CAL POLY SAN LUIS OBISPO

SPILL EMERGENCY RESPONSE PLAN (SERP)

PART 1: COMPLIANCE GUIDE

California Polytechnic State University, San Luis Obispo
Facilities Management & Development
Environmental Health & Safety

Prepared to Comply with:
State Water Resources Control Board
Order 2022-0103-DWQ
Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

WDID: 3SSO10235

Effective Date: 2025

This Spill Emergency Response Plan is organized into two functional parts. **Part 1 serves as the Compliance Guide**, providing regulatory context, required elements of the SERP, and the framework used for staff training and reference. **Part 2 is the Field Guide & Forms**, designed for real-time use by first responders and plumbing personnel during SSO spill response activities, with clear, actionable procedures, **applicable forms, worksheets, and field tools** needed to document spill events, support accurate reporting, and assist personnel in completing required response tasks.

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A. INTRODUCTION

Cal Poly San Luis Obispo operates a sanitary sewer collection system serving academic, residential, agricultural, dining, and auxiliary facilities. This Spill Emergency Response Plan (SERP) is required under Waste Discharge Requirements (WDR) Order No. 2002-0103-DWQ ("General Order"), adopted by the State Water Resources Control Board (SWRCB) on December 6, 2022. The WDR stipulates that Enrollees must maintain an up-to-date SERP to ensure prompt detection and response to spills, to reduce spill volumes and to collect information for the prevention of future spills.

A.1 Purpose of This SERP

Mains and laterals located Cal Poly property are all owned and operated by Cal Poly, unless otherwise specified. This SERP applies to all sewage spills caused by a failure or blockage of the Cal Poly's sanitary sewer system.

This SERP is required under WDR Section 5.12 and is intended to:

- Provide clear procedures for emergency spill response
- Establish Cal Poly's internal and external notification protocols
- Support accurate volume estimation and documentation
- Minimize or prevent discharges to waters of the State
- Maintain public health protections
- Ensure compliance with monitoring, reporting, and recordkeeping

A.2 Compliance

- In coordination with the EH&S Department, the Cal Poly Legally Responsible Official (LRO) is responsible for ensuring full compliance through implementation, review, and training on the Sewer Emergency Response Plan.
- The Cal Poly's Legally Responsible Officials (LRO) and Data Submitters (DS) for wastewater collection system matters are authorized to submit electronic and written spill reports and other required information to CIWQS.
- Cal Poly dedicates significant resources to its spill emergency response operations. This includes a work force of plumbers and investments in numerous field equipment, and spare parts/supplies.
- Cal Poly is also staffed/equipped to perform emergency sewer line repairs onsite 24/7 and has an outside vendor for assisting with spill emergencies.

A.3 Plan Availability

This SERP is maintained by the EH&S Department in coordination with the Facilities & Maintenance Department. It is publicly available on the EH&S website.

A.4 Notification

Student, Staff, Faculty, Community Observation of Sewage Spill

Should students, staff, faculty, or a member of the community observe a suspected sewage spill, the following contact should be made immediately:

Business Hours (M-F): (7:30AM – 4:30PM)	**FMD CBS Help Desk**	**(805) 756-5555**
After Hours & Weekends	**Cal Poly University Police Dept.**	**(805) 756-2281**

A.5 Regulatory Background

Under Order 2022-0103-DWQ, Cal Poly must implement an up-to-date SERP that includes:

- Procedures for rapid detection and mitigation of spills
- Regulatory notifications (Cal OES, RWQCB, etc.)
- Receiving water sampling for spills ≥50,000 gallons
- Public health warning protocols
- Post-spill evaluation procedures
- Annual review/update requirements

This SERP satisfies:

- WDR Specifications 5.7, 5.12, 5.13
- Attachment D – Required SERP Elements
- Attachment E – Monitoring & Reporting Requirements

A.6 Required SERP Elements (Summary of WDR Requirements)
The WDR requires the SERP to include:

- Rapid spill detection, response, and mitigation
- Spill containment and minimization of impacts
- Notifications to internal and external agencies
- Receiving water sampling for qualifying spills
- Public health warning processes
- Documentation and CIWQS reporting
- Post-spill assessments
- Annual review and training requirements

A.7 Definitions

Drainage Conveyance System: A publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

California Integrated Water Quality System (CIWQS): The statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

Enrollee: A public, private, or other non-governmental entity that has obtained approval for regulatory coverage under the Statewide Sanitary Sewer Systems General Order 2022-0103-DWQ.

Exfiltration: The underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

Lateral: An underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement.

Lower Lateral: The portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary or other jurisdictional locations.

Legally Responsible Official: An official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by the Statewide Sanitary Sewer Systems General Order 2022-0103-DWQ.

Potential to Discharge, Potential Discharge: Any exiting of sewage from a sanitary sewer system that can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

Sanitary Sewer System: A system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headwork, including: laterals owned and/or operated by the Enrollee; satellite sewer systems; and/or temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet walls, impoundments, tanks and diversionary structures.

