

Sanitary Sewer Overflow Report

Side A

- Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.
- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.
- Spill from Private Lateral

Describe in detail the basis for choosing the spill category:

IMMEDIATE NOTIFICATION: If this is a Category 1 spill greater than or equal to 1,000 gallons, contact CalEMA within 2 hours at (800) 852-7550.

A. SPILL LOCATION		
Spill Location Name:		
Latitude Coordinates*:	Longitude Coordinates:	
Street Name and Number:		
Nearest Cross Street:	City: Rancho Palos Verdes	Zip: 90275
County: Los Angeles	Spill Location Description:	

B. SPILL DESCRIPTION		
Spill Appearance Point (check one or more): <input type="checkbox"/> Building/Structure <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Sewer		
<input type="checkbox"/> Pump Station <input type="checkbox"/> Other Structure (i.e. cleanout) <input type="checkbox"/> Manhole-Structure ID# <input type="checkbox"/> Other (specify):		
Did the spill reach a drainage channel and/or surface water: <input type="checkbox"/> Yes (Category 1) <input type="checkbox"/> No		
If the spill reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? <input type="checkbox"/> Yes <input type="checkbox"/> No (Cat. 1)		
Was this spill from a private lateral? <input type="checkbox"/> Yes <input type="checkbox"/> No if YES, name of responsible party:		
Discharged into: <input type="checkbox"/> Beach/Ocean <input type="checkbox"/> Waters of the state other than ocean <input type="checkbox"/> Drainage channel <input type="checkbox"/> Storm Drain		
<input type="checkbox"/> Paved surface <input type="checkbox"/> unpaved surface <input type="checkbox"/> building/structure <input type="checkbox"/> street/curb/gutter <input type="checkbox"/> Other:		
Provide name(s) of affected drainage channels, beach, etc.:		
Total Estimated spill volume (in gallons – 1,000gal or more = Category 1):		gallons
Est. volume that reached a storm drain that flows to a canyon:	gal	Recovered: gal
Est. volume that reached a drainage channel that flows to a canyon:	gal	Recovered: gal
Est. volume discharged directly to a surface water body:	gal	Recovered: gal
Est. volume discharged to land:	gal	Recovered: gal
Calculation Methods: <input type="checkbox"/> Eyeball <input type="checkbox"/> Photo Comparison <input type="checkbox"/> Upstream Connections <input type="checkbox"/> Area/Volume		
<input type="checkbox"/> Other (describe):		
NOTE: Attach all Spill Volume Estimation documentation including calculations and summary.		

C. SPILL OCCURRING TIME	
Estimated spill start date:	Estimated spill start time:
Date spill reported to contractor:	Time spill reported to Cont:
Date contractor arrived:	Time contractor arrived:
Who was interviewed to help determine start time:	
Estimated spill end date:	Estimated spill end time:
Note: Attach detailed start time determination documentation.	

- If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.

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Side B

D. CAUSE OF SPILL	
Location of Blockage: <input type="checkbox"/> Main <input type="checkbox"/> Lateral <input type="checkbox"/> Other:	
SSO cause (check all that apply): <input type="checkbox"/> Debris/Blockage <input type="checkbox"/> Flow exceeded capacity <input type="checkbox"/> Grease <input type="checkbox"/> Roots <input type="checkbox"/> Structural Problem <input type="checkbox"/> Pump Station fail <input type="checkbox"/> Electrical Power Failure <input type="checkbox"/> Vandalism <input type="checkbox"/> Debris <input type="checkbox"/> Other (specify):	
Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):	
Sewer pipe material at point of blockage/spill cause (if applicable):	
Estimated age of sewer asset at the point of blockage or failure (if applicable):	
Description of terrain surrounding point of blockage/spill cause: <input type="checkbox"/> Flat <input type="checkbox"/> Mixed <input type="checkbox"/> Steep	

