

TRAP WASTES

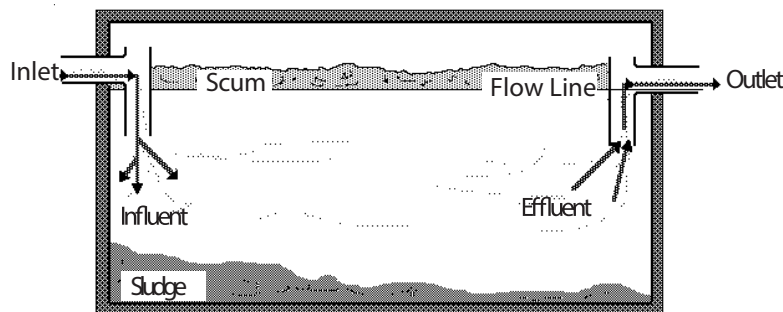
The Lincoln-Lancaster County Health Department (LLCHD) often uses the terms *traps* and *sumps* to mean the same thing. Other terms used in the *Uniform Plumbing Code* (UPC), in regulations, or by contractors and installers are: *interceptors*, *grit basins*, *sediment bowls* (or *basins*), or *settling tanks*.

All of these installations are intended to ensure that waste water is properly handled and treated. According to the UPC, "liquid wastes containing grease, flammable wastes, sand, solids, and other materials [may be] harmful to a building's drainage system, the public sewer, or the sewage-treatment plant or process" (section 6.1.1). Traps are designed to restrict the flow of wastewater contaminants—such as sludge, debris, oil, soil, sand, or gravel—but to allow the free flow of the water itself.

Trap Structure and Maintenance

A trap has three basic parts. First, there is a pipe or drain (or both) that allows water to flow into the tank. This pipe or drain is called the *inlet*, and the water that enters through it is called the *influent*. Second, there is the tank, basin, or bowl itself. This is the area in which the water collects, scum and oils rise to the surface, and sediments, heavy chemicals, and petroleum-contaminated particles sink to the bottom. Third, there is the pipe that leads from the tank to the sanitary sewer. *It should not empty into a storm drain, septic tank, septic lagoon, gutter, or storm sewer.* This pipe is called the *outlet*, and the water that exits through it is called the *effluent*. Some outlets include a baffle or filter to prevent the release of scum or solids that are suspended in the *top* layer of the trap waste contents.

Any trap must be maintained in order to operate in an efficient manner. Maintenance includes periodically removing accumulated scum, oil, grease, solids, or other settled, suspended, or floating debris. These contaminants will occur in one or more of the layers within the tank: floating on the water's surface, suspended within the water, or collected at the bottom of the tank.



Many traps will have a layer of *scum* floating on the water surface. This layer should remain above the *flow line* (the level at which water may flow out of the tank) so that it is not released with the effluent. You should periodically check the level of scum in the tank to ensure that too much does not build up. Occasionally, this scum will include a film of oil. You should remove this oil occasionally. This oil should be reported as a special waste and disposed of properly.

Below the scum layer, the tank contains a relatively large body of water. Water collects here to let sediments settle. As the sediments settle, the water should be clearer at the flow line. If a trap is functioning properly, only water that is free of scum, oil, or solids should flow out the trap through the outlet.

The layer of accumulated solids, petroleum-contaminated particles, heavy chemicals, and sediments that have settled to the bottom of the tank is known as *sludge*. You will need to remove this sludge periodically. If a trap is not properly maintained, the sludge level will get too high, and solid or semisolid wastes may be released with the effluent into sewer lines.

Regular pumping and removal of scum and sludge are the most important tank maintenance practices you can employ.

Trap Waste is a Special Waste

Liquid **and** solid wastes generated by cleaning out and maintaining traps are special wastes. An inventory of these wastes must be submitted to LLCHD. In addition, businesses must apply for a Special Waste Disposal Permit from LLCHD in order to dispose of the waste in the municipal landfill. For special waste types 1–5, a free permit will be issued through the wastewater treatment plant. This permitting process will be handled by the licensed liquid waste hauler.