Spill: A discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Spill Categories:

Category 1 Spill: A spill of any volume of sewage from or caused by a regulated sanitary sewer system that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill.

Category 2 Spill: A spill of 1,000 gallons or greater, from or caused by a regulated sanitary sewer system that does not discharge to a surface water. A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 2 spill.

According to State Water Resources Control Board personnel, it is assumed that a sewage spill of 1,000 gallons or more will discharge or has the potential to discharge to surface water.1

Category 3 Spill: A spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a regulated sanitary sewer system that does not discharge to a surface water. A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4 Spill: A spill of less than 50 gallons, from or caused by a regulated sanitary sewer system that does not discharge to a surface water. A spill of less than 50 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

Upper Lateral: The portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary or other jurisdictional locations, to the building or property.

Waters of the State: Surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Includes, but is not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States: Surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

A.8 Plan Location

The SERP is saved in electronic format on the EH&S server and is publicly available on the EH&S website at

A.9 Roles and Responsibilities

Legally Responsible Official (LRO)
Director of Facilities Management and Development
Responsible for:

- Certifying spill reports in CIWQS
- Ensuring SERP implementation and compliance
- Allocating response resources
- Authorizing updates to the SERP

Facilities Management & Development – Plumbing / Collections Crew
Primary first responders for:

- Mobilize resources to stop the source of the sanitary sewer discharge.
- Visually assess the spill location and spread.
- Estimate the spill volume.

- Document conditions of affected area and extent of spill with photographs and/or videos, upon arrival at the scene.
- Contain the spill and prevent or minimize discharge to surface water (e.g., block storm sewer inlets with covers, sandbags, and/or mats), when feasible.
- If sewage spill has entered surface water or storm drain, attempt to contain it by plugging the downstream location.
- Remove sewage from the surface water or drainage conveyance system (e.g., storm sewer, creek) and redirect to sewer system or containerize for off-site disposal.
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact the receiving waters. For example, flushed water is recovered downstream.
- Minimize public access to and contact with spilled sewage.
- If additional resources are needed for repair or cleanup, contact vendors.
- Send documentation and photographs to EH&S.

Environmental Health & Safety (EH&S)
Responsible for:

- Make observations of the receiving water, for spills discharging to surface waters (if not already done by the First Responder).
- Provide guidance to reduce environmental impacts
- Regulatory notifications (Cal OES, RWQCB, County Health)
- Post public health signs along affected areas, as needed.
- Conduct water quality sampling of the receiving water or contact vendor if additional resources are needed for sampling
- CIWQS Draft, Certified, and Technical Report preparation
- Prepare written spill reports, as required, and coordinate with the Legally Responsible Official for CIWQS submittal and certification.
- Maintaining SERP forms, training, and annual review

Cal Poly Police Department (UPD) and/or TAPS
Provides:

- Traffic control
- Public safety support at spill sites

Residential Hall/Housing
Supports:

- Communication with student residents regarding proper disposal of non-dispersibles (including “flushable” wipes)
- Access control during residential spills

Dining Services

- Management of Fats Oils and Grease (FOG) from dining establishments
- Maintaining contract with food grease disposal vendor
- Ensuring food establishment employees and subcontractors follow proper FOG management procedures to keep FOG out of the collection system

- Providing access as needed for quarterly grease interceptor cleaning and maintenance

A.10 SERP Performance Objectives

Cal Poly's SERP is designed to:

- Maintain rapid response
- Minimize spill volumes and prevent surface water discharges
- Provide consistent, defensible spill documentation
- Maintain 100% compliance with reporting deadlines
- Reduce recurrence of preventable spills
- Improve field decision-making through clear procedures and worksheets

A.11 Annual Review and Continuous Improvement

Per WDR Attachment D-6, Cal Poly must review and update the SERP annually. This includes:

- Updating procedures and contact lists
- Incorporating new equipment and technology
- Reviewing CIWQS spill trends
- Conducting training and drills

The LRO is responsible for certifying the SERP update in the Annual Report.

B. REQUIRED ELEMENTS

B.1 Resource Allocation

Cal Poly must ensure sufficient staffing, equipment, training, and resources for spill response.

Cal Poly Implementation

Cal Poly dedicates substantial resources, including:

- Trained utility plumbers
- Two jetters
- One vacuum trailer
- CCTV inspection system
- Spare parts inventory
- On-call mechanics and emergency vendors
- 24/7 response capabilities

B.2 SERP Implementation Requirements

- Must ensure prompt detection and response
- Must minimize spill volumes and protect waters of the State

Cal Poly Implementation

- Part 2 (Field Guide) provides step-by-step spill response procedures
- Preventive maintenance: quarterly jetting, CCTV cycles

- Effectiveness Measures (KPI)

B.3 Public Health & Environmental Protection
Cal Poly must:

- Protect public health
- Minimize environmental impacts
- Remove sewage from drainage conveyances
- Clean and restore affected areas

Cal Poly Implementation
Cal Poly uses:

- Vacuum extraction
- Containment berms and mats
- Storm drain plugs
- Creek recovery procedures
- Public health postings managed by EHS

B.4 Timely Spill Response & Impact Minimization
Spills must be quickly stopped, contained, intercepted, recovered, and cleaned.

