These procedures provide the proper clean-up procedures and safety measures to be followed during sewage spills and clean-up.

These procedures apply to:
- Chico State employees who respond to sewage spills.
- Facilities Management Services (FMS) employees and Environmental Health & Safety (EHS) personnel.
- Indoor and outdoor discharges.

**Purpose**

These procedures are designed to protect employees, the public, and the environment from the potentially harmful effects associated with sewage spills.

**Responsibility**

Facilities Management Services (FMS) personnel are the primary responders to sewage spills. Responsibilities include proper clean-up and disposal of spilled sewage.

The Department of Environmental Health and Safety (EHS) will provide guidance and assistance as outlined in these procedures.

Facilities Management Services (FMS) supervisors and managers will ensure appropriate training is provided to employees responding to sewage spills including blood borne pathogen training, confined space entry training, and other training as warranted.

**Health Hazards**

Many disease-causing agents are potentially present in raw sewage. These organisms include bacteria, viruses, fungi and parasites. In the U.S., most illnesses associated with raw sewage exposure produce mild to severe flu-like or cold-like symptoms. However, more serious illnesses, such as Hepatitis A, can be contracted through direct contact (mouth, eyes, nose, and ears) with raw sewage. With respect to HIV (AIDS) and HBV (Hepatitis B), the Division of Occupational Safety and Health (DOSH) has stated, in the Bloodborne Pathogen Standard, the following:

*There is no evidence to suggest that sewage plant or wastewater workers are at increased risk for hepatitis B infection. HBV and HIV may be present in wastewater, but only in a non-viable state and in very dilute concentrations, which would not be expected to pose a risk to wastewater workers or sewage plant workers.*

Since microorganisms can cause disease by entering the body through the mouth, eyes, ears, nose, or through cuts and abrasions to the skin, proper hygiene, and appropriate personal protective equipment (PPE) must be utilized when the potential for direct contact with raw sewage is possible.
Proper Hygiene

Wear waterproof gloves

Wash your hands thoroughly after clean-up work. Use plenty of soap, scrub for at least 30 seconds, and rinse thoroughly. The California Department of Health Services states: "frequent, routine hand washing is the most important safeguard in preventing infection by agents present in sewage."

Do not touch fecal matter or raw sewage with bare hands. Wear waterproof gloves and use an instrument such as tongs or a spade when direct contact with fecal material is necessary.

Do not touch your nose, mouth, eyes or ears with your hands unless you have just washed.

Do not smoke, eat, drink, apply lip treatments, or chew gum while cleaning up fecal matter or raw sewage.

Reduce exposure by keeping those who are not properly protected from coming in contact with the material.

Clean everything, including clothes, tools, and footwear, that came in contact with the fecal matter or raw sewage. Use an appropriate disinfectant to wash down contaminated surfaces and clean-up equipment.

Personal Protective and Clean-Up Equipment

As appropriate, use the following equipment when cleaning sewage spills.

- Waterproof gloves
- Face shield
- Impervious Coveralls
- Disinfectant detergent
- Buckets
- Wet/Dry Vacuum
- Hudson Sprayers (or equivalent)

- Mop(s)
- Tongs
- Shovels
- Portable pumps
- Fans/Blowers
- Confined Space Entry Equipment
- Portable Generator

Clean-Up Procedures

1. Evaluate how big the spill is (or may become) and take actions to contain the spill in the smallest area possible. If possible, prevent the spill from entering a storm drain.
2. Secure area against unauthorized entry.
3. Investigate the potential for electrical hazards and de-energize electrical circuits as necessary.
4. Determine if confined space procedures are required and implement as necessary.
5. Follow the “Proper Hygiene” section of this document during any clean-up activities.
6. Acquire all appropriate Personal Protective Equipment (PPE) and clean-up equipment.
7. Prepare disinfectant detergent in bucket(s) and/or Hudson Sprayer(s) or equivalent, in accordance with the manufacturer’s directions (SDS).
8. Put on appropriate PPE.
9. Remove all furniture, loose rugs, and other items from the contaminated area.
10. Saturated wall-to-wall carpeting (including padding) should be removed, wrapped in plastic, and delivered to a sanitary landfill. These items can not normally be adequately cleaned. If you decide to keep the carpeting, hire a licensed carpet cleaning company to steam clean and disinfect the carpet.

11. All hard surfaces, such as linoleum, hardwood floors, concrete, wood moldings, wood, and metal furniture, etc. should be thoroughly cleaned with hot water and disinfectant detergent. Let the surface air-dry.

12. Upholstered furniture, loose rugs, draperies etc., should be professionally cleaned. Be sure to notify the cleaner of the nature of the problem so appropriate precautions can be taken.

13. Remove and replace plaster, plasterboard, and lath that have been saturated and are soft to the touch. If the surface has only been wetted, clean as you would a hard surface, but do not saturate the plaster.

14. Clean sinks, rinse basins, and/or other plumbing fixtures that have had sewage back-up, with disinfectant detergent.

15. Collect and dispose of raw sewage and/or fecal matter into an active sewer system.

16. If spill is inside a building, increase air circulation to reduce odors and mold growth. Open all windows and doors. The use of fans and heaters should also be used to speed the drying process.

17. Following complete clean-up of the contaminated area, wash your hands thoroughly and launder soiled clothes separately.

18. Disinfect “clean-up” water-proof gloves, mops, brooms, shovels, tongs, brushes, etc. with disinfectant detergent. Air dry thoroughly.

**Additional Procedures**

If the spill exceeds 1,000 gallons, occurs where public contact is likely or if any amount enters a waterway via storm drain or other means, contact EHS at 898-5126 or UPD at 898-5555, if after hours so EHS can be notified.

**Exposure and First Aid**

If you believe raw sewage has come into direct contact with your eyes, mouth, ears, nose, or a cut, abrasion, puncture, etc., immediately and thoroughly wash the exposed area with copious amounts of soap and water and seek the care of an authorized Occupational Physician.