Septic Systems - Operations & Maintenance

System Components

A typical household sewage treatment system consists of a house sewer, septic tank, distribution box and absorption field or seepage pit.

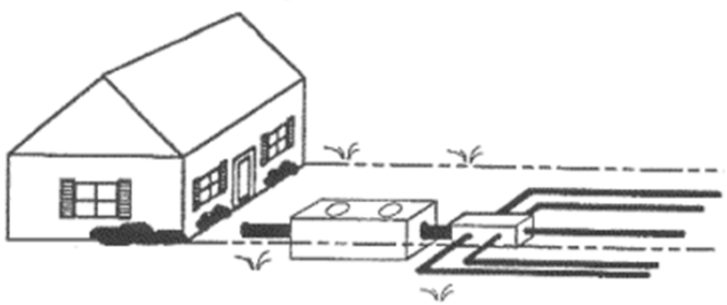
House Sewer - The pipeline connecting the house and drain and the septic tank.

Septic Tank - Untreated liquid household wastes (sewage) will quickly clog your absorption field if not properly treated. The septic tank provides this needed treatment. When sewage enters the septic tank, the heavy solids settle to the bottom of the tank; the lighter solids, fats and greases partially decompose and rise to the surface and form a layer of scum. The solids that have settled to the bottom are attacked by bacteria and form sludge. Septic tanks do not remove bacteria and, therefore, what is discharged cannot be considered safe.

Distribution Box - Serves to distribute the flow from the septic tank evenly to the absorption field or seepage pits. It is important that each trench or pit receive an equal amount of flow. This prevents overloading of one part of the system.

Absorption Field - A system of narrow trenches partially filled with a bed of washed gravel or crushed stone into which perforated or open joint pipe is placed. The discharge from the septic tank is distributed through these pipes into the trenches and surrounding soil. The subsurface absorption field must be properly sized and constructed to assure satisfactory operation and a long life.

Seepage Pit - A covered pit with a perforated or open-jointed lining through which the discharge from the septic tank infiltrates into the surrounding soil. It is generally installed in sandy or gravel-type soils. Like the absorption field, the seepage pit also must be properly sized and constructed. While seepage pits normally require less land area to install, they should be used only where absorption fields are not suitable and well water supplies are not endangered.



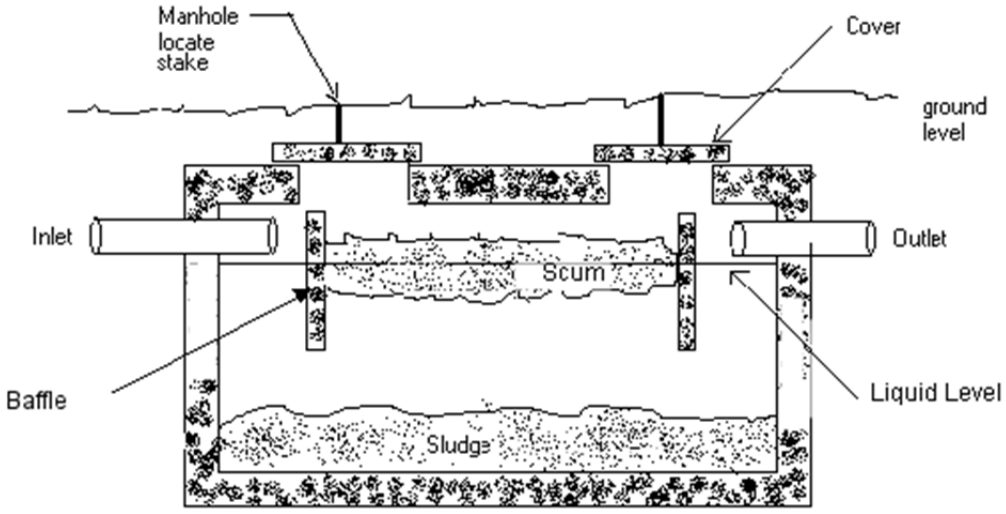
In most rural areas and in many suburban residential areas, individual household sewage treatment systems are relied upon for the disposal of household wastes. Wherever possible, sewage should be collected in community sewers connected to a central treatment plant.

A household sewage treatment system will serve a home satisfactorily only if it is properly located, designed, constructed and maintained. The purpose of this brochure is to explain how your system works and how it should be operated and maintained.

Operation and Maintenance

- The contents of the septic tank should be pumped every two to three years or when the total depth of sludge and scum exceeds one-third of the liquid depth of the tank. If the tank is not cleaned periodically, the solids are carried into the absorption field; rapid clogging occurs; premature failure follows; and finally, the absorption field must be replaced. Pumping your septic tank is less expensive than replacing your absorption field.
- Detergents, kitchen wastes, laundry wastes and household chemicals in normal amounts do not affect the proper operation of household sewage treatment systems. However, excessive quantities can be harmful.
- Avoid the disposal of cigarette butts, disposable diapers, sanitary napkins, plastics, trash, etc., into your household sewage system. These items are not readily decomposed.

- Septic tank additives are not recommended. Additives are unnecessary to the proper operation of household systems and may cause the sludge and scum in the septic tank to be discharged into the absorption field, resulting in premature failure. Some additives may actually pollute groundwater.
- Garbage grinders substantially increase the accumulation of solids in the septic tank, as well as the solids entering the absorption fields and pits. Their disadvantages outweigh the convenience they provide and are not recommended for households with their own sewage treatment systems. If used, the septic tank size should be increased.
- Connecting your laundry wastes to a separate waste system (dry well or seepage pit), while not normally necessary, will reduce the load on the regular system and permit the survival of a marginal system.
- All roof, cellar and footing drainage, and surface water must be excluded from the system. This drainage water can be discharged to the ground surface without treatment; make sure it drains away from your sewage treatment system.
- Roof downspouts should not drain toward the absorption field.
- Backwash from water softeners and/or iron/manganese removal equipment may be discharged to the septic tank and absorption system or to a separate system.
- Roots from trees in the immediate area of the absorption lines may clog the system.
- Keep swimming pools (above or in-ground) away from the absorption field.



Cross Section of a Typical Concrete Spetic Tank

Caution

- Avoid entering your septic tank.
- Individuals have died from gas asphyxiation.
- Never permit heavy equipment to pass over the absorption field.
- Conserve your water usage; this can prolong the life of your sewage treatment system. Check defective toilet tank valves, repair leaky fixtures, install appliances and fixtures that use less water and avoid wasteful practices.
- Your sewage treatment system is normally designed to accommodate two persons per bedroom. If your household is larger than this, or if you add additional bedrooms, enlarge the system.
- If surface water from higher ground is flowing onto your absorption field, install a ditch or berm to intercept this surface water.

For more detailed information concerning special conditions in your area, contact the Cattaraugus County Health Department.

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