3. SSO Response Procedures

The Sacramento Area Sewer District (the District) has developed the following procedures for responding to sanitary sewer overflows (SSOs). The purpose of these procedures is to ensure all SSO responses are handled efficiently and effectively and that all regulatory requirements are met. District staff members are required to know and follow these procedures. These procedures are summarized in the SSO Flow Chart under Tab 2 of this document and are also presented in detail below.

I. Investigate and Assess Problem (**Pre-checker/Supervisor**)

Pre-checker or supervisor investigates, evaluates, and takes pictures of the SSO and surrounding area to determine the extent of the overflow and if additional M&O resources are needed.
The following Tabs (4 through 7) are provided as resources.

A. Document all actions with a timeline. Locate SSO by address, cross street, and point of overflow (i.e. maintenance hole, cleanout, pump station, pipe, inside structure).

B. Determine the magnitude of the SSO (See Tabs 6 and 7)

- Backup into Structure (refer to Notification Guide - Tab 4)
- Storm water inlet
- Waterway
- Potential for public exposure
- Related problems
  a. Is overflow causing a traffic hazard such as displaced maintenance hole cover or street flooding?
  b. Is overflow related to construction work?
  c. Is overflow related to a street collapse?
- Provide initial estimate of overflow rate using pictures and tables (refer to Tabs 6 and 7).
- **If the SSO is a Category I Quantity (greater than 1,000 gallons or enters a water way), immediately contact the designated Asset Management Responder. If the Asset Management Responder cannot be reached, call the backup personnel on the weekly stand-by sheet.**

D. Begin initial CMMS documentation.

II. Traffic Control (**M&O Crew and/or Pre-checker/Supervisor**)

Traffic control may be needed immediately to protect the public or M&O staff. Typically, immediate traffic control is needed if there is a street collapse or significant depression in the pavement related to the sewer, the maintenance hole is ajar, or the overflow causes street flooding. Traffic control may also be needed to prevent

wastewater from further disbursing and to protect the M&O crew while containing the overflow and removing the blockage.

A. Provide traffic control per District standards.

B. If necessary, use other agencies, including police and sheriff, to ensure proper traffic control (refer to Resource Guide, Tab 5)

III. Contain SSO (**M&O Crew and/or Pre-checker/Supervisor**)

The overflow must be contained. 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. During dry weather, the storm drain system can 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 inlet
      b. Sand bags in gutter
      c. Dig earthen trench
   2. Overflow in building
      a. Evacuate affected people if necessary
      b. Use sand bags/plastic sheeting if necessary
      c. Avoid electrical shock - have power turned off
   3. Overflow into storm drain/drainage way
      a. Trace overflow in storm drainage system to downstream end point
      b. Plug all affected storm system outlets and coordinate with designated Asset Management Responder for strategy to contain spill
      c. Turn off storm water pump station

B. 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 pipe/hose
   2. Overflow into storm drain/drainage way
      a. Plugs
      b. Bypass pump
   3. Overflow at pump station
      a. Emergency generator
      b. Bypass pump

4. Begin preliminary notifications:

   Refer to the SSO Notification Guide Tab 4 and SSO Resource Guide Tab 5.

IV. Correct Cause (**M&O crew**)

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 maintenance holes
      b. Blockage should be between maintenance hole with sluggish flow or surcharging and maintenance hole with very little flow or dry
   2. Service Sewer
      a. Check flow in District cleanout. If cleanout does not have flow, stoppage is located on private property and is not the District's responsibility.
      b. If there is no existing District cleanout, refer to tab 10, BIS Procedure, for direction.
   3. Pump station (**Mechanical**)
      a. Check alarm system for indication of problem. Many alarms are telemetered by SCADA to the monitoring station at Ecology Lane, the North County Corporation Yard, and the Regional WWTP
      b. If power failure has occurred, determine if pump station has an operating emergency generator.
      c. Check flow meters and pressure gauges to determine if pumps are operating within normal ranges

B. Clear Blockage
   1. Within Sewer Main
      a. Clear line from dry maintenance hole if possible with high pressure cleaning or power rodding equipment
      b. Determine cause of blockage (if possible)
   2. Within Service line
      a. Dispatch District crew or service line contractor to eliminate stoppage from District cleanout
   3. If blockage cannot be cleared:
      a. Increase containment or initiate bypass pumping and

b. Perform CCTV inspection to determine problem and
c. Repair broken sewer line or dig up blockage

C. Pump Station (**Mechanical**)
1. If pump station does not have power, connect portable emergency generator, or portable bypass pump. Electricians are needed to connect a portable emergency generator to the pump station if an electric plug connection is not provided
2. Check fuel for emergency generator or bypass pump
3. If a pump is not operating properly, activate standby pump.
4. Investigate force main for possible damage or blockage.
5. Make other repairs as necessary

D. Follow up CCTV
1. Refer to the current Televised Inspection Policy to determine if and when the line should be televised.

V. Final Volume Estimate (**Designated Asset Management Responder**)

The final overflow volume is estimated to determine if additional reporting to regulatory agencies is required and for the District's records.

A. Estimate final overflow rate using tables and pictures (refer to Tabs 6 & 7)

B. Overflow volume can also be estimated by multiplying the overflow duration by the overflow rate

VI. Initiate Clean-up (**M&O crew**)

Disinfection of contaminated soil or drainage ways is only performed when directed by the designated Asset Management Responder or by one of the following agencies:

- Environmental Health Department (County of Sacramento)
- Department of Fish and Game (State)

A. Flooded building: follow Backup into Structures Procedure (Tab 10)

B. Waterway

1. Coordinate with Asset Management Responder for clean up procedures

C. Storm drain
1. Pump out wastewater into sewer system
2. Remove debris
3. Wash concrete and contain wash water, pump out into sewer system
4. Remove contaminated soil/plants from the storm drain
5. After the overflow cause has been mitigated and cleaned, remove all plugs/dams used to contain overflow

D. Street
   1. Remove debris
   2. Wash pavement and contain wash water
   3. Remove wastewater

VII. Water Sampling/Contamination Warning Signs (**Designated Asset Management Responder**)

(For section A refer to Tab 12)

A. The designated Asset Management Responder will obtain water samples and transport to the Regional laboratory for testing.

B. Contamination warning signs shall be posted at sewer overflow sites when the overflow is exposed on a pubic facility and/or enters a waterway until contained and cleaned. The designated Asset Management Responder will be responsible for posting and will coordinate with the Collection Systems Manager to determine the duration posting is required.

VIII. Report(s) and Data Capture (**Pre-checker/Supervisor**)

All SSOs must be tracked in the Computerized Maintenance Management System (CMMS) regardless of volume, District/Private, Category I or not. “Private SSOs” will require the submittal of cost documents.

A. Assure that all appropriate documentation has been completed in the CMMS. (Refer to “The Book” “SSO Tracking Tab”)

B. For “Private SSOs” provide copies of all job-sheets/time-sheets to the designated Asset Management Responder.

IX. Report(s) (**Designated Asset Management Responder**)

Certain overflows are required by law to be promptly reported to regulatory agencies. The designated Asset Management Responder will make all notifications to regulatory agencies regarding Category I SSOs. All overflows are tracked by the District in CMMS.

A. Prompt notification to regulatory agencies
   1. Refer to SSO Notification Guide (Tab 4)

B. Reports shall be submitted electronically to the California Integrated Water Quality System (https://ciwqs.waterboards.ca.gov/ciwqs/index.jsp) within three business days of the SSO. Refer to Tab 12 for an overview of the data input and certification process.