Cal Poly Implementation

- 30-minute response goal
- Immediate on-scene assessment
- Spill containment tools (sandbags, rubber mats, berms)
- EHS notification for Category 1 and 2 spills

B.5 Notification, Monitoring, Reporting, Recordkeeping
Cal Poly meets all notification and reporting timelines via EHS, including:

- Cal OES notification within 2 hours for qualifying spills
- CIWQS draft report within 3 business days
- Final report certified within 15 days
- Technical Report (≥50,000 gallons) within 45 days
- Monthly reporting for Categories 3–4

B.6 Coordination with Storm Drain Agencies
Cal Poly maintains pre-planned coordination with:

- City of San Luis Obispo
- County Environmental Health
- Regional Water Board

B.7 SERP Training and Drills

Cal Poly provides periodic training and practice drills for personnel involved in spill response to ensure familiarity with SERP procedures, equipment, and reporting requirements. Training frequency is based on operational needs, staffing changes, and SERP updates, consistent with Order 2022-0103-DWQ requirements. Training topics covered include but are not limited to:

- Operation of vacuum/jetting equipment
- Deployment of containment methods
- Spill estimation techniques
- Pump station emergency response
- Bypass pumping
- Deployment of containment methods

B.8 Equipment Inventory and Critical Spare Parts

A full equipment and spare parts inventory is maintained by the Plumbing Shop.

B.9 Staff and Contractor Training

Training is required for:

- Plumbing staff /First responders
- Contractors performing sewer work (required to review Cal Poly's SERP)

B.10 Emergency Operations & Traffic Control

Traffic control procedures are detailed in Field Guide (Part 2):

- Lane closures
- Pedestrian rerouting
- Safety zones around active spills

B.11 Implement Technology, Practices & Equipment

Cal Poly uses:

- Modern jetting equipment
- CCTV inspection system
- Vacuum extraction units
- Preventive maintenance scheduling
- GIS mapping (in development)

B.12 Post-Spill Assessment

Post-spill assessments include:

- Root cause analysis
- Evaluation of response effectiveness
- Corrective action planning
- Documentation for CIWQS

B.13 Annual SERP Review

SERP is reviewed annually and recertified by the LRO in the Annual Report.

C. SERP PERFORMANCE TOOLS

C.1 Annual Audit Framework

Audit includes:

- Annual spill trend analysis
- SERP implementation evaluation
- Review of documentation quality
- Recommendations for improvements

C.2 Trend Evaluation & Reporting

Spill data is tracked annually in CIWQS and internally for pattern identification.

C.3 Key Performance Indicators (KPIs)

These KPIs serve as optional internal management tools only and are not regulatory requirements. They supplement, not replace, mandatory SERP annual reviews and post-spill assessments required under WDR Attachment D-6.

These tools help Cal Poly:

- Evaluate response timeliness
- Monitor spill recovery rates
- Assess reporting compliance
- Review training completion
- Identify trends for preventive maintenance

KPIs include:

- Response time
- % spill recovery
- Reporting timeline compliance
- Training completion rates
- Maintenance cycle completion

C.4 Annual Review

In coordination with FMD plumbing staff and Facilities Management, Environmental Health & Safety (EHS) will conduct an annual review of the effectiveness of the Spill Emergency Response Plan (SERP) and update the Plan as necessary. The review will evaluate SERP procedures and Cal Poly's sanitary sewer spill responses from the previous year to confirm continued applicability and effectiveness.

C.5 Record of Plan Revision

Revision Date	Section(s) Revised	Notes
May 2023	Updated all sections	Update to implement new permit requirements
December 2025	Updated all sections	Updated to streamline first responder documentation and improve usability of field tools.

CAL POLY

CAL POLY SAN LUIS OBISPO

SPILL EMERGENCY RESPONSE PLAN (SERP)

PART 2: FIELD GUIDE & FORMS

California Polytechnic State University, San Luis Obispo
Facilities Management & Development
Environmental Health & Safety

Prepared to Comply with:
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CONTENTS

1. FIRST RESPONDER PROCEDURES

1.1 Priorities

A sewage spill response begins immediately upon notification. The first responder's priorities are:

- Protect health and safety
- Stop or reduce the spill
- Prevent the spill from reaching storm drains or surface waters
- Document conditions for reporting
- Request additional resources early

1.2 Response Procedures

Immediately following a report of a sewage spill, containment and mitigation are the primary concerns. First Responders/Plumbing Shop shall:

