CAL POLY SAN LUIS OBISPO

SLUG CONTROL PLAN

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

SIU Permit: 259-S

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CONTENTS

1. INTRODUCTION

California Polytechnic State University, San Luis Obispo (Cal Poly) operates a large, mixed-use university campus that discharges wastewater to the City of San Luis Obispo sanitary sewer system. In accordance with San Luis Obispo Municipal Code Section 13.08.100, this Accidental Discharge and Slug Discharge Control Plan has been developed to identify potential sources of non-routine or accidental discharges and to establish procedures to prevent, control, and respond to slug discharges that could adversely impact the sanitary sewer system or wastewater treatment facilities. This plan outlines Cal Poly's discharge practices, chemical management approach, notification procedures, and preventative measures, and is intended to ensure protection of public infrastructure, the environment, and public health while maintaining compliance with applicable pretreatment requirements..

2. WHAT IS A SLUG DISCHARGE

A slug discharge is any discharge to the sanitary sewer system that is non-routine, episodic, or accidental and that has the potential to cause interference with sewer system operations, wastewater treatment processes, or regulatory compliance. Slug discharges may occur over a short period of time or as a single batch release and may involve high volumes, high concentrations of pollutants, extreme pH, elevated temperature, or toxic substances.

Slug discharges differ from normal, continuous wastewater flows in that they are unplanned or infrequent and can overwhelm or disrupt the capacity of sewer infrastructure or treatment facilities.

- Examples of slug discharges include, but are not limited to:
- Accidental spills of chemicals that enter sinks or floor drains
- Uncontrolled release of water treatment chemicals from boilers or cooling towers
- Sudden discharge of swimming pool water, filter backwash, or cleaning solutions
- Equipment failures resulting in the release of concentrated wastewater
- Improper disposal of chemical solutions, solvents, or cleaning agents

Because slug discharges can damage sewer infrastructure, upset biological treatment processes, or cause permit violations, preventing and promptly responding to such discharges is critical. This Slug Control Plan establishes procedures to minimize the likelihood of slug discharges and to ensure rapid notification and response should one occur.

3. DESCRIPTION OF DISCHARGE PRACTICES

California Polytechnic State University, San Luis Obispo (Cal Poly) discharges wastewater to the City of San Luis Obispo sanitary sewer system from a variety of academic, residential, utility, and support operations. Wastewater discharges are generally categorized as routine domestic discharges or non-routine and batch discharges that may present a potential for slug discharge.

3.1 Routine Discharge Practices

Routine discharges consist primarily of domestic sanitary wastewater generated by normal campus activities, including:

- Restroom facilities, sinks, showers, and laundry facilities in academic, administrative, and residential buildings
- Wastewater generated by the campus population during academic quarters (approximately September 20 through June 10), including students, faculty, staff, and visitors
- Residence hall discharges from Buildings 100–110, 113, 114, and 170

These discharges occur on a continuous basis and are comparable in character to typical municipal domestic wastewater.

3.2 Non-Routine and Batch Discharge Practices

Non-routine or batch discharges occur intermittently and are managed to prevent adverse impacts to the sanitary sewer system. Non-routine discharges are evaluated and controlled to ensure compliance with local discharge requirements and to prevent slug discharges. Where applicable, discharges are paced or otherwise managed to avoid excessive flow, extreme pH, elevated temperature, or high concentrations of pollutants.

These discharges include, but are not limited to:

- Swimming pool filter backwash, maintenance activities, and controlled draining from pools located in Buildings 42, 43, and 46
- Boiler blowdown and condensate discharges from the central hot water boiling plant (Building 40) and approximately fifteen (15) steam boilers serving individual campus buildings
- Cooling tower blowdown from Engineering Complex cooling towers located in Buildings 41, 192, and 197
- Equipment cleaning and maintenance activities involving water treatment chemicals

3.2.1 Pipe Passivation and System Flushing

Pipe passivation and system flushing activities may be conducted during new construction, system commissioning, or large-scale maintenance of campus water systems. Passivation processes can result in wastewater containing varying concentrations of copper and other metals associated with corrosion control and surface conditioning.

Any significant volume drainage associated with pipe passivation, system flushing, or similar activities shall be reported to Cal Poly Environmental Health & Safety (EH&S) prior to discharge to the sanitary sewer system. Advance notification allows EH&S to evaluate the proposed discharge and, when appropriate, notify the City of San Luis Obispo Utilities Department to ensure the discharge is managed in a manner that protects the sanitary sewer system and wastewater treatment processes.