E. SPILL RESPONSE	
Spill response activities (check all that apply): <input type="checkbox"/> Cleaned up <input type="checkbox"/> Contained all/portion of spill <input type="checkbox"/> Restored flow <input type="checkbox"/> Returned all/portion of spill to sanitary sewer <input type="checkbox"/> Other (specify):	
Spill response completed (date & time):	
Visual inspection result of impacted waters (if applicable):	
Evidence of impact to marine life? <input type="checkbox"/> Yes <input type="checkbox"/> No Any ongoing investigation? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Were health warnings posted? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide health warning/beach closure posting/details:	
Was there a beach closure? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, name of closed beach:	
Were samples of impacted water collected? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Recommended corrective actions: (check all that apply and provide details)	
<input type="checkbox"/> Clean line ASAP:	
<input type="checkbox"/> CCTV:	
<input type="checkbox"/> Additional Work:	
<input type="checkbox"/> FOG Investigation:	
<input type="checkbox"/> Repair line segment:	
<input type="checkbox"/> Replace line segment:	
<input type="checkbox"/> Additional Comments:	

List all agency and contractor personnel involved in the response including name, title and their role in the response:

<u>Name</u>	<u>Title</u>	<u>Role</u>
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F. NOTIFICATION DETAILS	
Cal EMA contacted date and time (if applicable):	
Cal EMA Control Number (if applicable):	Spoke to:

G. RECOMMENDED FOLLOW-UP ACTIONS TO PREVENT FUTURE OCCURRENCES	
CURRENT PM FREQUENCY:	DATE OF LAST PM:
RECOMMENDED ACTIONS: <input type="checkbox"/> TV <input type="checkbox"/> CHANGE CLEANING SCHEDULE <input type="checkbox"/> REPAIR LINE SEGMENT <input type="checkbox"/> REPLACE LINE SEGMENT <input type="checkbox"/> OTHER (describe):	
NOTES:	

Place completed form in Maintenance Superintendent's Sewer Box for routing and logging

Collection System Failure Analysis

To be completed by Public Works Superintendent

Incident Report #		Prepared By:	
SSO/Backup Information			
Event Date/Time		Address	
Volume Spilled		Volume Recovered	
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Responders
Records Reviewed By		Record Review Date	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			
Recommendations			
No Changes or Repairs Required			
Maintenance Equipment			
Maintenance Frequency			
Repair (Location and Type)			
Add to Capital Improvement Rehabilitation/Replacement List: Yes No			
Supervisor Review Date		Superintendent Review Date	

IMMEDIATE SPILL NOTIFICATION REQUIREMENTS

THIS DOCUMENT LISTS AGENCIES TO BE NOTIFIED ONLY AND DOES NOT ADDRESS OTHER REQUIRED SPILL RESPONSE PROCEDURES

NOTIFICATIONS FOR PUBLIC SANITARY SEWER OVERFLOWS¹ (SSOs)

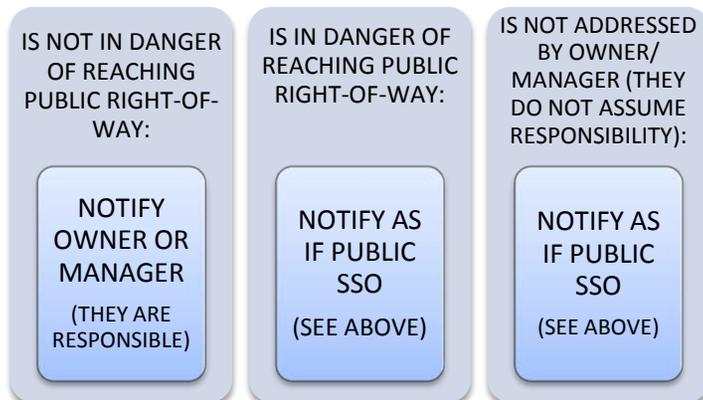
IF THE PUBLIC SSO...



- Public SSOs are all SSOs resulting from a failure in the City's sanitary sewer system.
- Drainage channels are man-made canals used to transport stormwater as part of a municipal storm drain system, or an intermittent or perennial stream bed. Surface waters are all water bodies on the surface of the earth. This includes wet drainage channels, streams, rivers, ponds, lakes and seas.

