, public, and environment, clean up procedures, and implementation plan to prevent future SSO events.
- Training Program – City Operation and Maintenance Department Staff will be trained once per year on the SSO Response Plan elements.
- New Employee Training – prior to starting work in the field for the City, each new employee will be required to review with their properly trained supervisor the SSO Response plan elements.

Key Staff

The key SSO response staff are listed in Attachment V.