

# INSPECTING YOUR HOUSEHOLD SEPTIC SYSTEM

*Kitt Farrell-Poe*

## Maintaining Your Septic System

Out of sight and out of mind—does this describe your relationship with your septic system? If you are like most homeowners, you probably never give much thought to what happens to what goes down your drain. But if you rely on a septic system to treat and disperse your household wastewater, what you don't know can hurt you. Proper operation and maintenance of your septic system can have a significant impact on how well it works and how long it lasts; and in most communities, septic system maintenance is the responsibility of you, the homeowner. This fact sheet was written as one in a series to help you maintain your septic system.

## Why Maintain Your System?

There are three main reasons why septic system maintenance is so important. The first reason is money. Failing septic systems are expensive to repair or replace, and poor maintenance is a common cause of early system failures. The minimal amount of preventative maintenance that septic systems require costs very little in comparison to replacing a system. For example, it typically costs from \$3,000 to \$10,000 to replace a failing septic system with a new one, compared to approximately \$55 to \$150 to have a septic system inspected, and depending on the ease of access and the amount of solids between \$150 to \$1000 to have the tank pumped.

The second and most important reason to maintain your system is to protect the health of your family, your community, and the environment. When septic systems fail, inadequately treated household wastewater is released into the environment. Any contact with untreated human waste can pose significant health risks, and untreated wastewater from failing septic systems can contaminate nearby wells, groundwater, and drinking water sources.

Chemicals improperly released through a septic system also can pollute local water sources and can contribute to system failures. For this reason, it is important for you to educate yourself about what should and should not be disposed of through a septic system.

Finally, the third reason to maintain your septic system is to protect the economic health of your community. Failed septic systems can cause property values to decline. Sometimes building permits cannot be issued or real estate sales can be delayed for these properties until systems are repaired or replaced. Also, failed septic systems can contribute to the pollution of local rivers, lakes, and shorelines that your community uses for commercial or recreational activities.

## Inspecting Your System

Annual inspections of your septic system are recommended to ensure that it is working properly and to determine when the septic tank should be pumped. By inspecting and pumping your system regularly, you can prevent the high cost of septic system failure. If the sludge depth is equal to one third or more of the liquid depth, the tank should be pumped.

A thorough septic system inspection will include the following steps:

1. **Locating the system**—Even a professional may have trouble locating your system if the access to your tank is buried. There are several ways to start looking for your system: 1) note where your drain pipe leaves the house, 2) or you can look up on the roof and find the plumbing vent, or 3) go in your basement and determine the direction the sewer pipe goes out through the wall. Then start probing the soil with a thin metal rod 10 to 15 feet from the foundation from where the drain pipe leaves the house, the plumbing vent goes out of the roof, or where the sewer pipe goes out through the basement wall. Once your system is found, be sure to keep a map of it on hand to save time on future service visits. You can sketch the location of your septic system using the worksheet provided in last page of this fact sheet.
2. **Uncovering the manhole and inspection ports**—This may entail some digging in your yard. If they are buried, try to make access to the ports easier for future inspections. Install risers (elevated access covers) if necessary.
3. **Flushing the toilets**—This is done to determine if the plumbing going to the system is working correctly.
4. **Measuring the scum and sludge layers**—There are two frequently used methods for measuring the sludge and scum layers inside your tank. Your inspector may use a hollow clear plastic tube that is pushed through the different layers to the bottom of the tank. When brought back up, the tube retains a sample showing a cross section of the inside of the tank. The layers can also be measured using long wooden sticks or poles. See Arizona Cooperative Extension publication AZ1160: Maintaining Your Septic Tank for detailed instructions. As a general guideline, if the scum layer is within three inches of the bottom of the inlet baffle, the tank should be pumped. If the sludge depth is equal to one third or more of the liquid depth, the tank should be pumped.

5. **Checking the tank and the soil treatment area**—The inspector will check the condition of the baffles or tees, the walls of the tank for cracks, and the soil treatment area for any signs of failure. If your system includes a distribution box, drop box, or pump, the inspector will check these too.

Properly sited, designed, constructed, and maintained septic systems can provide an efficient and economical wastewater treatment alternative to public sewer systems. While septic systems are designed and installed by licensed professionals to meet the needs of individual sites, homeowners are responsible

for the system's operation and maintenance. There is more information on household septic systems at The University of Arizona Extension publications web page ([ag.arizona.edu/pubs](http://ag.arizona.edu/pubs)).

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## Septic System Location

Using the box below to represent the property, sketch the location of your septic system. Show the location of the septic tank, distribution box, and soil treatment area (for instance, trenches, bed, chambers, or seepage pit). Indicate the distance of the septic system from your house and your well. For newer homes, note the area designated for your replacement field (should the original field ever fail).

Locating the components of your system can be difficult. Unfortunately, the tank is usually unmarked. Note where your drain pipe leaves the house; this will point you in the direction of the septic tank. Using a small diameter, rigid metal

rod as a probe, carefully search this area to locate the septic tank inspection ports and shallow depressions marking the trenches. (In winter months, the distribution line and septic tank are usually the last place frost forms, and the first place snow melts in your yard.) Once you locate an unmarked tank, place a marker in the ground above the inspection ports and the cleanout/manhole cover. Or, measure their exact distances from at least two reference points (such as a tree and the corner of the house) so you can easily find them again. If you cannot find any signs of your system, the local Health Department might have your building records on file.

**Sketch of System** (house, septic tank, soil treatment area, well)