1. Note your arrival time at the reported spill location and verify the presence of a sanitary sewers pill.
2. Assess the affected area and extent of the spill and record photographs and/or videos. Assessment may include observation of receiving water and inspections of lift station pumps and downstream sewer access holes. Containing the spill is the first priority. When the situation permits, obtain the following:
    - Take a **10-second video** of the spill (if active)
    - Take **photographs** of:
        - Spill appearance point
        - Flow direction
        - Any drainage inlets
        - Any impacted areas
3. If there is a possibility of pedestrian access to the site, barricade the area or use cones and/or caution tape to secure the site from public access. Contact UPD and/or TAPS for additional assistance, if needed (e.g., vehicular traffic control).
4. Contain the sanitary sewer spill to the maximum extent possible by utilizing spill containment devices (e.g., sandbags, storm inlet covers) to prevent the spill from entering drainage conveyance system (common containment methods are provided in section 3). Landscaping materials (i.e., soil) may also be used to divert the spill away from a drainage conveyance system and towards a landscaped area.
5. If possible, pump the sewage into an alternate sewer access hole (downstream or a different sanitary sewer line); or turn off the water supply to the building.
6. Once the spill is contained, correct the plumbing problem to stop the spill or the cause of the spill. If necessary, call a vendor for assistance.
7. Remove contaminated residual from storm drain pipes and attempt to recover **all** sewage from the storm drain, if possible.
8. Clean and sanitize the affected area(s) containing any flush waters downstream before being allowed to discharge to the creek and/or additional storm drain inlets.

9. Compete **Form 1 - Cal Poly SSO Spill Responder Form,** and submit to your supervisor and EH&S by the end of your shift. This form is used by EH&S and the Legally Responsible Officials to complete and submit spill reports to the state.

1.3 Additional Assessment

Determine System Responsibility

- Confirm whether the issue is within **Cal Poly-owned infrastructure**
- If the spill is from **City of SLO infrastructure**, call SLO Public Works immediately
- Regardless of ownership, **protect public health and contain the spill** until relieved

1.4 Initial Notifications (Internal)

Immediately contact:

- Plumbing Supervisor
- Facilities Operations Manager, Mechanical Trades
- EH&S Environmental Specialist for Category 1 or 2 spills/overflows

2. RESPONDER FIELD GUIDANCE & TOOLS

2.1 Spill Containment Strategies

Containment of a spill is one of the primary ways to mitigate a spill. Immediately cover or plug storm drain inlets to divert flow for containment. The control/containment of a spill becomes increasingly difficult if reaching a drainage conveyance system/waterway. The quicker the source/extent can be determined, the spill contained and/or controlled, the less impact on the environment and public health.

The first responder's decisions should be based on best action(s) for mitigation to protect human health and prevent discharging to surface waters. Multiple techniques (no in particular order) are listed below for spill containment depending on circumstances, spill category, and available material.

Location	Strategies for Containment
Curb & Gutter	Create a berm or dam using the following: ✓ Rubber Berm ✓ Dry Sweep ✓ Dirt ✓ Sandbags ✓ o Deploy Absorbent Bags
Open Space	✓ Hand-Dig a trench to contain the spill ✓ Create sandbag dam/for diverting sewage to natural low point
Lift Station	✓ Vacuum retrieve from the wet well using Hydro-Vac ✓ Establish Bypass Operations
Drainage Channel	✓ Create a Dam using sandbags or dirt ✓ Use vacuum retrieval if accessible by hydro-vac

Storm Drain	✓ Block inlets using rubber mats and/or sandbags ✓ Plug manhole outlets using pneumatic plugs or sandbags ✓ Plug outfall manhole
Discharge from Building	✓ Attempt to remove cleanout caps to allow the sewage to discharge outside ✓ the building ✓ Establish containment using the most effective method from above
Creeks/Streams (Low flow only)	✓ Create Sandbag Dams ✓ Install a silt fence to contain floating solids ✓ Contact the local health department or Fish and Wildlife for direction NOTE: Containment attempts should not negatively impact aquatic life

2.2 Spill Clean Up Strategies

First responders and cleaning crews must take photographs or videos to verify the conditions before and after cleaning activities. Response crews shall remove all sewage that has entered the drainage conveyance system by vacuuming all water, debris, solids, and paper in the drainage conveyance system. With containment in place, either hydro-jet the storm drains or flush the affected area with water to the containment location and vacuum water and debris.

Location	Strategies for Clean Up
Street, Curb or Gutter or Hardscape	✓ Remove all debris and solids with broom, shovels and wash down water ✓ Wash pavement, curb and gutter area, with the high-pressure wand, then vacuum all wash water with a hydro-vac.
Open Area/ Landscape	✓ In an open area that is primarily dirt, response crews shall use either a hydro-vac vacuum nozzle or dig and remove dirt until a dry layer is visible. ✓ If the area is a grass landscaped area, flush the spill area with copious amounts of water and vacuum the area thoroughly.
Natural and Man-Made Waterways	✓ Contain contaminated creeks where feasible. Remove all contaminated water by pumping it to the collection system or vacuuming using a vacuum truck and return all collected water to the sewer system. Introduce additional wash water to flush contaminated areas towards the containment area. ✓ Photograph the area(s) cleaned to confirm the spill has been thoroughly cleaned, and document the locations on the Field Spill Report form
Drainage Channel	✓ Create a Dam using sandbags or dirt ✓ Use vacuum retrieval if accessible by hydro-vac
Storm Drain	✓ Block inlets using rubber mats and/or sandbags ✓ Plug manhole outlets using pneumatic plugs or sandbags ✓ Plug outfall manhole
Discharge from Building	✓ Attempt to remove cleanout caps to allow the sewage to discharge outside ✓ the building ✓ Establish containment using the most effective method from above
Creeks/Streams (Low flow only)	✓ Create Sandbag Dams ✓ Install a silt fence to contain floating solids ✓ Contact the local health department or Fish and Wildlife for direction. NOTE: Containment attempts should not negatively impact aquatic life

2.3 Creek Pumping Procedures

In the event that a spill/overflow enters Brizzolara or Stenner Creek (surface water).

