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Take care of your septic system and it'll take care of you

While septic maintenance is often overlooked, it is one of the more important things you can do for your property. Today the average cost of a total system replacement can run from \$7,500 to as much as \$15,000 or more. Caring for your septic system can help save money and avoid unnecessary headaches.

To care for your system, first you need to locate your septic tank and drain field. Your county should have records of all permitted septic systems and can provide a copy of the permit, which should help in locating the septic system.

Septic system maintenance is not complicated. It's mostly common sense and need not be expensive, if you take four key steps.

- Inspect and pump regularly.
- Use water efficiently.
- Be careful what you flush and put down the drain.
- Take care of your drain field and it will take care of you.

Inspect and pump

How often a septic system should be inspected and pumped depends on the size of the tank and number of people in the home. The average septic system should be inspected at least every three years to judge

TABLE 1.—Estimated Septic Tank Pumping Frequency for Year-round Residence^a (in Years) by Karen Mancl. Originally published in the *Journal of Environmental Engineering* in February 1984.

Tank, in gallons	Number of Persons in Residence										Tank, in cubic meters
	1	2	3	4	5	6	7	8	9	10	
500	5.8	2.6	1.5	1.0	0.7	0.4	0.3	0.2	0.1	—	1.9
750	9.1	4.2	2.6	1.8	1.3	1.0	0.7	0.6	0.4	0.3	2.8
900	11.0	5.2	3.3	2.3	1.7	1.3	1.0	0.8	0.7	0.5	3.4
1,000	12.4	5.9	3.7	2.6	2.0	1.5	1.2	1.0	0.8	0.7	3.8
1,250	15.6	7.5	4.8	3.4	2.6	2.0	1.7	1.4	1.2	1.0	4.7
1,500	18.9	9.1	5.9	4.2	3.3	2.6	2.1	1.8	1.5	1.3	5.7
1,750	22.1	10.7	6.9	5.0	3.9	3.1	2.6	2.2	1.9	1.6	6.6
2,000	25.4	12.4	8.0	5.9	4.5	3.7	3.1	2.6	2.2	2.0	7.6
2,250	28.6	14.0	9.1	6.7	5.2	4.2	3.5	3.0	2.6	2.3	8.5
2,500	31.9	15.6	10.2	7.5	5.9	4.8	4.0	4.0	3.0	2.6	9.5

^aMore frequent pumping is needed if garbage disposal is used.

if the tank needs to be pumped. Inspections should be performed by a septic professional, as there are hundreds of potentially dangerous pathogens in raw sewage. Septic tanks typically are pumped every three to five years. If your septic system has a pump, float switches, or other mechanical parts, you may consider inspecting annually.

When you have the tank pumped, ask the technician to let you know if they notice anything that needs to be addressed. Ask if the inlet and outlet tees and baffles are in place to retain the scum layer in the tank. It's also a good idea to ask if the lids are in good condition, i.e., properly fitting, properly secured, and not cracked.

You can also ask a professional to add an effluent filter to the discharge end of the tank to help keep solids in the tank, which will lengthen the life of the leach field.

Use water efficiently

The EPA estimates that on average a typical family can use as much as 70 gallons per person, per day. Just one leaky toilet can add as much as 200 gallons of excess water per day to your septic system. Fixing all

leaks quickly is a very important step in protecting your leach field.

Remember, every drop of water that goes down the drains goes into the septic system, and your septic system has been designed for a specific water flow based on the number of bedrooms in the home, with two people per room. By having a copy of your septic permit, you can find out how much water your septic system was designed to handle.

Installing high-efficiency toilets, faucets, and showerheads saves hundreds of gallons per year. Toilets can account for 20–30% of household water used. High-efficiency toilets use half (or less) the amount of water that older toilets use.

Laundry can also place a large water load on the septic system. Try to run full loads and spread the laundry out through the week rather than doing it all on one day. This will allow the soil in the leach field to recover between loads. Laundry models rated energy star by the EPA use 50% less water, with some machines using as little as 7 gallons per load compared to 35–45 gallons per load for older machines.

Properly dispose of waste

Not everything that you can flush down the drain should go down the drain. Remember, your septic system is not a trash can. In general, you should only flush human waste and toilet paper.

None of the following items should be flushed, as the septic system can't break them down and they will build up in the tank or worse, clog it or the drain field.

- Cooking grease
- Personal wipes
- Any chemicals or medications
- Feminine hygiene products
- Condoms
- Dental floss
- Diapers
- Cigarette butts
- Coffee grounds
- Cat litter
- Paper towels
- Gasoline, oil, pesticides, antifreeze, paint, or paint thinner

Having a water softener or reverse osmosis system will also negatively affect your septic system. Both produce purge water daily that will add a tremendous amount of liquid to the system. Water softeners purge brine that is very high in salt, while reverse osmosis purge liquid has an extremely high pH, both of which will kill bacteria in the leach field. Bacteria need a pH of 6.5 to 7.5 to thrive and digest the waste. If you need either of these systems, you will want to discharge the purge water to a separate drain field.

Your septic system is a living thing that needs oxygen. All the items listed above can prevent the system's microbes from getting the oxygen they need to survive. Even too much antibacterial soap can kill the good bacteria your septic system needs.

Also, you should eliminate, or greatly limit, the use of a garbage disposal. By doing this, you will significantly reduce the amount of fats, grease, and solids that can clog your tank and the drain field.

Maintain your drain field

Your drain field is a major component of your septic system and also the costliest to replace. It removes contaminants from the liquid that comes from the septic tank. Here are a few things you can do to protect the drain field.

- **Parking:** Do not park or drive on your tank or drain field as this will compact the soil and prevent the liquid from draining away, as well as cutting off the oxygen to the leach field. Septic tanks are not designed to carry a traffic load, even if they are concrete.
- **Planting:** Plant trees an appropriate distance from the drain field to keep roots from growing into your septic system. County officials can provide guidance on this. Plants with shallow root systems, like grasses or flowers, are good things to plant as they use liquid from the drain field. Do not plant a vegetable garden, or other edible plants. Normal mowing and watering, within reason, will not hurt the drain field.
- **Placing:** Keep excess water from damaging your leach field by keeping roof drains, sump pump discharge, and rainwater drainage away from your drain field. It may be necessary to make a drain ditch around the leach field to protect it from excess water.
- **Protection:** Keep animals off the drain field. A walking 1,200-pound horse can exert more than 500 psi on the ground, which will compact the soil. The animals also add to the volume of waste that the leach field needs to treat.

By giving a little attention to your septic system, you can ensure proper problem-free operation and add years of life to the system. With proper care, your septic system should last 20 or more years. Please don't hesitate to contact your county for assistance with septic issues.

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