

SEPTIC SYSTEM

HOMEOWNER'S GUIDE & RECORD KEEPING FOLDER



DID YOU KNOW...

Maintaining your septic system saves you money, protects your property value, keeps you and your neighbors healthy, and protects the environment. If you are like most homeowners, you probably never give much thought to what happens to the waste that goes down your drain. Just like a car needs preventative maintenance, such as an oil change or tire rotation, preventative maintenance on your septic system can save you both time and money. This owner's guide can help you use and maintain your septic system properly and provides a place to record and store important information, such as your permit, a sketch of your system, maintenance records, and fact sheets. Study this guide to learn:

- ✓ How a septic system works
- ✓ Why and how to maintain your septic system
- ✓ How to keep your own maintenance records

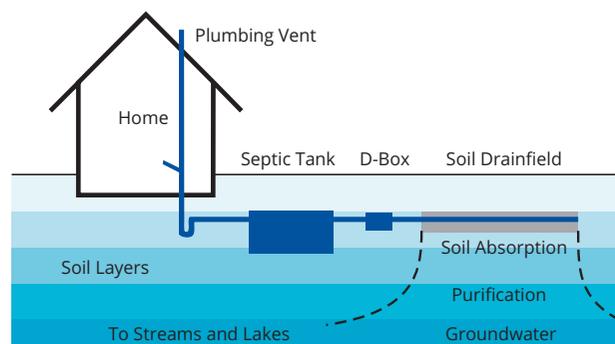
HOW DO SEPTIC SYSTEMS WORK?

System Description. A septic tank system uses natural processes to treat and dispose of wastewater. Systems typically consist of a septic tank and a drainfield or soil absorption field. The septic tank provides the first step in treatment. As wastewater flows into the tank, the heavier solids settle to the bottom to form a sludge layer. The lighter solids, greases, and oils float to the top to form a scum layer. The liquid wastewater (effluent) from the tank flows into trenches in the drainfield area where it is distributed and then treated by the soil. The diagram below shows the components of a typical septic system.

System Operation. The septic tank provides biological treatment of the accumulated sludge and scum layers. However, the majority of treatment occurs in the drainfield where the effluent enters the soil and is treated as it percolates to the groundwater. According to the Environmental Protection Agency, the septic tank digests organic matter and separates floatable matter (e.g., oils and grease) and solids from the wastewater. Soil-based systems discharge the liquid (known as effluent) from the septic tank into a series of perforated pipes buried in a leach field, leaching chambers, or other special units designed to slowly release the effluent into the soil or surface water.

Baffles or outlet tees located in the tank are designed to prevent the sludge and scum from flowing into the drainfield. If the tank is not pumped regularly to remove the accumulated solids, the tank will fill with sludge and the solids will be washed out into the drainfield. Once solids reach the drainfield, they quickly clog the soil and eventually cause the septic system to fail.

BASIC SEPTIC SYSTEM COMPONENTS



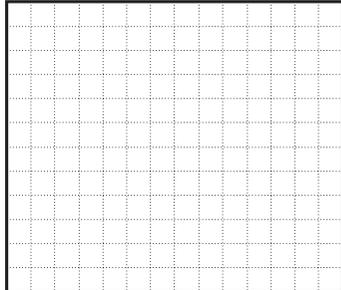
SEPTIC SYSTEM MAINTENANCE

Why Maintain Your System? There are three important health reasons for maintaining your septic system.

- ✓ **Your Pocketbook.** Periodic maintenance costs approximately \$250-\$500 every three to five years. That may sound costly but failure to provide routine maintenance will eventually lead to your system failing. Repairs and replacement costs can be thousands of dollars.
- ✓ **Your Family. Your Community. Your Environment.** Untreated wastewater contains sewage and may harbor disease-causing bacteria, harmful viruses, and harsh chemicals. A failing septic system may allow untreated sewage to seep into drinking water wells, groundwater, and surface water bodies used for drinking and recreation.
- ✓ **SC's Economy.** Contamination of water bodies by failed septic systems may pollute water supplies, close shellfish beds and recreational areas, and create offensive odors. Quality of life, recreational opportunities, and tourism may decline and with them the area's property values and economic vitality.

How Do You Maintain Your System? Proper upkeep of your system requires day-to-day management as well as periodic maintenance. The septic system maintenance process is pretty simple: inspect and pump frequently, use water efficiently, consider what you flush or wash down the drain and the impact it may have on your system, and maintain your drainfield. Many common household items can either clog your system or kill the microbes that treat the wastewater. For more information on what not to flush or wash down the drain, see the "Do Not Flush" chart on the next page. The more you know about how your system operates and how it should be maintained, the better equipped you will be to protect the investment you've made in your home and property, protect your family's health, and protect your environment.

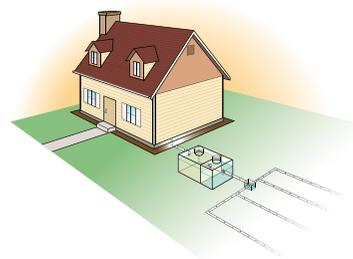
SEPTIC SYSTEM LAYOUT



WHERE IS YOUR SEPTIC SYSTEM LOCATED?

In order to maintain your system, the tank must be accessible for pumping and the drainfield should be protected. Locating your system is not always easy. If you do not already have a copy of your permit, contact your local DHEC Environmental Affairs Office (www.scdhec.gov/EAOffices) to see if they have a copy on file. Your permit will indicate the approximate location of the system and the size of the tank. The completed permit (also called the Permit to Construct/Approval to Operate) will have a diagram of the actual system's installation and include other information about your system. Keep your permit in this file folder for future reference and to pass on to the next homeowner. If you are unable to obtain a copy of your permit, contact a DHEC-licensed septic system contractor who will be able to locate your system for you.

