

The care and feeding of your septic system

Septic systems are very much like automobiles. They need periodic inspections and proper maintenance to continue working properly. Also, like automobiles, they must be operated properly and cannot be overtaxed without the owner suffering consequences such as repair or replacement bills.

Often overlooked or neglected is the fact that a septic system should have a regular check-up to prevent problems. You should have your septic system inspected every 1-2 years by a professional and your tank pumped when necessary. The septic tank traps the solids in the wastewater and should be checked to determine whether or not it is time for it to be pumped out. The inspection port should be opened and the baffles (internal slabs or tees) should be checked to ensure that they are in good condition since the last check-up (see Figure 1). If you have a septic tank effluent filter, it should also be inspected. Effluent filters require periodic cleaning. Some filters are now equipped with alarm systems to alert the homeowner when the filter has become dirty and needs to be cleaned. Failure to keep the filter clean may result in a backup of wastewater in the home from a clogged filter. Septic systems that have mechanical parts such as a pump should be inspected at least once a year or more frequently as recommended by the manufacturer. The absorption field should be checked for sogginess or ponding, which indicates improper drainage, a clogged system, or excessive water use. The presence of damp or soggy areas or odors may indicate a leak in the system.

SEPTIC TANK

A properly designed septic system will have a septic tank with sufficient volume to accumulate solids for several years. As the level of solids rises in the tank, the wastewater has less time to settle properly and suspended solid particles flow into the absorption field. If the tank is not periodically pumped out, these solids will

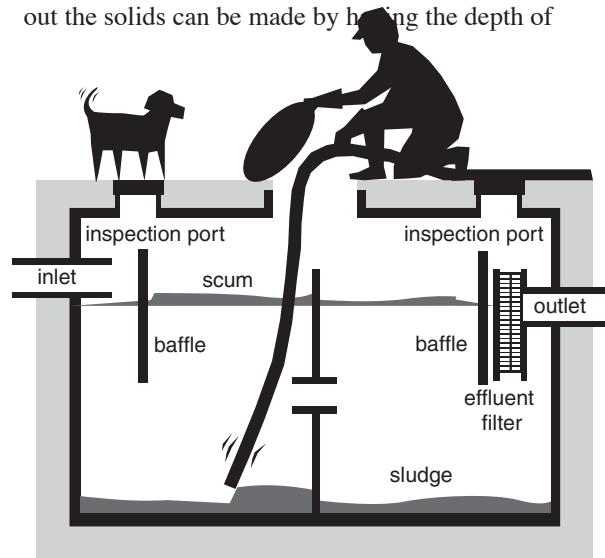
eventually clog the absorption field to the point where a new field will be needed.

When the tank is pumped, the contractor should pump the contents through the manhole, which is usually located in the center of the tank, rather than through the inspection ports. Pumping through one of the inspection ports could damage the baffles inside the tank (see Figure 1). Damage to the baffles could result in the wastewater flowing directly into the absorption field without the opportunity for the solids to settle.

Remember, commercial septic tank additives do not eliminate the need for periodic pumping and may be harmful to the absorption field. You should check your local health department regulations before using additives. Be sure when the septic tank is pumped that it is completely emptied. It is not necessary to retain any of the solids to restart the digestive process. You do not need biological or chemical additives for successful restart or continuous operation of your septic system, nor should you wash or disinfect the tank after having it pumped.

When to Have Your Septic Tank Pumped

A specific determination of when it's time to pump out the solids can be made by having the depth of



Cross-section of a two-compartment septic tank being pumped

Fig. 1

solids and level of scum buildup on top of the wastewater in the septic tank checked periodically. Two factors affect how often you should have your septic tank pumped. Whether you need to have your tank pumped every year, once every five years, or some other time interval is affected by these factors. The first factor is the size or capacity of the tank itself. If more people are living in the home than when the system was installed, or if new high water use appliances or technologies such as a hot tub or whirlpool bath are now in use, then the capacity may be too small. The more people using a system, the faster the solids will accumulate in the tank, and the more frequently the tank will need to be pumped. Also, the additional surge of water from hot tubs and whirlpool baths may wash solids out of the tank and into the absorption field. An inspection can determine whether the system is of adequate capacity to handle the volume of solids and flow from the number of people in the household and types of appliances used. A larger capacity system provides better treatment and requires less pumping.