When you apply for a permit, you will be required to submit the results of one or more laboratory tests conducted on a representative sample of the waste. These analytical testing methods that must be conducted in order to landfill trap wastes are contained in the third edition of *Test Methods for Evaluating Solid Waste, Physical Chemical Methods*, EPA publication SW-846. The municipal wastewater treatment plant will require different testing procedures. EPA-approved laboratories that can conduct these tests are listed in the yellow pages of your telephone book under “Engineers–Consulting,” “Engineers–Environmental,” or “Engineers–Hazardous and Industrial Waste.” Wastes generated in traps are classified into one or more of the following special waste type categories.

Mud or Sand Sumps or Trap Waste - This type of waste normally collects in properly maintained traps in areas such as floor drains, motor vehicle wash bays, and process floors. This type of trap often has multiple floor drains. The trap should be designed to prevent sand and other solid materials from obstructing the sewer system. This waste type category does **not** include the oils and greases separated out by means of a sump or oil/water separator or wastes heavily contaminated with petroleum or other products that are found in improperly maintained traps. Those oils and greases must be reported as separate waste types.

In order to transport this waste to the Theresa Street Wastewater Treatment Plant, contact a liquid waste hauler. The liquid waste hauler will handle permitting requirements. (See the list of liquid waste haulers that pump traps and are currently licensed in Lancaster County at the end of this fact sheet.)

In order to receive a Special Waste Permit to landfill this type of waste, you must dewater it. The waste must pass the Paint Filter Liquids Test (EPA SW-846 Method 9095). In addition, include the results of a Total (8 Heavy) Metals analysis (EPA SW-846 Method 6010). You may need to have a Toxic Characteristic Leaching Procedure (TCLP) performed on a waste sample. This procedure is discussed in *Title 40, Code of Federal Regulations* (40 CFR) in Section 261.24 and in Appendix II of Section 261. You will also need to have a Total Recoverable Petroleum Hydrocarbons (TRPH) analysis (EPA Method 418.1) conducted on waste samples.

Petroleum Type Grease Trap Waste - This type of waste normally collects in properly maintained traps in areas such as vehicle service and repair garages, some gasoline stations, grease pits, oil/water separators, industries that use petroleum products in their processes, water treatment separators, sumps, and floor drain systems. Other types of activities might also produce petroleum type grease trap waste. This waste type is often **incorrectly** classified as “Mud or Sand Sumps Trap Waste.”

For wastes containing free liquids, contact a liquid waste hauler to transport this waste to the Theresa Street Wastewater Treatment Plant. Telephone the wastewater treatment plant at 441-7967 for information regarding any additional testing that must be conducted prior to transportation to the municipal wastewater treatment plant. (See the list of liquid waste haulers that pump traps and are currently licensed in Lancaster County at the end of this fact sheet.) Dewatered waste oil may be collected by a waste oil recycler. You may obtain information about oil recyclers by calling LLCHD at 441-8040.

In order to receive a Special Waste Permit to landfill this type of waste, you must dewater the waste. The waste must pass the Paint Filter Liquids Test (EPA SW-846 Method 9095). In addition, include the results of a Total (8 Heavy) Metals analysis (EPA SW-846 Method 6010). You may need to have a Toxic Characteristic Leaching Procedure (TCLP) performed on a waste sample. This procedure is discussed in *Title 40, Code of Federal Regulations* (40 CFR) in Section 261.24 and in Appendix II of Section 261. You will also need to have Total Recoverable Petroleum Hydrocarbons (TRPH) analysis (EPA Method 418.1) conducted on waste samples. In addition, a Closed-Cup Flashpoint analysis must be conducted on a representative sample of the waste. The results of these analyses must be submitted along with your Special Waste Inventory/Permit Application form.

Cooking Grease Trap Waste - This type of waste normally collects in properly maintained grease traps in areas such as commercial, industrial, or institutional kitchens or food-processing facilities. It includes animal fat and vegetable shortening. Wastes in this waste type might include any oily matter used for the purpose of and resulting from the processes of cooking, preparing, or rendering animal or vegetable products or by-products. This type of waste often contains detergents and other chemicals. Therefore, it is unsuitable for recycling. Contact a liquid waste hauler to transport this waste to the Theresa Street Wastewater Treatment Plant.

Liquid Waste Haulers

Liquid waste haulers are licensed on an annual basis. The licenses are issued based on the types of wastes their equipment is designed to haul.