

Slug Discharge Prevention

The purpose of this Fact Sheet is to help Principal Investigators (PIs) and supervisors fulfill their responsibilities to train their staff on the Slug Control Plan. **East Bay Municipal Utility District (EBMUD)** requires the campus to maintain and implement a Slug Control Plan to eliminate or minimize the potential for a slug discharge of any pollutant that could interfere with the EBMUD Wastewater Treatment Plant. Potential pollutant sources include laboratories, photo-processing operations, construction sites, physical plant operations, and food establishments.

What is a Slug Discharge?

A slug discharge is any discharge to the sanitary sewer of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge of:

- Hazardous materials or hazardous wastes
- Non-routine wastewater (e.g., backflow prevention test/flush, domestic water main flush) discharged without pre-approval by the Office of Environment, Health & Safety (EH&S) and EBMUD
- A substance that exceeds EBMUD Local Limits
- Other substance that does not meet the Drain Disposal Restrictions.

Why are Slug Discharges a Problem?

Accidental discharge of pollutants that could cause sanitary sewer or wastewater treatment plant problems is a risk associated with the various chemicals handled in laboratory, shop, and facility operations. The EBMUD Wastewater Treatment Plant treats conventional pollutants, such as total suspended solids or those that deplete the oxygen content of the water. Campus discharge limits are set to prevent damage to the sewage treatment process and to prevent toxic chemicals from passing through the treatment plant into San Francisco Bay or into the residual sludge.

The EBMUD Wastewater Treatment Plant uses bacteria in an oxygen-rich environment to break down sewage solids and to clean the water before it is discharged to San Francisco Bay. The bacteria are sensitive to toxic chemicals and pH changes. A slug discharge of toxic material could kill the bacteria, rendering the treatment process ineffective. This could allow sewage-contaminated wastewater to pass through to the bay.

Additionally, campus plumbers may be working on sections of the campus sanitary sewer system at any time. Harmful slug discharges could hurt these workers if they were exposed to a slug discharge without warning. The following section introduces Best Management Practices for identifying potential spill sources, implementing preventative measures, conducting spill response, and notifying the appropriate authorities in the event of an accidental slug discharge to the sanitary sewer.

Slug Discharge Prevention

Best Management Practices (BMPs)

Following are general BMPs for slug discharge prevention applicable to chemical use, handling, and storage operations. These spill prevention measures should be standard operating procedures for campus hazardous material use operations.

Chemical storage and use in laboratory, shop, and facility operations:

- Avoid open container use of chemicals near sinks and floor drains.
- When open container use of chemicals near sinks and floor drains is unavoidable, cap or plug sinks and drains during chemical use.
- Store chemicals in tubs, cabinets, bermed or diked areas, or in other secondary containment.
- Avoid storing excess quantities of chemicals. Order only what you need and dispose of unwanted or expired chemicals through EH&S.
- Secure storage cabinets and shelves to prevent tipping or falling.
- Use proper containers and restraints.
- Maintain spill containment and clean-up materials nearby.
- Follow good housekeeping practices.
- Never store chemicals in sinks.

Inspection and maintenance of storage areas:

All chemical use and storage areas should be regularly inspected for implementation of BMPs. In chemical storerooms where floor drains go to the sanitary sewer, the floor drains should be plugged, except when they are in use (for example, when floors are mopped).

Chemical storerooms should use removable drain plugs in such cases.

Material handling and transfer:

Chemicals transferred within buildings or between buildings should be placed in secondary containers that can contain more than 100% of the chemical, in case the primary container breaks. Please see the [Transporting Chemicals Safely on Campus Fact Sheet](#).

Shops, hazardous waste accumulation areas, satellite accumulation areas, or other hazardous material use areas must post the attached Slug Discharge Notification Procedure. This notification must be posted in all areas where there is the potential for a slug discharge to the sanitary sewer. For laboratories, this spill notification advisory is included in the Chemical Hygiene Plan (CHP) Emergency Procedures Section. Posting the CHP in the laboratory satisfies the EBMUD posting requirement. The CHP is available from your Department Safety Coordinator.

All personnel in operations that could cause a slug discharge must be trained on the contents of this Fact Sheet. For laboratory staff, reading and signing the CHP provides the required documented training. For all other chemical users, training should be documented on a roster that is kept on file.

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EBMUD inspects the campus for indications of Slug Control Plan implementation. Inspectors look for BMP implementation and check to see that slug discharge notification procedures are posted in chemical use areas. EBMUD may also check the CHP or other personnel training records. EBMUD may issue a notice of violation if the spill notification requirements are not posted, if personnel are not trained, or if staff fail to implement the notification procedures. If violations are not corrected, EBMUD may impose monetary penalties or restrict the use of the drains. For questions related to Slug Control Plan requirements, contact EH&S at (510) 642-3073.