

**SSMP
ELEMENT 6 – Overflow
Emergency Response Plan
APPENDIX 6.3**

**Investigation and Documentation
Forms**



SSO INVESTIGATION FORM

<p><u>Caller Summary</u></p> <p>SSO ADDRESS: _____</p> <p>Cross Street: _____</p> <p>CALLER NAME: _____</p> <p>CALLER CONTACT #: _____</p> <p>DATE OF INITIAL CALL: _____</p> <p>TIME OF INITIAL CALL: _____ am pm</p> <p>EST. TIME SSO STARTED: _____ am pm</p> <p><u>Work Summary</u></p> <p>REC'VD BY CREW (DATE/TIME): _____ am pm</p> <p>ARRIVAL TIME: : _____ am pm</p> <p>_____ Called PW Sup. _____ <input type="checkbox"/> Spoke <input type="checkbox"/> Left message (Initial) (Sup Initials) <input type="checkbox"/> Called PW Mgr</p> <p>TIME SSO ENDED: _____ am pm</p> <p>TIME CLEAN-UP FINISHED: _____ am pm</p> <p>EMPLOYEES: _____</p> <p>VEHICLES: _____</p> <p>MATERIALS: _____</p> <p><u>SSO Details</u></p> <p>•SSO DURATION (hrs/min): _____</p> <p>•EST. SSO RATE (gal/min): _____</p> <p>•EST. SSO VOLUME (gal): _____</p> <p>•EST. VOL RECOVERED(gal): _____</p> <p>•EST. VOL NOT RECOVERED(gal): _____</p> <p>•FEET CLEANED: _____ main _____ lateral</p> <p>•RAIN: Y N If Yes Size of Rain Event: _____</p> <p>•PROPERTY TYPE?: Public Private</p> <p>•PROPERTY DAMAGE?: Yes No</p> <p>•SPILL APPEARANCE POINT:</p> <p><input type="checkbox"/> Inside Bldg/Struc (location) _____</p> <p><input type="checkbox"/> Cleanout on lateral</p> <p>Lat type: <input type="checkbox"/> Proper c-o <input type="checkbox"/> Imp c-o <input type="checkbox"/> No c-o</p> <p>Lat loc: <input type="checkbox"/> Front <input type="checkbox"/> Back <input type="checkbox"/> Side</p> <p><input type="checkbox"/> Manhole MH# _____</p> <p><input type="checkbox"/> Lampost Cleanout LP# _____</p> <p><input type="checkbox"/> Other _____</p> <p>PROBLEM FOUND IN: <input type="checkbox"/> Lateral <input type="checkbox"/> Mainline</p> <p>UPSMH# _____ DWNMH# _____</p> <p>PIPE DIA.: _____" MATERIAL: _____ AGE _____</p>	<p><u>Condition Encountered</u> (Describe...):</p> <p>Customer Cleanout was (circle): Full Empty Non-existent</p> <p>• ACTIONS TAKEN (circle): JET VAC CCTV HANDROD SNAKE OTHER: _____</p> <p><u>Order of Steps Taken:</u></p> <p>1. _____ 3. _____</p> <p>2. _____ 4. _____</p> <p>Contained Spill (circle): ALL PORTION NONE</p> <p>•Restored Flow?: Y N</p> <p>•SITE CLEANED-UP?: Y N</p> <p>•SITE DISINFECTED?: Y N</p> <p>•HEALTH WARNINGS POSTED AT SITE?: Y N</p> <p>•BEACHES POSTED?: Y N</p> <p>•BARRICADES PLACED? Y N</p> <p>•PHOTOS TAKEN? Y N</p> <p>•PROBLEM (circle):</p> <p>Blockage (If blockage) → •BLOCKAGE FROM:</p> <p>Broken Animal Carcass</p> <p>Capacity Deficiency Construction Debris</p> <p>I & I Debris/Grit</p> <p>Unknown Detergent</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Further Details:</p> <p>Grease/FOG</p> <p>Roots</p> <p>Solids</p> <p>Other _____</p> </div> <p>•FINAL DESTINATION: Bubble-Up Storm Drain</p> <p style="padding-left: 100px;">Storm Drain System*</p> <p style="padding-left: 100px;">Inside Bldg/Structure</p> <p style="padding-left: 100px;">Unpaved Surface</p> <p style="padding-left: 100px;">Street/Curb/Gutter</p> <p style="padding-left: 100px;">Surface Water Impact</p> <p style="padding-left: 100px;">Other _____</p> <p>*If Storm Drain System – Was stormpipe plugged downstream and vacuumed? Y N N/A</p> <p>•REACH STATE WATERS?: Y N UNK</p> <p>•EST VOL REACHED STATE WATER: _____ gal</p> <p>•SAMPLES COLLECTED: Y N N/A</p>
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SSO SERVICE CALL FORM

When a call is received by a representative of the City of San Mateo regarding an SSO complaint, or when a City representative witnesses a sewage discharge, the following information should be recorded:

Date: _____ Time Call Received: _____ Received By: _____

Caller's Name: _____ Phone #: _____

Caller Address: _____

Location of SSO: _____ X-St. _____

Estimated Time SSO began: _____

NOTE: A City Representative could be any City employee, a police officer or dispatcher, fire fighter, or administrative staff. The Sewer Division is to ensure that all representatives of the City understand the urgency in contacting the Sewer Division directly after receiving an SSO complaint and the importance of collecting contact information and the estimated start of spill time.



