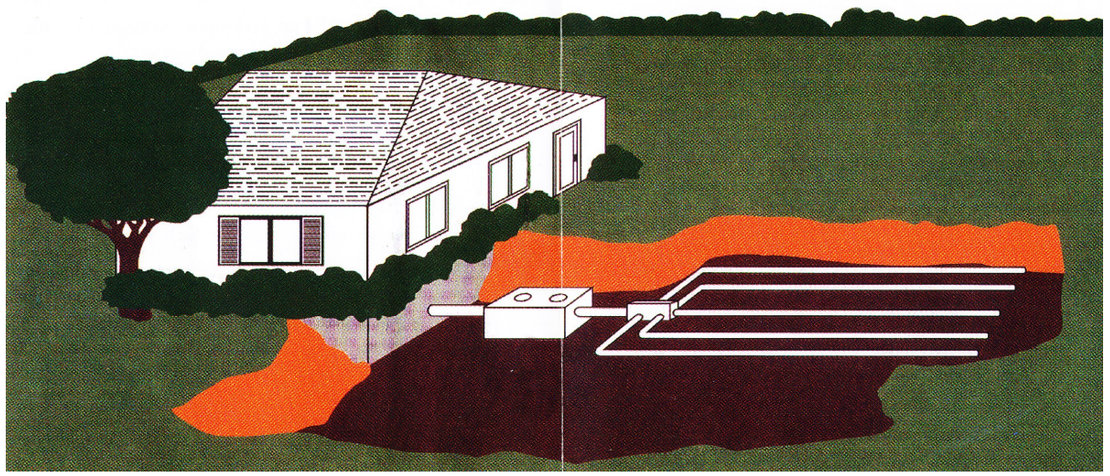
Septic Systems Explained

Septic systems are individual wastewater treatment systems that use the soil to treat small wastewater flows, usually from individual homes. They are typically used in rural or large lot settings where centralized wastewater treatment is impractical and unnecessary.

There are many types of septic systems in use today. While all septic systems are individually designed for each site, most septic systems are based on the same principles.

A Conventional Septic System



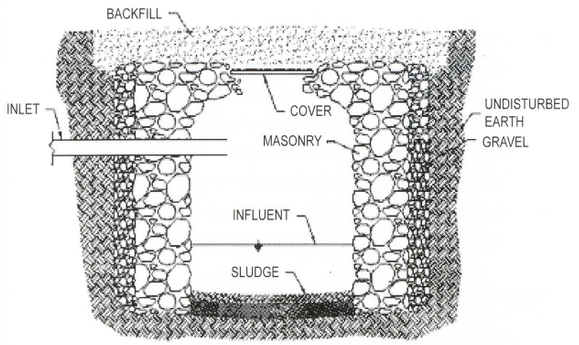
Septic systems are not complicated! A septic system consists of a septic tank, a distribution box and a drainfield, all connected by pipes called conveyance lines.

Your septic system treats your household wastewater by temporarily holding it in the septic tank where heavy solids and lighter scum are allowed to separate from the wastewater. This separation process is known as primary treatment. The solids stored in the tank are decomposed by bacteria and should be removed, along with the lighter scum, by a licensed septic tank pumper.

After the partially treated wastewater leaves the tank, it flows into a distribution box, which separates this flow evenly into a network of drainfield trenches. Drainage holes at the bottom of each line allow the wastewater to drain into gravel trenches for temporary storage. This then slowly seeps into the subsurface soil where it is further treated and purified (secondary treatment) before replenishing the ground water and eventually flowing to a stream or other body of water.

Some homes may still have a cesspool –an underground tank that stores sewage with an inlet pip but no outlet (Continued rear panel)

(cont.) pipe. A cesspool basic design is shown below. If you suspect that you have a cesspool waste disposal system instead of a conventional system, call your local health district or the Conservation District listed below.



For More Information

For more information about septic systems and their maintenance, including educational videos, contact you local health department or the conservation district indicated below.

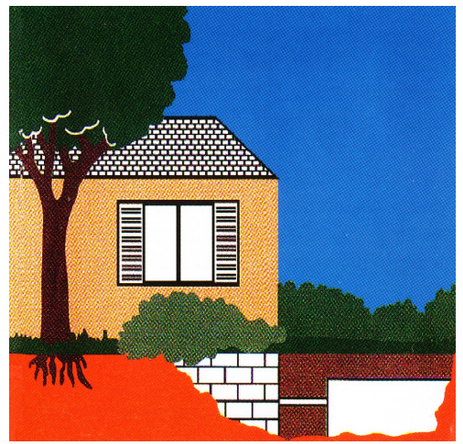
Funded in part by the CT Department of Environmental Protection through a U.S. EPA Nonpoint Source Grant under section

Southwest Conservation District

(203) 287-8179 x 111 or 113
swcd43@sbcglobal.net

51 Mill Pond Road
Hamden, CT 06514

Septic Care & Maintenance for the Homeowner



Your Septic System Explained

Funded by the Long Island Sound License Plate Program
Connecticut Department of Environmental Protection

Rev. Three

Caring for Your Septic System

Proper Maintenance

The accumulated solids in the bottom of the septic tank should be pumped out every two to three years to prolong the life of your system, as frequently as every year for large households with heavy use or those with whirlpools, hot tubs or garbage disposals.