3.3 Prohibited Discharge Practices

The discharge of hazardous materials, concentrated chemicals, solvents, or other prohibited substances to the sanitary sewer is not permitted. Chemicals and waste materials are managed through approved disposal methods and campus environmental health and safety programs.

4. STORED CHEMICALS

All users of hazardous materials at California Polytechnic State University, San Luis Obispo (Cal Poly) are required to maintain an accurate chemical inventory and submit the information through campus Environmental Health & Safety (EH&S) programs. Chemical inventory information is managed electronically using the Risk and Safety Solutions (RSS) chemical management system, which provides area-specific, real-time inventory data accessible from any campus computer. In addition, required hazardous materials information is compiled and submitted through the California Environmental Reporting System (CERS) in accordance with regulatory requirements and is made available to the City of San Luis Obispo Utilities Department upon request.

The list of chemicals maintained across the Cal Poly campus varies by operation and location and is not limited to any single set of materials. Any illustrative examples provided are intended to represent typical chemical categories and are not inclusive of all chemicals present on campus.

5. TYPICAL HAZARDOUS CHEMICALS BY GENERAL GROUPING (ILLUSTRATIVE)

Chemical Group	Typical Examples / Description
Acids and Bases	Inorganic and organic acids; caustic bases such as hydroxides and ammonia solutions
Solvents and Organic Chemicals	Alcohols, ketones, hydrocarbons, halogenated solvents, laboratory and industrial solvents
Flammable and Combustible Liquids	Fuels, fuel additives, flammable laboratory reagents, oils and lubricants
Oxidizers and Reactive Chemicals	Peroxides, nitrates, chlorates, strong oxidizers, water-reactive materials
Toxic and Highly Toxic Substances	Heavy metal compounds, toxic inorganic salts, toxic organic compounds
Compressed Gases	Industrial gases, fuel gases, corrosive or toxic gases, specialty laboratory gases
Corrosion Inhibitors and Water Treatment Chemicals	Boiler treatment chemicals, cooling tower biocides, scale and corrosion inhibitors
Cleaning and Maintenance Chemicals	Detergents, degreasers, disinfectants, sanitizers, custodial chemicals
Fats, Oils, and Greases (FOG)	Animal fats, vegetable oils, cooking oils and grease from food service operations
Agricultural, Animal, and Dairy-Related Chemicals	Sanitizers, cleaners, nutrient solutions, animal care and dairy processing chemicals
Paints, Coatings, and Adhesives	Paints, thinners, epoxies, resins, sealants, and bonding agents

6. PROCEDURES TO NOTIFY OF SLUG DISCHARGES

California Polytechnic State University, San Luis Obispo (Cal Poly) has established procedures to ensure prompt notification of appropriate authorities in the event of an accidental or slug discharge that reaches or threatens to reach the sanitary sewer system.

Immediate Notification

In the event of a known or suspected slug discharge, the following notifications shall be made immediately upon discovery:

6.1 Internal Notification

- Cal Poly Environmental Health & Safety (EH&S) shall be notified immediately.
- Campus Police or Dispatch shall be contacted as appropriate to support emergency response and coordination.

6.2 External Notification

- The City of San Luis Obispo Utilities Department shall be notified immediately if the discharge reaches or may reasonably reach the sanitary sewer system.
- Notification shall be made by phone by a member of the Facilities Management or EH&S to (805) 781-7215.

6.2.1 Information to Be Provided

To the extent known at the time of notification, the following information shall be provided:

- Name and contact information of the reporting party
- Location of the discharge
- Date and time of the incident
- Type and estimated quantity of material released
- Whether the discharge entered or may enter the sanitary sewer system
- Actions taken or planned to contain and control the discharge

6.2.2 Follow-Up Notification

A written follow-up report shall be submitted to the City of San Luis Obispo Utilities Department as directed by the Agency. The report shall describe the cause of the discharge, response actions taken, and measures implemented to prevent recurrence.

7. SLUG DISCHARGE PREVENTION

California Polytechnic State University, San Luis Obispo (Cal Poly) implements administrative, operational, and engineering controls to prevent accidental or slug discharges and to minimize adverse impacts to the City of San Luis Obispo sanitary sewer system.

7.1 Inspection and Maintenance

- Periodic inspections are conducted by Environmental Health & Safety (EH&S) and Facilities personnel in areas with elevated potential for slug discharges, including utility plants, mechanical rooms, food service operations, chemical use areas, and process support facilities.

- Equipment, piping, storage areas, and secondary containment systems are maintained in good working condition to prevent leaks, failures, or uncontrolled releases.
- Identified deficiencies are corrected in a timely manner to reduce the likelihood of future discharges.

