

## **DEFINITION OF SEWAGE & WASTEWATER**

Sewage, solid waste, and all other waterborne waste that comes *into* or *from* the Wastewater Treatment Plant.

## **WHY ARE SEWAGE AND WASTEWATER POTENTIALLY DANGEROUS TO HUMAN HEALTH?**

Pathogenic (disease-causing) microorganisms that may be found in sewage include those responsible for:

- bacillary dysentery
- cholera
- typhoid fever
- hepatitis type B
- polio
- gastroenteritis

Other organisms that may be found in wastewater include parasites such as amoebae, roundworms, other protozoans (including hookworms), and tapeworms. These are water-borne diseases, transmitted by the FECAL-ORAL route. That is, affected individuals shed the microorganisms in their feces, and healthy individuals may become ill through the ingestion of water or food contaminated with feces or sewage. Other routes of infection include inhalation (breathing spray or mist containing pathogenic organisms, through the lungs, and into the bloodstream), and direct contact, (through a break in the skin, and into the bloodstream) as in the case of tetanus, or through eye and ear infections.

## **HOW CAN I MINIMIZE THE RISK OF COMING INTO CONTACT WITH THESE CONTAMINANTS DURING A WASTEWATER SPILL CLEAN UP?**

- Wash hands frequently and always prior to drinking, eating, and smoking.
- Eat, drink, and smoke only in designated areas, never while working in direct contact with wastewater.
- Wear proper PPE (see Proper PPE section below)
- If work clothes become soiled, change into clean garments immediately. If you get drenched, take a shower before changing into a clean change of clothes.
- Do not wash your work clothing at home, and avoid going home in your work clothes or boots. Change into clean clothing and clean shoes before going home.
- Clean all contaminated tools with a 2 % solution of household bleach and water.
- Handle sharp objects with one hand and with extra care to prevent cuts and punctures that may provide direct portals of entry into the bloodstream.
- Treat cuts and abrasions promptly, using proper first aid measures. Report all such injuries to your supervisor.
- Ensure your tetanus shots are up to date: every 10 years, booster after the 5th year.

## **WHAT IS THE PROPER PPE TO WEAR DURING A CLEAN UP OF A WASTEWATER SPILL?**

- Always wear goggles and plastic face shields if there is a probability of exposure to aerosols.
- Wear respiratory protection if there is a probability of exposure to mist, sprays, and dusts.
- Always wear long sleeve shirts
- Wear a coated Tyvek suit if there is a probability of exposure to splashes on clothes.
- Always wear waterproof latex gloves for light work; reinforced rubber gloves for heavy activities; and puncture-resistant gloves for screening waste and removing sharp objects.
- Wear waterproof rubber aprons that can be easily washed, if there is a probability of exposure to sprays/splashes.
- Always wear waterproof rubber boots that can be easily washed.

## **HOW DO I CLEAN UP A WASTEWATER OR SEWAGE SPILL?**

- Wear the proper PPE to protect yourself from wastewater contaminants.
- All solid waste must be raked up and taken to the Wastewater Treatment Plant and put back into the system or taken to the landfill.
- When transporting solid waste debris in buckets and/or drums, they must be lidded and labeled per **BMP 313 - Drum/Container Management**.
- The area should then be decontaminated with household bleach diluted with water. The dilution should fall between 1 part bleach and 10 parts water (1:10) and 1 part bleach and 100 parts water (1:100). Wear eye protection when there is a probability of exposure to splashes or sprays.
- If bleach is not available, lime can also be used to decontaminate an area. Lime that comes in powder form should be spread evenly over the contaminated area.
- When using lime, wear long sleeves, gloves, and face shield to avoid getting it on your skin or in your eyes. Lime will burn skin if it is moistened. Wear respiratory protection if there is a probability of exposure to dust from the lime. Wear a Tyvek suit or other protective clothing if there is a probability that lime will get on your clothing. The suit shall be disposed of after the job is complete. Please read the MSDS sheet for the product before use.
- If the spill site is an active walk or drive way then it must be roped off then disinfected immediately to limit the amount of area that is affected by the contaminants and reduce the risk of spreading the contaminants to other areas.
- All other non-active areas must also be disinfected with bleach water.
- Place used PPE in the dumpster or wash thoroughly with bleach water. Also, use good hygiene senses after working around wastewater clean ups and wash hands before eating.

## **EMPLOYEE TRAINING**

All personnel shall receive training or at the least have access to this BMP when dealing with any sewage and wastewater spill cleanup. Environmental Services can provide training to all supervisors and/or environmental coordinators. The supervisor and/or team environmental coordinator will provide training to the workforce.

**ENVIRONMENTAL BEST MANAGEMENT PRACTICE**  
**BMP No. 401**  
**Sewage & Wastewater Spill Clean Up**

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All personnel responsible for cleanup will be task trained on the necessary equipment (i.e. bobcat, backhoe, 10 yd<sup>3</sup> truck, etc.). The appropriate area will provide this training.

**QUESTIONS OR NEED HELP?**

**Division Representatives**

**Enviro Representatives Phone Extensions:** Brian Chronowski (WWT)... 865-6257

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**Safety Department** Regarding Safety issues