

Maintaining Your Septic System

You would certainly never think of connecting the plumbing that carries wastewater from your house to the plumbing that carries fresh water to your drinking water tap. That's exactly what you might be doing. An improperly sited, overloaded, or poorly maintained septic system can add nutrients, bacteria, viruses, and hazardous chemicals to groundwater. Those pollutants can then be drawn into your well and come out the tap in your drinking, cooking and bathing water.

Even if you don't pollute your own or your neighbor's drinking water, improperly functioning septic systems can add pollutants to lakes and streams increasing weed and algae growth and, in extreme cases, killing fish.

These problems can be avoided if your septic system is:

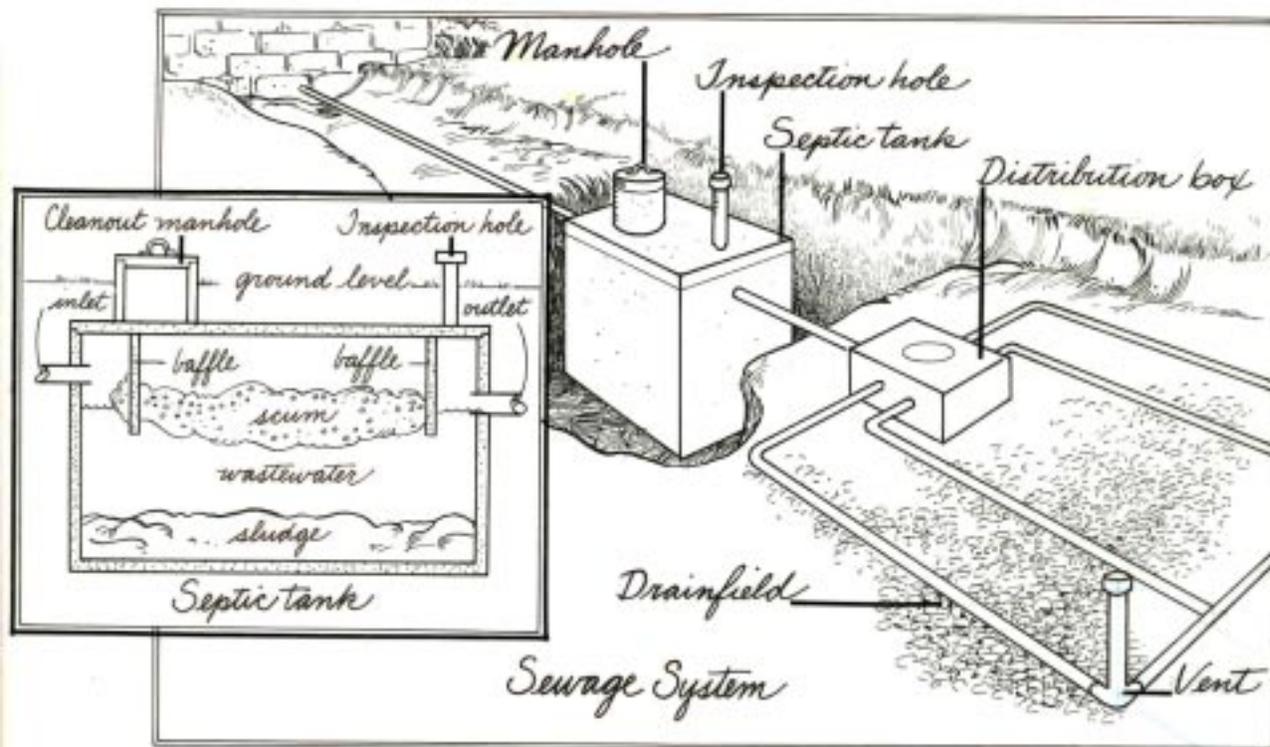
- correctly sited
- properly designed
- carefully installed
- correctly used
- regularly maintained.

Regular maintenance costs much less than repair or replacement of a failed system.

