



Greene County
Resource
Management

Maintaining Your Septic System

Proper maintenance protects your family's health, saves you money, and guards area water quality.

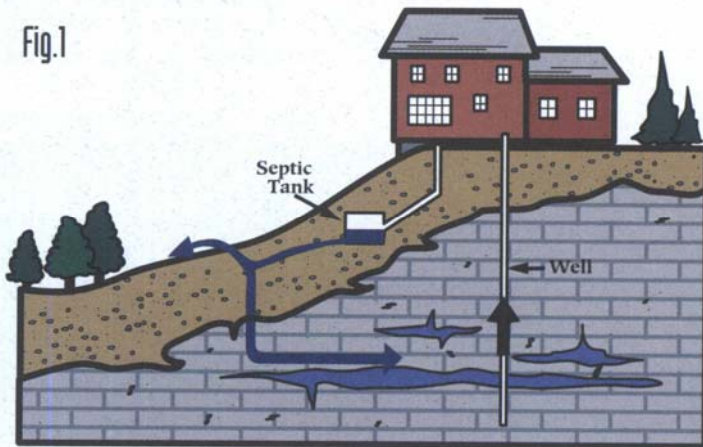


Watershed
Committee
of the Ozarks

Why maintain your system?

Septic tank systems, like houses and cars, require periodic maintenance. This is especially true in the Ozarks, where soils are often thin and rocky and may allow partially treated sewage to leak directly into ground water supplies (See figure 1). Although this problem is being addressed today with better site evaluations and designs, there are thousands of septic systems already in use in the Ozarks. Owners of these systems may claim to have never had problems, even though no maintenance has been done for many years. It is these very systems that may in fact be contributing to the unseen pollution of ground water.

Fig.1

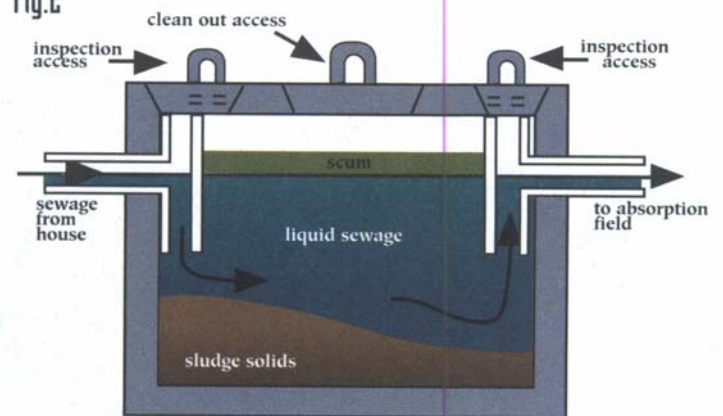


By following the routine maintenance tips in this fact sheet, you will prolong the life of your septic system, prevent ground water pollution and surfacing effluent, and protect your property values. Compared with the cost and hassles of repairing or replacing your system, the effort and expense of annual maintenance is minimal.

How does a septic tank system work?

Sewage from the home first goes into a septic tank- a large, watertight chamber made of concrete, fiberglass, or plastic with baffles or tees at the inlet and outlet. Inside the septic tank, anaerobic (oxygen-lacking) bacteria partially break down the sewage. There is always a portion of the solids which the bacteria cannot digest and these remain in the tank as sludge and scum (see figure 2).

Fig.2



After leaving the septic tank, sewage enters the soil absorption field (lateral or tile field). The soil absorption field is a network of pipes laid in trenches dug into the soil and surrounded by gravel. Perforations in the pipe allow the sewage to drain through the gravel into the soil (see figure 3), where the majority of the actual treatment occurs. The absorption field is located in the soil, where filtration and aerobic (oxygen-using) bacteria remove the remaining impurities (germs and chemicals) before the wastewater returns to the groundwater.