	METHOD A: **DIVERT CREEK WATER AROUND THE SPILL**	**METHOD B:** **DIVERT CREEK WATER AND SPILL**
Applicability	If response time is quick enough to capture the leading edge of spill. Otherwise, go to Method B.	In cases where you cannot capture the leading edge of a spill.
Equipment & Supplies	2 trash pumps sandbags (for dam structure)	1 trash pump sandbags (for dam structure)
Agency Notification	City of SLO notification & approval is needed prior to pumping creek water into the sanitary sewer;	
Procedures	1. Create a temporary dam immediately downstream of the sanitary sewer spill. 2. Use the trash pump to transfer the sewage to an adjacent sanitary sewer, downstream of the failure. 3. Create a temporary dam immediately upstream of the affected area 4. Use the other trash pump to transfer creek water to a point downstream of the dam created in Step 1.	1. Construct a downstream dam. 2. Use the trash pump to transfer the mixture of sanitary sewer spill and creek water to the sanitary sewer. Continue pumping until clean flows. 3. If a layer of solids has been deposited on the creek bed, flush with dechlorinated water. 4. Pump all wash water to the sanitary sewer.

SPILL CATEGORY DETERMINATION WORKSHEET

To quickly determine whether a spill is Category 1, 2, 3, or 4 for notification and reporting purposes. Category 1 or 2 required immediate notification to EHS (562) 572-2184 as these category of spills/overflows must be reported to the regulatory agencies within 2 hours.

Instructions:

Start at Category 1. If **YES** to any criterion → the spill is Category 1.
If **NO**, move to Category 2, and so on.

CATEGORY 1: Discharge to Surface Water

Check **YES** if *any* of the following occurred:

☐ Spill entered a creek, stream, or pond (any volume)
☐ Spill entered a storm drain that discharges to creek, stream, or pond (surface water) and was **not fully recovered**
☐ Spill exfiltrated to a hydraulically connected surface water

If any box is checked → **CATEGORY 1 (notify EH&S immediately)**

CATEGORY 2: ≥1,000 gallons (no discharge to surface water)

☐ Spill volume is estimated at or above 1,000 gallons
☐ Spill did not reach surface water

If YES → **CATEGORY 2 (notify EH&S immediately)**

CATEGORY 3: 50 to <1,000 gallons

☐ Spill volume is between 50 and 1,000 gallons
☐ Did not reach creek, stream, or pond (surface water)

If YES → **CATEGORY 3**

CATEGORY 4: <50 gallons

☐ Spill volume is less than 50 gallons
☐ Did not reach creek, stream, or pond (surface water)

If YES → **CATEGORY 4**

SPILL VOLUME ESTIMATION WORKSHEET

Provides responders with simple, fast methods for spill volume estimation (choose one)

A. Eyeball Estimate (quick reference)

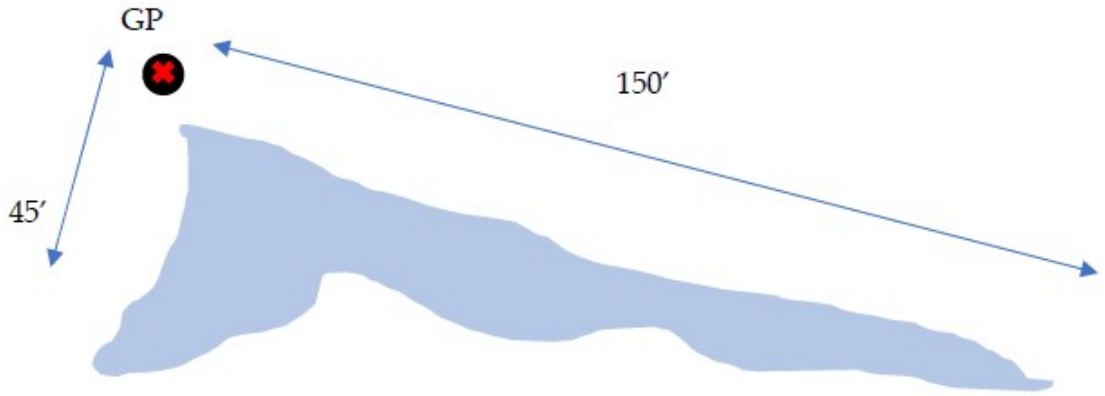
This method is effective during dry weather but may not be used during rain events because runoff can affect the spill volume estimate. Imagine the amount of water that would spill from a bucket or a barrel. This method is only useful for spills up to 100 gallons.