SPILL START TIME INVESTIGATION

Caller: _____

Where did you see sewage spill from? Manhole Inside Building Clean Out Wet well/Lift station

Other _____

Date/time caller noticed spill: Date: ___/___/___ Time: ____:____ AM PM

Comments from caller: _____

Last time Caller observed NO spill occurring: ____:____ AM PM Date: ____/____/____

Comments: _____

First Responder: _____

Arrival Date/Time: Date: ___/___/___ Time: ____:____ AM PM

**** Attempts should be made to interview at least two (2) others in addition to the Caller.
If nobody is available, document attempts (by address or passer-by) ****

On Site Interview 1: Name/Address: _____

Observation Description: _____

_____ Time Observed Spill: ____:____ AM PM N/A

On Site Interview 2: Name/Address: _____

Observation Description: _____

_____ Time Observed Spill: ____:____ AM PM N/A

Other comments regarding spill start time (more attempted interviews, or reason for no interviews, etc.): _____



SPILL VOLUME CALCULATION

The purpose of this worksheet is to capture the data and method(s) used in estimating the volume of an SSO. Since there are many variables and often unknown values involved, this calculation is just an estimate. Additionally, it is useful to use more than one method, if possible, to validate your estimate.



Check all methods and tools that you used:

Remember to take photos!

- Visual estimate
- Measured surface area and volume
- Duration and flow rate
- Estimated daily use per capita upstream
- Meter @ Pump Station
- Other (use notes to explain)

Visual Estimate Method- Imagine a bucket(s) or barrel(s) of water tipped over.

Size of bucket(s) or barrel(s)	How many of this Size?	Multiplier	Total Volume Estimated
1 gal. water jug		X 1	
5 gal. bucket		X 5	
32 gal. trash can		X 32	
55 gal drum		X 55	
Total Volume Estimated Using Visual Method			

Measured Volume Method (this may take several calculations as may have to break down the odd shaped spill to rectangles, circles, and polygons)

If the entire spill is settled in one area, calculate the volume of spill in feet (L' X W' X D') and convert to gallons (X7.48 for gallons in a square area, and X.785 for gallons in a circular area). It is important when guessing depth to measure, if possible in several locations and use an average depth.

1. Draw a sketch of the spill in the space provided on next page
2. Draw shapes and dimensions used for calculations
3. Use correct formula for various shapes (see table below)

SSO Shape	Volume Calculation Formula	Volume Result
Rectangle	$L \times W \times D \times 7.48$	
Circle	$3.14 \times R^2 \times D \times 0.785$	
Polygons	Show formula used	



USE THIS SPACE TO DRAW A SKETCH OF THE SSO SHAPE AND DIMENSIONS

Duration and Flow Rate Method

Start date and time:	
End date and time:	
Total spill duration: Subtract line 1 from line 2. Show time in minutes	
Average flow rate in GPM: Use photo chart to estimate flow rate (account for diurnal patterns if long duration)	
Total volume estimate: minutes x gpm	

Upstream Connections Method

If you are dealing with a spill that has been running into a storm drain, you must estimate the gallons by: the amount of the overflow times the number of upstream connections on the receiving line (200 gal. per household per 24 hr) and estimate the time that the flow has been occurring. Each residence contributes about 240 gallons per day or about 10 gallons per hour. Multiply the number of residences by 10 and by the number of hours. This gives you the number of gallons.

EXAMPLE A: If you have a line with 6 houses on it and it has been overflowing for 24 hours :
6 houses x 200 gallons per house per 24 hours = 1,200 gal.

EXAMPLE B: If you have 60 houses on a line that has been overflowing for 4 hours :
60 houses x 10 gallons per house per hour x 4 hours= 2,400 gal.

Pump Station Method

If the flow is coming from a pump station, use the previous day's (same weather) flow and pump capacity to estimate the flow.

Additional Notes (attach extra pages if needed): _____



SAMPLING

Remember to take photos!

Required for spills where more than 10,000 gallons reach surface waters



Name of waterway/channel where sewage entered water: _____

Waterway was: Dry Ponded Trickling Flowing Gushing

Waterway was: Noticeably Impacted NOT Noticeably Impacted

Samples taken by: _____ Date & Time: _____

Samples taken: _____ ft upstream & _____ ft downstream of where sewage entered water

Conditions that may have influenced sample results: _____

Additional sample location(s), if requested by Sr Project Manager or San Mateo County Health: _____

RE-SAMPLING

Sample Dates/Times: _____

Additional Sampling Notes: _____

USE THIS SPACE TO DRAW A SKETCH OF SAMPLING LOCATIONS IN RELATION TO THE SSO LOCATION