Maintaining Your Septic Tank System

Septic tanks are designed to accumulate solids for several years under normal conditions. As solids fill up the tank, wastewater has less time to settle properly and solid particles flow into the absorption field. If the tank is not periodically pumped out, these solids entering the absorption field will clog it to the point that a new field may be needed. There are three factors which determine how often a septic tank must be pumped:

1. Size or capacity of the tank.
2. The number of people in the household or how much water flows through the system.
3. The volume of the solids in your waste. If you have a garbage disposal, the extra solids make it necessary to pump out the septic tank about twice as often.

Table 1 gives the suggested pumping frequencies based on tank size and number of people in the household.

Some chemicals can destroy the bacterial action taking place in your system. Do not pour the following down drains: chemical drain openers, septic tank additives, paint, varnishes, thinners, waste oil, photographic solutions, pesticides and other organic chemicals. Call University Extension to locate a household chemical collection center. In Springfield, call the Household Chemical Collection Center at 864-2000. If used according to label directions, most other household cleaners and chemicals will not harm your system.

Excess water use can lead to early system failure. Up to 53 gallons of water are discharged into your septic 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 is to space out your laundry washing throughout the week.

Divert all unnecessary water, including roof and foundation drains, away from the distribution laterals.

Have water wells tested every year. The Health Department provides free or low-cost testing. Remember, the well that is closest to your system is usually your own.



Tank Size (gallons)	HOUSEHOLD SIZE (number of people)					
	1	2	3	4	5	6
500	3	1 1/2	7 mths	5 mths	3 mths	1 mth
1000	6	3	2	1 1/2	1	7 mths
1250	8	4	2 1/2	2	1 1/2	1
1500	10	5	3	2	1 3/4	2 1/2
2000	13	6	4	3	2 1/4	2
2500	16	8	5	3 3/4	3	2 1/2

Table 1 Estimated septic tank pumping frequencies in years (unless otherwise noted). These figures may be increased by 50% if a garbage disposal is not present.

(Source: Pennsylvania State University Cooperative Extension Service)