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

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

B. Measured Volume Method

1. Measure:



Length:	(feet)
Width:	(feet)
Average Depth:	(feet)

2. Calculate Volume (based on shape of spill and measurements)

Rectangular Spill

Measure:

- ✓ **Length (L)** = _____ ft
- ✓ **Width (W)** = _____ ft
- ✓ **Average Depth (D)** = _____ ft

Calculate volume in gallons:

Total Volume (gallons) = L × W × D × 7.48

Circular Spill

Measure:

- ✓ **Diameter (DIA)** = _____ ft
- ✓ **Average Depth (DEPTH)** = _____ ft

Calculate volume in gallons:

Total Volume (gallons) = DIA × DIA × 0.785 × DEPTH × 7.48

Triangular Spill

Measure:

- ✓ **Base (B)** = _____ ft
- ✓ **Height (H)** = _____ ft
- ✓ **Average Depth (D)** = _____ ft

Calculate volume in gallons:

Total Volume (gallons) = B × H × 0.5 × D × 7.48

C. Duration × Flow Rate Method

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 form 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)**		

INTERNAL NOTIFICATION CONTACTS

Group	Name/Title	Contact
FMD Management & LRO	Russ Caligiuri Jr, Facilities Maintenance Manager - Mechanical Trades	Office (805) 756-0736 Cell: (207) 745-1251
Environmental Health & Safety (EH&S)	Erin Winett, Environmental Protection Program Specialist	Office (805) 756-6678 Cell: (562) 572-2184
Environmental Health & Safety (EH&S)	Christina Juarez, EH&S Manager	(805) 440-1392
Plumbing Shop	Albert Gonzales, Plumbing Supervisor	(805) 756-5236
Vendor – Testing Lab	Oilfield Environmental & Compliance https://oecusa.com	Business Hours & After Hrs./Weekends (805) 922-4772

EXTERNAL REGULATORY NOTIFICATION CONTACTS

Agency	Contact	Notes
California Office of Emergency Services (OES)	(800) 852-7550	EH&S will contact if needed. Obtain a control number and contact name
Regional Water Quality Control Board (RWQCB)	CentralCoast@waterboards.ca.gov (805) 549-3147	EH&S will contact if needed. Leave a voicemail with date and time. Send follow up email.
San Luis Obispo County Environmental Health	Jeremiah Damery Tel: (805) 781-5548 jdamery@co.slo.ca.us	OES report will sent notification as well
California Department of Fish and Wildlife	(559) 243-4005 reg4assistant@wildlife.ca.gov	Guidance for Sensitive Riparian Areas and to notify if SSO enters creek(s)
City of San Luis Obispo Utilities Department	(805) 781-7215	Creek water pumping to City collection system, if needed

3. EH&S PROCEDURES

Immediately following a report of a sewage spill, EH&S shall:

1. Contact a First Responder for spill response resources, if not previously notified.
2. Assess the situation by communicating and coordinating with the First Responder.

3. Respond to the spill location if the First Responder needs on-site assistance (e.g., provide guidance for a spill that discharges to a drainage conveyance system and/or surface water, etc.).
4. Notify CalOES as soon as possible but no later than two hours after knowledge of the spill.
5. Notify other regulatory agencies if required & provide initial notification of sanitary sewer spills to regulatory agencies in a timely manner.
6. Contact neighboring agencies, as needed for additional support and resources.

Following the initial response to the spill, EH&S shall:

1. Determine if water quality sampling is necessary (required within 18 hours for sewage spills of 50,000 gallons or more) and prepare for sample collection and analysis.
2. Provide updates to CalOES when there are substantial changes to:
    a. The estimated volume of the spill (increase or decrease)
    b. The estimated direct discharge volume to surface water or indirect discharge to a drainage conveyance system (increase or decrease)
    c. Additional impacts to the receiving water and beneficial uses
3. Complete Form 2: EH&S Sanitary Sewer Overflow Spill Report
4. Continue to make update notifications to CalOES until a spill report is submitted and certified in the CIWQS Sanitary Sewer System Database.
5. Submit spill reports and related documentation via CIWQS and notify the Legally Responsible Official when certification is needed.

3.1 Receiving Water Sampling

(WDR General Order 2022-0103-DWQ Section E-1, 2.3)

For sewage spills in which an estimated 50,000 gallons or greater are discharged into surface water, EH&S shall arrange water quality sampling no later than 18 hours after the knowledge of a potential discharge to a surface water. In addition, EH&S shall gather information during and after the spill event to assess the spill magnitude and update its notification and estimated spill volume.

EH&S will document the following
Photographs:

- Waterbody bank erosion
- Floating matter
- Water surface sheen (potentially from oil and grease)
- Discoloration of receiving water
- Impact to the receiving water

EH&S will contact an approved laboratory vendor (see internal notification contacts table) to initiate surface water sampling services in compliance with the Order.