How Your Septic System Works

Whatever you put into your toilets and sinks flows into the septic tank. In the tank, most solids settle to the bottom and are partially decomposed by bacteria to form sludge. Some materials float and form a scum on top of the water.

The liquid in the tank—carrying bacteria, viruses, compounds of nitrogen and other potentially harmful substances—is discharged into a soil absorption field. The soil is your last line of defense to prevent polluted water from entering lakes, streams, and groundwater. The wastewater is partially purified by the filtering action of the soil and the ability of microorganisms in the soil to decompose any of the remaining contaminants. However, the soil cannot remove dissolved solvents, drain cleaners, and other household chemicals that can easily percolate into the groundwater.



Septic System Maintenance

The most critical part of septic system management is the decisions you make about what to put into the system as noted later under “Household Hints.”

The Septic Tank

The tank is the part of the system that requires regular maintenance. You must have the tank cleaned out regularly so that sludge and scum don't build up. If you do not clean your tank when needed, sludge or scum will clog the outlet pipe or move out into the soil absorption field. This will clog the field and lead to early and costly failure of the system.

How do you know when your septic tank needs to be pumped? You can have a commercial septic tank pumper give you an idea of how often you should have the tank pumped. It depends on the size of your family, the volume of water you use, whether you use a garbage disposal, and the capacity of the tank. Generally, for a family of four using a modern septic system, it's a good idea to have the tank pumped every two to three years. Pump annually if you use a garbage disposal. If you don't want to pay to have the tank pumped this often, you can make your own determination about the need for pumping by measuring the sludge and scum depth in the tank. Here's how you do it:

1. Find the tank. Sometimes this is tricky. The tank's cover will usually be within a couple of feet below the ground surface, but the depth can vary depending on how your land slopes. If you don't know where the tank is, you can probably find it by gently tapping a steel rod into the ground starting about ten feet from where the sewer drain leaves your house. If your tank has an observation pipe, the cover should be at the other end of the tank—a few feet toward the house. After you find the cover, you might want to

mark its location so you can find it again the next time.

2. Remove sod and soil until you can lift the cover. Loose soil should be kept clear of the opening.
3. Find a pole or thin board long enough to reach the bottom of the tank (~ 8'). Wrap the bottom five feet with white rags.
4. Lower the wrapped part of the pole. Note the thickness of the scum as the pole penetrates the floating layer. Then lower to the bottom of the tank.
5. Hold the pole there for several minutes so that the sludge layer will get the rags filthy black.
6. Remove the pole and note the sludge line and the liquid line. The sludge line will be darker than the coloration caused by the liquid waste.
7. If the total depth of sludge plus the scum is more than one-third of the total wetted length of your pole, it's time to have the tank cleaned. For example, if the total length of your stick that is wet is 48 inches, the tank should be pumped if the dark sludge portion plus the scum portion is over 16 inches. Pump the tank immediately if the scum is more than 4 inches thick or appears to be escaping below the baffle.

If you have trouble measuring the sludge or scum or have trouble with the system, call a pumper or plumber. *The gases generated in a septic tank are dangerous, and can kill. Never enter a septic tank. Only a trained person with life support equipment and a trained assistant should ever enter a septic tank.*

The Soil Filter

The area where the septic liquid soaks into the ground is called the soil absorption field, drain field, seepage bed, or dry well. It is a filter. If it is properly installed and used, it will accept septic tank discharge for many years. The soil absorption field should require no maintenance if a few simple precautions are followed.

1. Minimize your water use so that you do not overload the filter.
2. Be absolutely sure your septic tank is working properly. Never allow sludge or scum to escape from the tank.
3. Some systems are equipped with a pump or dosing chamber that floods the absorption field in controlled doses rather than letting effluent continuously trickle from the tank. Other systems include a lift station. Make sure that all pumps or siphons are operating properly. Your plumber can give you advice on how to check your system.
4. Avoid compacting the soil that acts as a filter for effluent leaving the tank. Keep buildings, cars, and other heavy equipment off the absorption field.
5. Avoid overloading the absorption field with rainfall and snowmelt. Slope the land above the field so surface water is not directed toward it and slope the land below it so water does not pond on it. Make sure the downspouts from your house or other buildings carry water away from the field. Never pile winter snow on the field.
6. Mark the boundaries of your drainage field as a reminder. There may be one or more observation pipes to serve as guides.