Current installations require a filter at the tank outlet to protect and extend the life of the drainfield system. This must be checked when the tank is emptied.

A properly designed and maintained septic system requires minimal care, typically costs less than sewer fees and keeps water on site for replenishment of plants and wells.

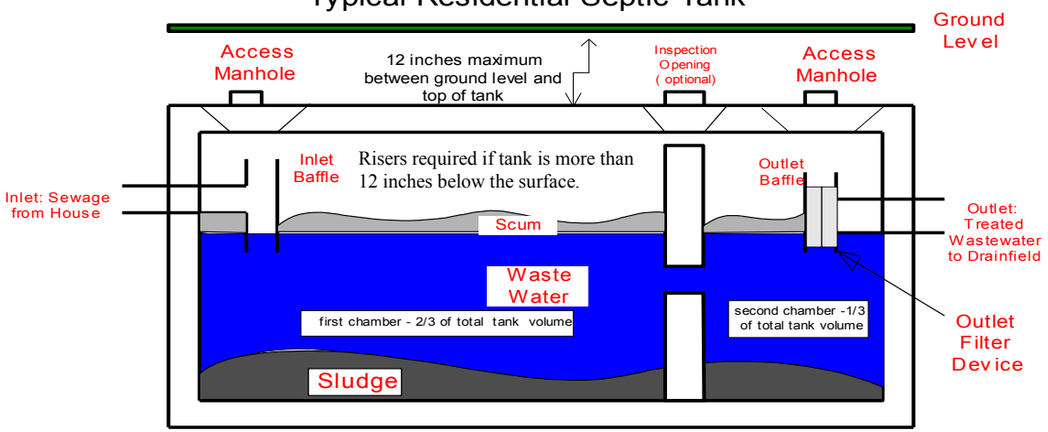
Neglect or abuse of your septic system can cause it to fail. Failing septic systems can -

- cause a serious health threat to your family and neighbors, or put thousands of water supply users at risk if you live in a public water supply watershed;
- degrade the environment, especially lakes, streams, and groundwater;
- be very expensive to repair; and
- reduce the value of your property.

Know the signs of a failing system.

- sewage surfacing over the drainfield (especially after storms);
- lush, green growth over the drainfield;
- slow -draining toilets or drains; and
- sewage odors.

Typical Residential Septic Tank



Tanks installed as of July 2000 are required to have two chambers and two cleanout access points, as well as an outlet filter. Access manholes must be a minimum of 17 inches wide. *Tanks installed before this date may have different configurations*. Older tanks should be replaced with one of current design. Systems with drainfields uphill from the tank require a pump, two tanks and wiring for the pump and alarm on two different circuits.

Tips to Avoid Trouble

DO learn the location of your septic system and drainfield. Keep a sketch of it handy for service visits (check with your local health district for an "as built" drawing). Leave the area over a drainfield undisturbed with only a mowed grass cover. Roots from trees or shrubs may clog and damage your drain lines. Pavement over the field prevents evaporation and easy inspection.

DO have your tank pumped out and system inspected every 2 to 5 years, more often if your household is large or uses large quantities of water, by a licensed septic contractor (in the yellow pages or contact your local health department). Filters at the outflow baffle have been required on new tanks since 2000 and should be checked, cleaned or replaced at the same time.

DO have your pumper report to you on the condition of your system. Keep a record of pumping, inspections, and other maintenance. Steel septic tanks should always be replaced (See other side of this brochure.)

DO practice water conservation. Repair dripping faucets and leaking toilets, run washing machines and dishwashers only when full, stagger loads, avoid long showers, and use water-saving features in faucets, showerheads and toilets.

DO divert roof drains and surface water from driveways and hillsides away from the septic system. Keep sump pumps and house footing drains away from the system.

DO take leftover hazardous household chemicals to your approved hazardous waste collection center for disposal.

DO use low-phosphate liquid detergents and toilet paper safe for septic systems

DON'T allow anyone to drive or park over any part of the system.

DON'T make or allow repairs to your septic system without obtaining the required health department permit. Use professional licensed septic contractors when needed. Do not allow tanks to be washed or disinfected.

DON'T use commercial septic tank additives.Some of these products contain organic solvents and will pollute groundwater.

DON'T use your septic system as a trash can by dumping nondegradables down your toilet or drains. Also, don't poison your system and the groundwater by pouring harmful chemicals down the drain. These chemicals can kill the beneficial bacteria that treat your wastewater.

Keep the following materials out of your septic system:*

NONDEGRADABLES: grease, cigarette butts, cat litter, disposable diapers, plastics, paper towels, facial tissues or personal hygiene items.

POISONS: gasoline, oil, paint, paint thinner, pesticides, antifreeze, poolwater, water-softener discharges, prescription medicines, and excess household cleaners, including bleach.Hot tubs, swimming pools, and water treatment device backwash (i.e. softener backwash) is not sewage and cannot be directed to septic systems.

*Garbage disposals are not recommended for residential septic systems; they will increase the amount of solids in your tank by as much as 50% and could clog your system requiring expensive repairs. If you do have one, use it sparingly and have your system pumped more often.