Minimum sampling will include:

- ✓ Ammonia
- ✓ pH
- ✓ Electric Conductivity
- ✓ Bacterial indicators, such as total and fecal coliform, enterococcus, and e-coli, per the regional Basin Plan or as directed by SWRCB
- ✓ Temperature

3.2 Public Health Notifications

Barricades and warning signs should be posted whenever a sewage spill is detected or suspected that may pose a public health concern. Public health postings should be placed at visible locations where there is a likelihood for the public to have access to the contaminated area, including landscaped and paved areas.

Public health postings with high pedestrian foot traffic should utilize multiple barricades such as cones in addition to caution tape. Pedestrian foot traffic should be redirected inside buildings so that occupants do not come in contact with the sewage as clean-up is occurring.

If a sewage spill flows off-site, EH&S shall contact the downstream sewer agency to coordinate posting. In general, the downstream agency will be responsible for posting, but the downstream agency may request assistance, in which case, Cal Poly will post signage in locations that they recommend.

Example Signage:

WARNING

RAW SEWAGE IN WATER

AVOID CONTACT WITH CREEK WATER

This section of Brizzolara Creek contains untreated sewage because of a sewer line failure. Do not drink or touch the water. Keep children and dogs away from the creek. The campus is currently working to repair the failure.
For more information, contact the Office of Environment, Health & Safety at (805) 756-5555.

Signs should be staked into the ground on both sides of the creek, approximately every 100 feet. If necessary, caution tape should be strung between signs, especially in areas where the potential for incidental contact with the creek is high.

FORM 1: First Responder Spill Response Field Report

To be completed by First Responders / Plumbing Shop

CAL POLY SANITARY SEWER OVERFLOW
FIRST RESPONDER SPILL RESPONSE FIELD REPORT

THIS IS A REQURIED FORM TO BE COMPLETED BY THE SANITARY SEWER OVERFLOW FIRST RESPONDERS

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).

Name and Phone Number of First Responder	Name:	Tel:
Location of Spill (e.g., Building Name, Cross Streets)		
When were you first notified or made aware of the spill?	Date:	Time:
How were you notified?	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? If yes, notify EH&S		
Is the spill potentially greater than 1,000 gallons? If yes, notify EH&S		

STEP 2 Contain the spill and protect all storm drain inlets and drainage paths to prevent or reduce the spread of sewage. Every effort must be taken to ensure the spill does not enter storm drains, drainage channels, or surface waters.

STEP 3 Immediately secure and cordon off the spill area using cones, barricades, or caution tape to prevent vehicle traffic, pedestrian access, or other contact with the sewage. Maintain a safe perimeter until cleanup is complete and the area is deemed safe. Contact UPD for assistance if needed.

STEP 4

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

STEP 5

Responders must document the spill with photographs, including **at minimum 1-4 listed below**. These photos are required under the Order and must be submitted with the spill report.

✓	**Photographs Obtained**
	(1) the spill appearance point
	(2) the extent and direction of spill flow
	(3) any storm drain inlets or drainage pathways affected or threatened by the spill
	(4) the condition of the area after cleanup
	10-second video of spill
	Other (describe):
	Other (describe):

STEP 6

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:

Sketch the spill shape and estimate/measure the dimensions.

STEP 7

Estimate the **spilled volume <u>and</u> the recovered spill volume**. (Use *either* Method A, Method B, or Method C found in the spill estimation worksheet. Or a combination as appropriate. You do not need to complete all three). Using the data collected, complete the table below.

Estimation Method for Spill Volume		**Estimation Method for <u>Recovered</u> Spill Volume:**	
☐ Eyeball Estimate ☐ Measured Volume ☐ Duration and Flow Rate ☐ Other (explain):		☐ Eyeball Estimate ☐ Measured Volume ☐ Other (explain):	
Spill Volume (gallons)		**Recovered Spill Volume (gallons) <u>do not include water used for cleanup</u>**	
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		Estimated spill volume **recovered** from the discharge to land	

STEP 8

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: egwinett@calpoly.edu

RESPONSE CREW (List all names)			
Description of sewer pipe at point of blockage or failure	Diameter: Material:	Estimated Asset Age:	
Spill Appearance Point (Select all that apply)	☐ Forced Main ☐ Gravity Mainline ☐ Lateral Clean Out	☐ Inside Building/Structure ☐ Manhole	☐ Pump Station ☐ Other (specify):

