

STEP 1

Note your arrival time at the scene (be exact!) and take photographs of the spill, including drainage conveyance entry location(s), and discharge location into surface water (if applicable).

Immediately call EH&S at (510) 642-3073 during business hours or (510) 642-6760 after hours with these details.

Name and Phone Number of First Responder	Name:	Tel.:
Location of Spill (e.g., Building Name, Cross Streets)		
When was your Dept. first notified or made aware of the spill?	Date:	Time:
Complainant Information	Name:	Tel.:
Estimated Spill Start Date and Time	Date:	Time:
First Responder's Date and Time of Arrival on Scene	Date:	Time:
Does the spill have the potential to reach a drainage conveyance?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the spill potentially greater than 1,000 gallons?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

STEP 2

Restore flow; contain and clean up the spill. Notify supervisor or EH&S if additional assistance is needed.

STEP 3

Record the date and time that the spill stopped and when spill response activities were completed. Take photographs following cleanup.

Spill End Date and Time	Date:	Time:
Spill Response Completion Date and Time	Date:	Time:

STEP 4

Estimate the spill volume and the recovered spill volume.

SPILL VOLUME ESTIMATION

METHOD 1: EYEBALL ESTIMATE

This method is effective during dry weather but may not be used during rain events because runoff can affect the spill volume estimate.

Imagine the amount of water that would spill from a bucket or a barrel. This method is only useful for spills up to 100 gallons.

STEP 4 (cont.) Estimate the spill volume and the recovered spill volume.

Spill Volume				Spill Volume Recovered			
Container	#	Multiplier	Total Volume (gal)	Container	#	Multiplier	Total Volume (gal)
1 gal water jug		x 1		1 gal water jug		x 1	
5-gal bucket		x 5		5-gal bucket		x 5	
32-gal trash can		x 32		32-gal trash can		x 32	
55-gal drum		x 55		55-gal drum		x 55	
Total Volume of Spill (gal)				Total Spill Volume Recovered (gal)			

SPILL VOLUME ESTIMATION (cont.)

METHOD 2: MEASURED VOLUME.

- A. Sketch the spill shape and measure the dimensions.
- B. Measure the depth at multiple locations and average them to calculate an average depth.
- C. Convert dimensions, including depth to feet.
- D. Based on the spill shape, calculate the area (square feet):
 - a. Rectangle
length (feet) x width (feet)
 - b. circle
diameter (feet) x diameter (feet) x 0.785
 - c. triangle
base (feet) x height (feet) x 0.5
 Area (square feet) =
- E. Calculate the volume (cubic feet) using the average spill depth and the area calculated above.
 area (square feet) x average spill depth (feet)
 Volume (cubic feet) =
- F. Convert volume units from cubic feet to gallons.
 Volume (cubic feet) x 7.48
 Volume (gallons) =

METHOD 3: DURATION AND FLOW RATE

Line 1	Spill End Date and Time	Date:	Time:
Line 2	Spill Start Date and Time	Date:	Time:
Line 3	Total time elapsed of overflow (minutes) (Subtract line 2 from line 1. Show time in minutes)	Time elapsed (minutes):	
Line 4	Average flow rate (GPM)		
Line 5	Spill volume in gallons (Multiply Line 3 x Line 4)		

STEP 4 (cont.) Estimate the spill volume and the recovered spill volume.

SPILL VOLUME ESTIMATION (cont.)

Estimation Method for Spill Volume		Estimation Method for Recovered Spill Volume:	
<input type="checkbox"/> Eyeball Estimate	<input type="checkbox"/> Duration and Flow Rate	<input type="checkbox"/> Eyeball Estimate	<input type="checkbox"/> Other (explain):
<input type="checkbox"/> Measured Volume	<input type="checkbox"/> Other (explain):	<input type="checkbox"/> Measured Volume	
Spill Volume (gallons)		Recovered Spill Volume (gallons) <i>do not include water used for cleanup</i>	
Estimated spill volume that reached a separate storm drain that flows to a surface water body		Estimated spill volume recovered from the separate storm drain that flows to the surface water body	
Estimated spill volume that reached a drainage channel that flows to a surface water body		Estimated spill volume recovered from a drainage channel that flows to a surface water body	
Estimated spill volume discharged directly to a surface water body		Estimated spill volume recovered from surface water body	
Estimated spill volume discharged to land (includes inside of buildings)		Estimated spill volume recovered from the discharge to land	

STEP 5 Fill in the rest of the form as completely as possible. Return the completed form and your photos/videos before the end of your shift. Submit via email to EH&S: ehs-ep@berkeley.edu

RESPONSE CREW (List all names along with their department or company)			
Description of sewer pipe at point of blockage or failure	Diameter: Material:	Estimated Asset Age:	
Spill Appearance Point <i>(Select all that apply)</i>	<input type="checkbox"/> Forced Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Inside Building/Structure	<input type="checkbox"/> Lateral Clean Out <input type="checkbox"/> Lateral <input type="checkbox"/> Manhole	<input type="checkbox"/> Pump Station <input type="checkbox"/> Other (specify):
Final Spill Destination <i>(Select all that apply)</i>	<input type="checkbox"/> Building or Structure <input type="checkbox"/> Drainage Channel <input type="checkbox"/> Paved Surface	<input type="checkbox"/> Street/Curb and Gutter <input type="checkbox"/> Surface Water	<input type="checkbox"/> Storm Drain <input type="checkbox"/> Unpaved Surface <input type="checkbox"/> Other (specify):
Was the spill associated with a storm event?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

STEP 5 (cont.)