7.2 Chemical Storage and Handling

- Chemicals are stored in approved containers and locations appropriate for their hazard class and intended use.
- Secondary containment is used where chemicals are stored or handled near sinks, floor drains, or sewer connections.
- Chemical quantities are minimized where practicable to reduce the potential magnitude of an accidental release.
- Chemical handling and transfer activities are conducted using established campus safety procedures.

7.3 Control of Site Drainage and Runoff

- Campus operations are designed to prevent chemicals or contaminated water from entering the sanitary sewer through uncontrolled pathways.
- Floor drains in chemical use or storage areas are protected, sealed, or otherwise controlled when not actively required for operations.

7.4 Training and Awareness

- Employees and students working in areas with chemical use or potential sewer connections receive training through existing campus safety programs.
- Training includes spill prevention practices, recognition of potential slug discharge conditions, FOG proper management, and emergency notification procedures.
- Training requirements and records are managed through established campus systems.

7.5 Emergency Response and Containment

- Spill response materials appropriate to the hazards present are maintained in or near areas with chemical use.
- Cal Poly EH&S may respond to minor spills using campus resources to contain and prevent discharge to the sanitary sewer.
- Major spills or releases exceeding campus response capability will involve the San Luis Obispo County Office of Emergency Services (OES) Hazardous Materials Team and the San Luis Obispo County Fire Department Hazardous Materials Team.
- Response actions prioritize containment, protection of drains, and prevention of discharge to the sanitary sewer system and protection of storm drain systems.

8. RECORD OF PLAN REVISION

Revision Date	Section(s) Revised	Notes
1/7/2026	All Sections	Complete plan rewrite, plan required upon request by City of SLO.

APPENDIX A – SLUG DISCHARGE PREVENTION ONE SHEET

EH&S "One-Sheet"

CAL POLY
Environmental Health & Safety
ADMINISTRATION & FINANCE

SLUG DISCHARGE PREVENTION & REPORTING

WHAT IS A SLUG DISCHARGE?

A slug discharge is any non-routine, accidental, or sudden release of wastewater or chemicals that could harm the sanitary sewer system or wastewater treatment facilities. Slug discharges may involve high volume, extreme pH, elevated temperature, or toxic substances.

WHY ARE SLUG DISCHARGES A PROBLEM?

Slug discharges can damage the sanitary sewer system and interfere with wastewater treatment processes. Wastewater treatment relies on microorganisms that are sensitive to toxic chemicals, extreme pH, high temperatures, and sudden changes in wastewater composition. A slug discharge can harm these microorganisms, reducing treatment effectiveness and potentially allowing inadequately treated wastewater to be released to the environment.

Slug discharges can also pose a safety risk to campus plumbers and maintenance staff who may be working in the sewer system at any time. Preventing slug discharges protects public infrastructure, worker safety, and environmental quality.

SLUG DISCHARGE AWARENESS

COMMON CAUSES	PREVENT SLUG DISCHARGES
Chemical spills entering sinks or floor drains	Never pour chemicals down sinks or floor drains, never store chemicals in sinks, Store chemicals in tubs, cabinets, or in other secondary containment. Protect or cover drains during chemical handling or transfer.
Improper boiler or cooling tower blowdown, pipe & systems passivation	Keep chemicals away from drains and use secondary containment. Pipe passivation drainage can be arranged with
Swimming pool draining or filter backwash	Pool draining must be coordinated with the City of SLO, including dichlorination and prior notification.
Equipment failure or hose rupture	Conduct regular inspection for systems and equipment. Follow approved procedures for utility and maintenance operations
Improper disposal of chemicals or cleaning solutions	Use spill prevention and containment measures at all times

IF A DISCHARGE OCCURS

1. Stop the source if it can be done safely
2. Protect drains immediately
3. Notify Cal Poly Environmental Health & Safety (EH&S)

SEWER AUTHORITY NOTIFICATION

If a discharge reaches or may reach the sanitary sewer, Cal Poly Facilities Management or EH&S shall notify:
City of San Luis Obispo Utilities Department
(805) 781-7215

RESOURCES

- City of San Luis Obispo Municipal Code https://sanluisobispo.municipal.codes/Code/13.08.100
- Cal Poly Significant Industrial User Permit Sanitary Sewer Discharge Permit: https://afd.calpoly.edu/ehs/docs/CalPoly_SIU.pdf
- Erin Winett, Environmental Protection Specialist egwinett@calpoly.edu