Final Spill Destination (Select all that apply)	☐ Building or Structure ☐ Drainage Channel ☐ Paved Surface	☐ Street/Curb & Gutter ☐ Surface Water ☐ Storm Drain	☐ Unpaved Surface ☐ Other (specify):
Was the spill associated with a storm event?	☐ Yes ☐ No		
Spill Cause	☐ Air Relief Valve (ARV) / Blow-Off Valve (BOV) Failure ☐ Construction Diversion Failure ☐ Cal Poly Staff Caused Spill or Damage ☐ Damage by Other Not Related to Cal Poly Construction / Maintenance (specify): ☐ Debris from Construction ☐ Debris from Lateral ☐ Debris – General ☐ Debris – Rags ☐ Flow Exceeded Capacity ☐ Grease Deposition (FOG) ☐ Inappropriate Discharge to System	☐ Natural Disaster ☐ Non-Dispersibles ☐ Operator Error ☐ Pipe Structural Prob / Failure ☐ Pipe Structural Prob / Failure – Installation ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Rainfall Exceeded Design ☐ Root Intrusion ☐ Siphon Failure ☐ Vandalism ☐ Other (specify):	
Where did the failure occur?	☐ Air Relief Valve (ARV) / Blow-Off Valve (BOV) ☐ Force Main ☐ Lateral	☐ Gravity Mainline ☐ Manhole	☐ Pump Station – Controls ☐ Pump Station – Mechanical ☐ Pump Station – Power ☐ Siphon ☐ Other (specify):
Spill Response Activities (check all that apply)	☐ Cleaned up ☐ Mitigated effects of spill ☐ Contained all of spill ☐ Contained portion of spill ☐ Restored flow ☐ Returned all of spill to sanitary sewer system	☐ Returned portion of spill to sanitary sewer system ☐ Vendor engaged for restoration, and/or cleanup assistance Vendor name:	
Name of receiving water	☐ Brizzolara Creek ☐ Stenner Creek ☐ Drum Reservoir ☐ Not Applicable, did not reach drainage system or surface water		

- END OF FIRST RESPONDER FORM -

FORM 2: EH&S SSO Spill Investigation Report

To be completed by EH&S

EH&S SANITARY SEWER OVERFLOW SPILL REPORT

FOR EH&S STAFF USE		
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) (800) 852-7550	Date: Control No. (received from CalOES):	Time:
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.		
Conduct receiving water visual observations, note the presence of any of these conditions and actions taken	☐ Waterbody bank erosion ☐ Water surface sheen ☐ Floating matter ☐ Discoloration ☐ Impacts to aquatic life	☐ Public closure ☐ Restricted access ☐ Temporary restricted use ☐ Posted health warnings
Final Vol. Estimate of 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)	☐ Yes	☐ No; not applicable

EH&S STAFF REMINDERS FOR CIWQS REPORTING AND INTERNAL ASSESSMENT	
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.	Draft report due date:
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.	Certified report due date:
Category 3: Submit certified report within 30 calendar days after the end of the month in which the spill occurs.	Technical due date:
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	☐ Entered into ROC Form Internal Assessment due date:
All Categories: Conduct post-spill assessments of spill response activities	

POST-SSO ASSESSMENT	
PARTICIPANTS (list all names)	
Spill Information	Spill Date: Location: Category: ☐ 1 ☐ 2 ☐ 3 ☐ 4 Estimated Volume (gal): Estimated Recovered (gal):
Spill Cause & System Conditions	Suspected cause: ☐ Roots ☐ FOG ☐ Wipes / non-dispersibles ☐ Debris ☐ Structural failure ☐ Pump/lift station issue ☐ Capacity issue ☐ Operator error ☐ Other: Is this a recurring location? ☐ Yes ☐ No Contributing factors (check any): ☐ Aging pipe ☐ Maintenance backlog ☐ Weather ☐ Construction activity ☐ High flows ☐ Other:
Detection & Notification	How was the spill discovered? Estimated duration before discovery: Were notifications made promptly according to procedure? ☐ Yes ☐ No If no, explain:
Response Timeline & Resources	First responder arrival time: Staffing adequate? ☐ Yes ☐ No Equipment adequate and available? ☐ Yes ☐ No If no, identify missing/delayed equipment: Were additional resources requested timely? ☐ Yes ☐ No ☐ NA
Containment & Mitigation	Was spill contained quickly? ☐ Yes ☐ No Did sewage reach a storm drain or drainage path? ☐ Yes ☐ No Did spill reach surface water? ☐ Yes ☐ No Was there pedestrian/vehicle exposure risk? ☐ Yes ☐ No Were closures or postings needed? ☐ Yes ☐ No Was containment effective? ☐ Yes ☐ No Issues encountered:

EH&S SANITARY SEWER OVERFLOW SPILL REPORT (CONT)

Cleanup & Recovery	Wash water collected? ☐ Yes ☐ No Disinfection completed where appropriate? ☐ Yes ☐ No
Documentation Quality	Required photos collected? ☐ Yes ☐ No Responder Form completed? ☐ Yes ☐ No Volume estimation method documented? ☐ Yes ☐ No All materials submitted to EHS? ☐ Yes ☐ No
Corrective Actions Recommended actions (check all that apply)	☐ Add to preventive maintenance schedule ☐ Increase cleaning frequency ☐ CCTV inspection ☐ Repair/rehab pipe ☐ Equipment upgrade needed ☐ Public education / signage ☐ Training improvement ☐ Other:
Overall Response Effectiveness	What went well:
Overall Response Effectiveness	Areas for improvement:

- END OF EH&S FORM -