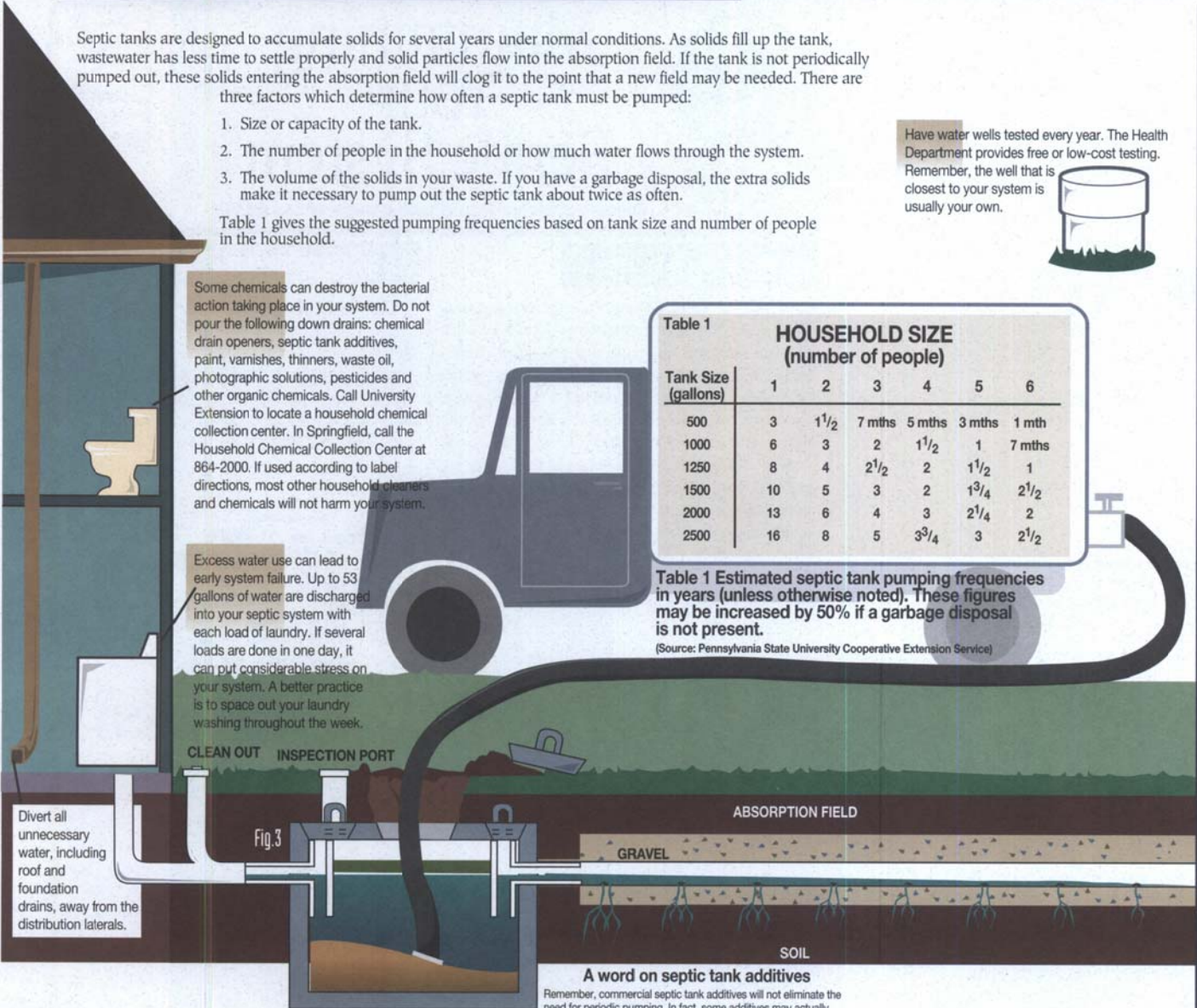


Fig. 3

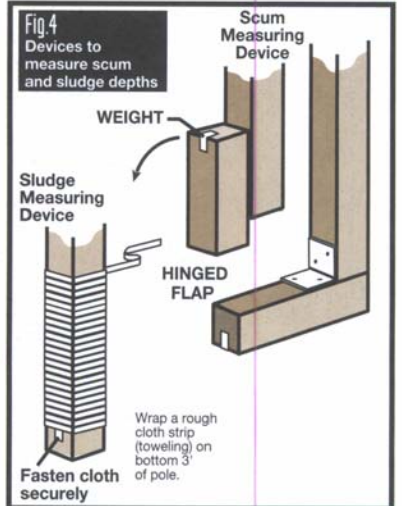
A word on septic tank additives

Remember, commercial septic tank additives will not eliminate the need for periodic pumping. In fact, some additives may actually cause damage to the system or surrounding soil and vegetation, and may contribute to chemical contamination of groundwater. Stay away from these products and rely on routine maintenance to extend the life of your septic system.

DO IT YOURSELF

You can make a specific determination of when it's time to pump out solids by occasionally checking the depth of the solids and the level of the scum buildup in your tank (see figure 5). Measure the scum layer using a stick with a hinged flap as in figure 4. Push the stick through the scum until you feel the flap fall into a horizontal position. Raise the stick until you can feel the bottom of the mat. Pull the stick through to the top of the scum and note the distance. If the scum mat is more than 12 inches thick, pump the tank.

To measure sludge depth, wrap a rough cloth strip around the bottom 3 feet of the measuring stick (see figure 4) and lower it to the tank bottom through the hole in the scum made while checking its thickness. Wait a few minutes and remove the stick slowly and carefully. Sludge depth is shown by black particles clinging to the cloth. Pump the tank if sludge is 1/3 or more of the liquid depth.



When the tank is pumped out make sure your contractor uses the manhole located in the center of the tank and not the inspection port.