Fill in the rest of the form as completely as possible. Return the completed form and your photos/videos before the end of your shift. Submit via email to EH&S: ehs-ep@berkeley.edu

Spill Cause	<input type="checkbox"/> Air Relief Valve (ARV) / Blow-Off Valve (BOV) Failure <input type="checkbox"/> Construction Diversion Failure <input type="checkbox"/> UCB Staff Caused Spill or Damage <input type="checkbox"/> Damage by Other Not Related to UCB Construction / Maintenance (specify): <input type="checkbox"/> Debris from Construction <input type="checkbox"/> Debris from Lateral <input type="checkbox"/> Debris – General <input type="checkbox"/> Debris – Rags <input type="checkbox"/> Flow Exceeded Capacity <input type="checkbox"/> Grease Deposition (FOG) <input type="checkbox"/> Inappropriate Discharge to System	<input type="checkbox"/> Natural Disaster <input type="checkbox"/> Non-Dispersibles <input type="checkbox"/> Operator Error <input type="checkbox"/> Pipe Structural Problem / Failure <input type="checkbox"/> Pipe Structural Problem / Failure – Installation <input type="checkbox"/> Pump Station Failure – Controls <input type="checkbox"/> Pump Station Failure – Mechanical <input type="checkbox"/> Pump Station Failure – Power <input type="checkbox"/> Rainfall Exceeded Design <input type="checkbox"/> Root Intrusion <input type="checkbox"/> Siphon Failure <input type="checkbox"/> Vandalism <input type="checkbox"/> Other (specify):
Where did the failure occur?	<input type="checkbox"/> Air Relief Valve (ARV) / Blow-Off Valve (BOV) <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Lateral <input type="checkbox"/> Manhole	<input type="checkbox"/> Pump Station - Controls <input type="checkbox"/> Pump Station – Mechanical <input type="checkbox"/> Pump Station – Power <input type="checkbox"/> Siphon <input type="checkbox"/> Other (specify):
Spill Response Activities (check all that apply)	<input type="checkbox"/> Cleaned up <input type="checkbox"/> Mitigated effects of spill <input type="checkbox"/> Contained all or portion of spill <input type="checkbox"/> Restored flow <input type="checkbox"/> Returned all spill to sanitary sewer system	<input type="checkbox"/> Returned portion of spill to sanitary sewer system <input type="checkbox"/> Property owner/building occupants notified <input type="checkbox"/> Vendor engaged for plumbing, restoration, and/or cleanup assistance <input type="checkbox"/> enforcement agency notified
Spill Corrective Action Taken (check all that apply)	<input type="checkbox"/> Added sewer to preventative maintenance program <input type="checkbox"/> Adjusted schedule/method of preventative maintenance <input type="checkbox"/> Enforcement action against source	<input type="checkbox"/> Inspected sewer using CCTV to determine cause <input type="checkbox"/> Plan rehabilitation or replacement of sewer <input type="checkbox"/> Repaired facilities or replaced defect <input type="checkbox"/> Other (specify):
Is there an on-going investigation?	<input type="checkbox"/> Yes; describe the reason and expected date of completion: <input type="checkbox"/> No	
Name of receiving water	<input type="checkbox"/> Strawberry Creek <input type="checkbox"/> Meeker Slough	<input type="checkbox"/> Codornices Creek <input type="checkbox"/> Berkeley Aquatic Park <input type="checkbox"/> Other (specify):

FOR EH&S STAFF USE ONLY

List the GPS Coordinates of Spill Origination	Latitude:	Longitude:
Notify CalOES of the Spill within 2 hours (for sewage spill that is 1,000 gallons or greater and discharges to surface water)	Date:	Time:
		Control No. (received from CalOES):
<i>Complete the following sections for spills discharging to surface waters. Take photographs/videos of the drainage conveyance system and receiving water to document presence/absence of waterbody conditions noted below.</i>		
Conduct receiving water visual observations, note the presence of any of these conditions and actions taken	<input type="checkbox"/> Waterbody bank erosion <input type="checkbox"/> Water surface sheen <input type="checkbox"/> Floating matter <input type="checkbox"/> Discoloration	<input type="checkbox"/> Impacts to aquatic life <input type="checkbox"/> Public closure <input type="checkbox"/> Restricted access <input type="checkbox"/> Temporary restricted use <input type="checkbox"/> Posted health warnings
Estimate the spill travel time to the receiving water (in minutes)		
For a spill entering a drainage conveyance system (e.g., storm drain), estimate the spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water (in minutes)		
Estimate the spill volume that entered the receiving water (gallons)		
Conduct water quality sampling and analysis each day of the duration of the spill (applicable to sewage spill of 50,000 gallons or greater to surface water; within 18 hours)	<input type="checkbox"/> Yes	<input type="checkbox"/> No; not applicable

EH&S-EP STAFF REMINDERS FOR CIWQS REPORTING AND INTERNAL ASSESSMENT

<p>Category 1: Submit Draft report within 3 business days of becoming aware of the spill and certify within 15 calendar days of spill end date. Submit Technical report within 45 days of spill end date for a spill of 50,000 gallons or more discharged to surface waters.</p> <p>Category 2: Submit Draft report within 3 business days of becoming aware of the spill and certify within 15 calendar days of spill end date.</p> <p>Category 3: Submit certified report within 30 calendar days after the end of the month in which the spill occurs.</p> <p>Category 4: Submit certified report within 30 calendar days of the end of the month of the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills.</p>	Draft report due date:
	Certified report due date:
	Technical due date:
	Internal Assessment due date:
	<input type="checkbox"/> Created bCal event reminder for reporting and (internal) assessment
All Categories: Conduct post-spill assessments of spill response activities (set your own due date)	