- ✓ Make a sketch on the grid provided below indicating your septic tank and drainfield (the trenches) in relation to surrounding reference points. Begin by sketching your house, driveway, water well, and other landscape features such as trees or fences.
- ✓ A good starting point for finding the exact location of the tank is to look in your crawl space to see the direction in which the house's sewer pipe enters the soil. Gently push a thin (3/8 to 1/2-inch diameter) steel rod into the soil about 5-10 feet away from the house to feel for the tank. Call local utility companies before you begin the process of locating your tank to ensure there are no underground utilities (such as buried electrical cables) in the area.
- ✓ When you have your septic tank pumped, remember to mark the location of the septic tank for future maintenance. At a minimum, take measurements from the house to the access manhole on the tank. Also, you may want to have the access manhole raised to just below ground level and marked clearly with a stake, rock, or bird-bath. A marker will help you find it again.



TAKING CARE OF YOUR SEPTIC SYSTEM

An ounce of prevention is worth a ton of cure! Committing a little attention to the care of your system can help you avoid the nightmare of a failing system. Assuming that your septic system was properly located, designed, and installed according to state regulations, you are now in the driver's seat for the care of your system. By following the recommendations below, you can help your system work properly for years to come.

DOs:

- ✓ Conserve water to reduce the amount of wastewater that must be treated and disposed of by your system. Doing laundry over several days will put less stress on your system.
- ✓ Repair any leaking faucets or toilets. To detect toilet leaks, add several drops of food dye to the toilet's tank and see if dye ends up in the bowl.
- ✓ Divert downspouts and other surface water away from your drainfield. Excessive water keeps the soil from adequately cleansing the wastewater.
- ✓ Have your septic tank inspected every year and pumped regularly by a licensed septic system contractor. *See the chart below for suggested pumping frequencies.

PUMP SYSTEM REGULARLY

Suggested Pumping Frequency (years)

Tank Size (Gallons)	Number of people using the system				
	1	2	4	6	8
1000	12	6	3	2	1
1250	16	8	3	2	1
1500	19	9	4	3	2

Source: Adapted from "Estimated Septic Tank Pumping Frequency," by Karen Mancl, 1984. Journal of Environmental Engineering. Volume 110.

* Pumping your septic tank is probably the single most important thing you can do to protect your system. If the buildup of solids in the tank becomes too high and solids move to the drainfield, this could clog and strain the system to the point where a new drainfield will be needed.

- ✓ Keep your septic tank cover accessible for inspecting and pumping. Install risers with lids if necessary.
- ✓ Call a licensed septic tank contractor whenever you experience problems with your system, or if there are any signs of system failure.
- ✓ Keep a detailed record of repairs, pumpings, inspections, and other maintenance activities.

DON'Ts:

- ✗ Don't drive over your drainfield or compact the soil in any way.
- ✗ Don't dig in your drainfield or build anything over it, and don't cover it with a hard surface such as concrete or asphalt.
- ✗ Don't plant anything over or near the drainfield except grass. Roots from nearby trees and shrubs may clog and damage the drain lines.
- ✗ Don't use or significantly limit the use of a garbage disposal. According to the Environmental Protection Agency, garbage disposals significantly increase the accumulation of sludge and scum in septic tanks, resulting in the need for more frequent pumping.
- ✗ Don't poison your system or the groundwater by pouring harmful chemicals and cleaners down the drain. Harsh chemicals can kill the bacteria that help purify your wastewater. See the list below for examples of items that should never be flushed.
- ✗ Don't install a separate pipe to carry wash waters to a side ditch or the woods. Wash water, known as graywater, may contain germs that can spread disease.
- ✗ Don't waste money on septic tank additives. The bacteria needed to treat wastewater is naturally present in sewage. Additives can resuspend solids and cause your drainfield to clog. Additives do not eliminate the need for routine pumping of your tank.
- ✗ Don't allow backwash from home water softeners to enter the septic system.
- ✗ Never climb into a septic tank as toxic gases from the tank can kill. If your system develops problems, get advice from your local DHEC Environmental Affairs Office or a licensed septic system contractor.



DO NOT FLUSH

- | | |
|--|---|
| <ul style="list-style-type: none"> • coffee grounds • disposable diapers • grease • dental floss • cat litter • tampons • baby wipes • chemicals • gasoline | <ul style="list-style-type: none"> • pesticides • oil • antifreeze • paint • high amounts of anti-bacterial soaps and detergents |
|--|---|

MAINTENANCE RECORD

Use the following spaces to record information about your septic system. Some of this information can be copied from your Permit to Construct/Approval to Operate. Your local DHEC Environmental Affairs Office may have a copy on file. Good maintenance records can be a positive selling point for your home if/when the time comes.

Permit Number: _____ **TMS Number:** _____

Issued To: _____ **Date Issued:** _____

Address: _____

System Description: _____

Drainfield Type:

- Conventional Trenches
- Shallow Trenches
- Mound
- Bed
- Ultra-Shallow Trenches
- Other Information _____

Septic Tank Size (gallons): _____
 Pump Tank Size (gallons): _____
 Drainfield Dimensions: _____
 Number of Trenches: _____
 Trench Length: _____

Septic System Installer:

Name: _____

Address: _____

Telephone: _____

Date System Installed: _____

Septic System Pumper:

Name: _____

Address: _____

Telephone: _____

SYSTEM MAINTENANCE RECORD

Date	Work Description	Firm	Cost

Please see the Onsite Wastewater Website (www.scdhec.gov/septic tanks) for additional information or contact your local DHEC office (www.scdhec.gov/EAOffices) with any questions.