FOR PRIVATE LATERAL SSOs³

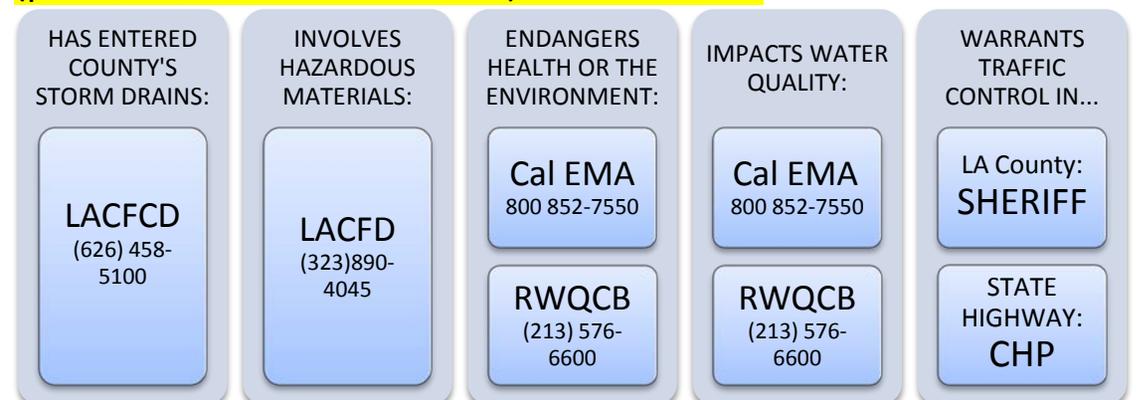
IF THE PRIVATE LATERAL SSO...



- Private lateral SSOs are all SSOs caused by blockages within privately owned laterals.

FOR ANY OTHER SPILL TO STORM DRAIN SYSTEM⁴

(paint, oil, vehicle fluids, etc.) IF THE SPILL...



- If you are uncertain what agency needs to be notified, contact Cal EMA. Cal EMA will contact the appropriate agencies based on the type of spill.

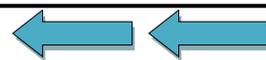
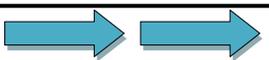
← ← ← **TURN OVER FOR CONTACT INFORMATION** → → →

SPILL NOTIFICATION CONTACT INFORMATION

THIS DOCUMENT LISTS AGENCIES TO BE NOTIFIED ONLY AND DOES NOT ADDRESS OTHER REQUIRED SPILL RESPONSE PROCEDURES

Contact	Full Title	Phone	Availability	Notes
Cal EMA	California Emergency Management Agency	800 852-7550	24 hours	
CHP	California Highway Patrol (Southern Division)	(818) 240-8200	24 hours	Call for traffic control on state highways
LACDPH	LA County Department of Public Health	(213) 974-1234	24 hours	
LAFD (Hazardous Materials)	Los Angeles Fire Department	(323)890-4045	24 hours	Call if spill involves hazardous materials
CSMD	LA County Sewer Maintenance District	1-800-675-HELP(4357)	24 hours	Call if spill originates from CSMD operated pipeline
LACFCD	LA County Flood Control District	1-800-675-HELP(4357)	24 hours	Call if spill materials have entered a County storm drain/flood channel
LASD (Sheriff)	LA County Sheriff's Department	(323) 267-4848	24 hours	
RWQCB	Los Angeles Regional Water Quality Control Board	(213) 576-6600	Business hours	
On-call clean-up	Peninsula Septic Services	310 832-4800		Contractor
Other Agencies	LA County Sanitation Districts	(562) 437-6520 or (562) 437-1881	24 hours	
	Cal Trans District 7	(213) 897-3656		

Adjacent Agencies	Phone	Department
Palos Verdes Estates	(310) 378-0383	Public Works
Rolling Hills	(310) 377-1521	City Manager
Rolling Hills Estates	(310) 377-1577	City Manager/Public Works
City of Los Angeles	(213) 473-3231	Public Works
Torrance	(310) 781-6900	Public Works


TURN OVER FOR SPILL NOTIFICATION INFORMATION


Methods for Estimating Spill Volume

A variety of approaches exist for estimating the volume of a sanitary sewer spill. This documents the three methods that are most often employed. The person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available.