The second factor is the volume of solids in the wastewater. If you have a garbage disposal, for example, you will have to pump out your system more frequently than persons disposing of their food wastes through other means. The use of a garbage disposal may increase the amount of solids in the septic tank by as much as 50 percent. Excessively soiled clothes may add solids to your septic tank. Sometimes, geographical location may also contribute to extra solids ending up in the septic tank. For example, systems in coastal areas may have an accumulation of sand in the septic tank from washing beach clothes.

Reducing the Flow of Wastewater

Generally, the more people, the more water will flow through the system. However, the use of water conservation devices such as low-flow toilets or shower fixtures greatly reduces the amount of wastewater thus prolonging the life of your septic system. For example, up to 53 gallons of water are discharged into your system with each load of laundry. If several loads are done in one day, it can put considerable stress on your system. A better practice would be to

space your laundry washing throughout the week.

The new ultra low-flush toilets use between 1 and 1.6 gallons of water per flush and will provide as much as a 30 percent water savings. Low-flow faucet aerators on sink faucets and low-flow showerheads will save additional water. There are also low-flow washing machines which use much less water than standard washing machines.

ABSORPTION FIELD

An absorption field generally does not require any maintenance. However, to protect and prolong the life of the absorption field, follow these simple rules:

- Plant only grass over and near your septic system. Roots from nearby trees or shrubs may clog and damage the absorption field.
- Do not drive or park over any part of your septic system. This can compact the soil and crush your system.
- Direct all wastewater from your home into the septic tank. This includes all sink, bath, shower, toilet, washing machine and dishwasher wastewaters. Any of these wastewaters can contain disease-causing microorganisms or environmental pollutants.
- Keep roof drains, basement sump pump drains, and other rainwater or surface water drainage systems away from the absorption field. Flooding of the absorption field with excessive water will keep the soil from naturally cleansing the wastewater, which can lead to groundwater and/or nearby surface water pollution.

Septic System Health Tips

What you put into your septic system will have a direct effect on whether or not you have a healthy, long-lasting and trouble-free system. Your septic system is not a dispose-all.

- Conserve water to avoid overloading the septic system. Be sure to repair any leaky faucets or toilets. Use low-flow fixtures.
- Do not use caustic drain openers for a clogged drain. Instead, use boiling water or a drain snake to open clogs.
- Do not use septic tank additives, commercial septic tank cleansers, yeast, sugar, etc. These products are not necessary and some may be harmful to your system.
- Use commercial bathroom cleaners and laundry detergents in moderation. Many people prefer to clean their toilets, sinks, showers, and tubs with a mild detergent or baking soda.
- Check with your local regulatory agency if you have a garbage disposal to make sure that your septic system can accommodate this additional waste.
- Check with your local regulatory agency before allowing water softener backwash to enter your septic tank.
- Your septic system is not a trash can. Do not put disposable diapers, sanitary napkins, tampons, condoms, paper towels, facial tissues, plastics, cat litter, or cigarettes into your septic system. These items quickly fill your septic tank with solids, decrease the efficiency, and will require that you pump out the septic tank more frequently. They may also clog the sewer line to the septic system causing wastewater to back up into your home.
- Avoid dumping grease or fats down your kitchen drain. They solidify and the accumulation may contribute to blockages in your system.
- Keep latex paint, varnishes, thinners, waste

oil, photographic solutions, pesticides, or other hazardous chemicals out of your system. Even in small amounts, these items can destroy the biological digestion taking place within your septic system.

Septic systems are a very simple way to treat household wastewater and are easy to operate and maintain. Although homeowners must take a more active role in maintaining septic systems, once they learn how their systems work, it is easy for them to appreciate the importance of a few sound operation and maintenance practices.



For more information regarding the care of your septic system, contact your local health department.

More information about septic systems is available from the National Small Flows Clearinghouse (NSFC) through other brochures in this series:

Groundwater protection and your septic system,

So . . . now you own a septic system,

For more information please contact the National Environmental Services Center
West Virginia University
(304) 293-4191

The care and feeding of your septic system

One in a series of three brochures designed to aid you in caring for your septic system.



Helping America's small communities meet their wastewater needs



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