Household Hints that Help

To minimize maintenance costs, to protect your lake and the groundwater, and to prolong the life of your system:

DO

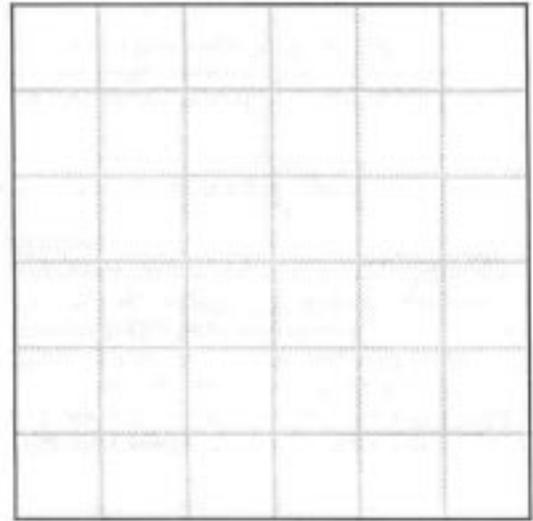
- Limit the water entering your tank. Use water saving fixtures. Fix toilet float valves, leaks, and dripping faucets. Spread clothes washing over the entire week.
- Pump the tank when necessary. This means every two to three years (more often if you use a garbage disposal) or as indicated by your annual inspection.
- Divert surface water drainage away from the absorption field.
- If you are buying a house with a septic system, ask the owner for the name of their pumper and their maintenance records. Have the system evaluated. You may want to have the soil tested for compliance with the state uniform plumbing code. Such a test will be required before a replacement drain field can be constructed.

DON'T

- Do not connect the basement sump pump or other "clean water" discharges to the septic tank.
- Do not put materials down drains that will clog the septic tank (fats, grease, coffee grounds, paper towels, sanitary napkins, disposable diapers, etc.).
- Do not put toxic substances in drains that might end up in the groundwater (cleaning fluids, oils, paints, disinfectants, pesticides, etc.).
- Do not use chemicals to clean or "sweeten" your system. They may interfere with the biological action in the tank, clog the drain field by flushing sludge and scum into the field, or add toxic chemicals to groundwater. "Starters" are not necessary for new tanks or after pumping existing tanks.

Septic System Layout

If you do not have a sketch of your septic system to place in this file, draw one in the space provided. Show the location of your septic system components in relation to your house. Use the sketch to locate the tank for testing and cleaning, and to avoid the tank and drain field when routing driveways, planting trees, or directing heavy trucks or trailers.



Maintenance Record

Date	Pumper	Address	Telephone #	Cost

Information Directory

Inside Plumber Name _____ Address _____ Phone _____	DILHR District Office Name _____ Address _____ Phone _____	DNR Lake Management Coordinator Name _____ Address _____ Phone _____
--	---	--

Septic System Installer (Outside Plumber) Name _____ Address _____ Phone _____	County Sanitarian (or Code Administrator) Name _____ Address _____ Phone _____	Extension Resource Agent Name _____ Address _____ Phone _____
--	--	--

For more general information on rural living obtain a copy of Country Acres: A Guide to Buying and Managing Rural Property G3309 available from your County Extension office. Lakeshore homeowners have a special responsibility to ensure that their septic systems are not polluting the lake. More general information on lake management can be obtained from the DNR and Extension staff shown above.

PUB-WR-165 90REV
 May 1990
 Revised November 2003

Wisconsin Department of Natural Resources
 UW Extension
 Department of Industry, Labor, and Human Relations



**Wisconsin
 Lakes
 Partnership**