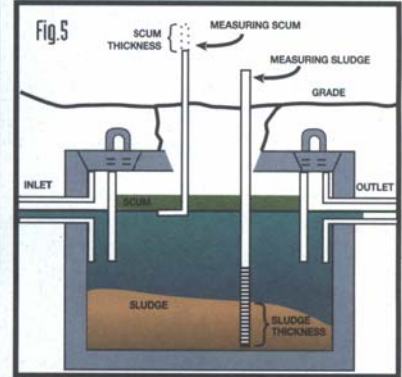


Fig. 5

Make sure that both the liquids and solids in the tank are pumped completely out. Do not wash or disinfect the tank after having it pumped. Also, it is not necessary to "start" your system with biological or chemical additives after it has been pumped.

Maintaining Your Septic System

Do

Do obtain necessary permits from Greene County Resource Management Department, (417/868-4015), or the appropriate local agency, before making any repairs.

Do use professional certified installers.

Do have your septic tank inspected annually.

Do keep your septic tank accessible for inspections and pumping. Install risers if necessary.

Do keep a detailed record of repairs, pumpings, inspections, permits issued, and other maintenance activities.

Do conserve water to avoid overloading the system. Repair any leaky faucets or toilets.

Do divert other sources of water, like roof drains, house footing drains, and sump pumps away from the lateral field.

Do establish and maintain a good stand of grass over the lateral field.

Do have your well tested annually (contact your local health department).

Don't

Don't go down into a septic tank.

Don't allow anyone to drive or park over any part of the system.

Don't plant anything over or near the lateral field except grass. Even roots from nearby trees or shrubs may clog and damage the drain lines.

Don't use your septic system as a trash can. Plastics, cat box litter, cigarette filters, condoms, tampons, sanitary napkins, paper towels and facial tissues should not be disposed of in your toilets. These items quickly fill your septic tank with solids, decrease its efficiency, and will require you to pump out the tank more frequently. They could also clog the sewer line to the septic tank, causing wastewater to back up into your home.

Don't dig in your lateral field or build anything over it, and don't cover the lateral field with a hard surface such as concrete or asphalt.

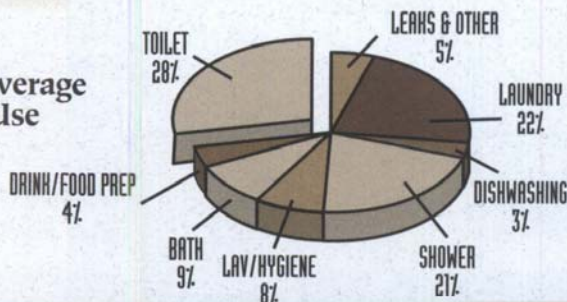
Don't pour into drains: septic tank additives, chemical drain openers, paint, varnishes, thinners, waste oil, photographic solutions, pesticides and other organic chemicals.

Don't allow backwash from your home water softener to enter the septic system.

If you have problems

Even with the best maintenance some systems will eventually have problems. Call the Greene County Health Department 864-1658 or the Greene County Resource Management Department 868-4015 for advice on ways to address these problems.

National Average Water Use



One of the best things you can do for your septic system is to reduce the amount of water flowing into it. This is especially important if the soil on your lot does not readily absorb water.

A typical family of four uses 250-300 gallons of water every day. You can reduce this figure with simple conservation measures.

- Repair leaking faucets or running toilets.
- Use clothes and dish washers only when full.
- Reduce length of showers and lower water level in baths.
- Turn off unneeded water when washing hands and brushing teeth.
- Install water saver fittings in faucets and shower heads.
- Install a low-flush toilet or toilet dam.



Watershed Committee of the Ozarks

320 N. Main
Springfield, MO
65806-1018

417-866-1127

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Greene County Resource Management Department

940 Boonville

Springfield, Missouri 65802

417-868-4015