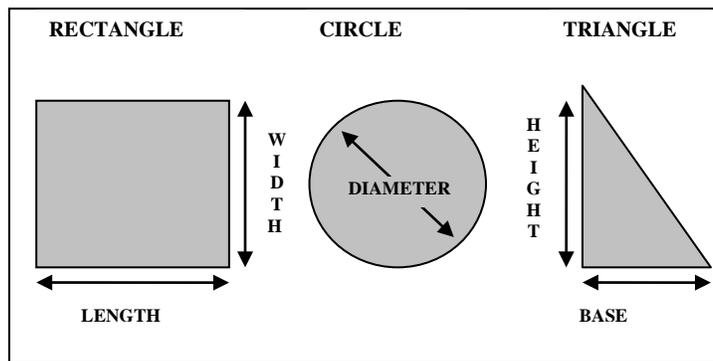
Method 1 Eyeball Estimate

The volume of small spills can be estimated using an “eyeball estimate”. To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to approximately 200 gallons.

Method 2 Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Figure VII-D-1: Common Shapes and Dimensions



Step 1 Sketch the shape of the contained sewage (see Figure VII-D-1).

Step 2 Measure or pace off the dimensions.

Step 3 Measure the depth at several locations and select an average.

Step 4 Convert the dimensions, including depth, to feet.

Step 5 Calculate the area in square feet using the following formulas:

Rectangle: Area = length (feet) x width (feet)

Circle: Area = diameter (feet) x diameter (feet) x 3.14

Triangle: Area = base (feet) x height (feet) x 0.5

Step 6 Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.

Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons

Method 3 Duration and Flow rate

Calculating the volume of larger spills, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: The duration is the elapsed time from the time the spill started to the time that the flow was restored.

Start time: The start time is sometimes difficult to establish. Here are some approaches:

- Local residents can be used to establish start time. Inquire as to their observations. Spills that occur in rights-of-way are usually observed and reported promptly. Spills that occur out of the public view can go on longer. Sometimes observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.
- Changes in flow on a downstream flow meter can be used to establish the start time. Typically the daily flow peaks are “cut off” or flattened by the loss of flow. This can be identified by comparing hourly flow data during the spill event with flow data from prior days.
- Conditions at the spill site change over time. Initially there will be limited deposits of toilet paper and other sewage solids. After a few days to a week, the sewage solids form a light-colored residue. After a few weeks to a month, the sewage solids turn dark. The quantity of toilet paper and other materials of sewage origin increase over time. These observations can be used to estimate the start time in the absence of other information. Taking photographs to document the observations can be helpful if questions arise later in the process.
- It is important to remember that spills may not be continuous. Blockages are not usually complete (some flow continues). In this case the spill would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). Spills that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End time: The end time is usually much easier to establish. Field crews on-site observe the “blow down” that occurs when the blockage has been removed. The “blow down” can also be observed in downstream flow meters.

Flow Rate: The flow rate is the average flow that left the sewer system during the time of the spill.

There are three common ways to estimate the flow rate:

- The San Diego Manhole Flow rate Chart: This chart, included as, shows sewage flowing from manhole covers at a variety of flow rates. The observations of the field crew can be used to select the appropriate flow rate from the chart. If possible, photographs are useful in documenting basis for the flow rate estimate.
- Flow meter: Changes in flows in downstream flow meters can be used to estimate the flow rate during the spill.
- Counting Connections: Once the location of the spill is known, the number of upstream connections can be determined from the sewer maps. Multiply the number of connections by 200 to 250 gallons per day per connection or 8 to 10 gallons per hour per connection.

For example:

$$\begin{aligned} & 22 \text{ upstream connections} \times 9 \text{ gallons per hour per connection} \\ & = 198 \text{ gallons per hour} / 60 \text{ minutes per hour} \\ & = 3.3 \text{ gallons per minute} \end{aligned}$$

Spill Volume: Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days and the flow rate in gallons per hour or gallons per day.

For example:

Spill start time = 11:00

Spill end time = 14:00

Spill duration = 3 hours

$$\begin{aligned} & 3.3 \text{ gallons per minute} \times 3 \text{ hours} \times 60 \text{ minutes per hour} \\ & = 594 \text{ gallons} \end{aligned}$$

Manhole Overflow Flow Rate Guide



City of San Diego
Metropolitan Wastewater Department



Reference Sheet for Estimating Sewer Spills
from Overflowing Sewer Manholes
All estimates are calculated in gallons per minute (gpm)



Wastewater Collection Division
(619) 654-4160

