Operating and Maintenance of Septic Tanks

INTRODUCTION

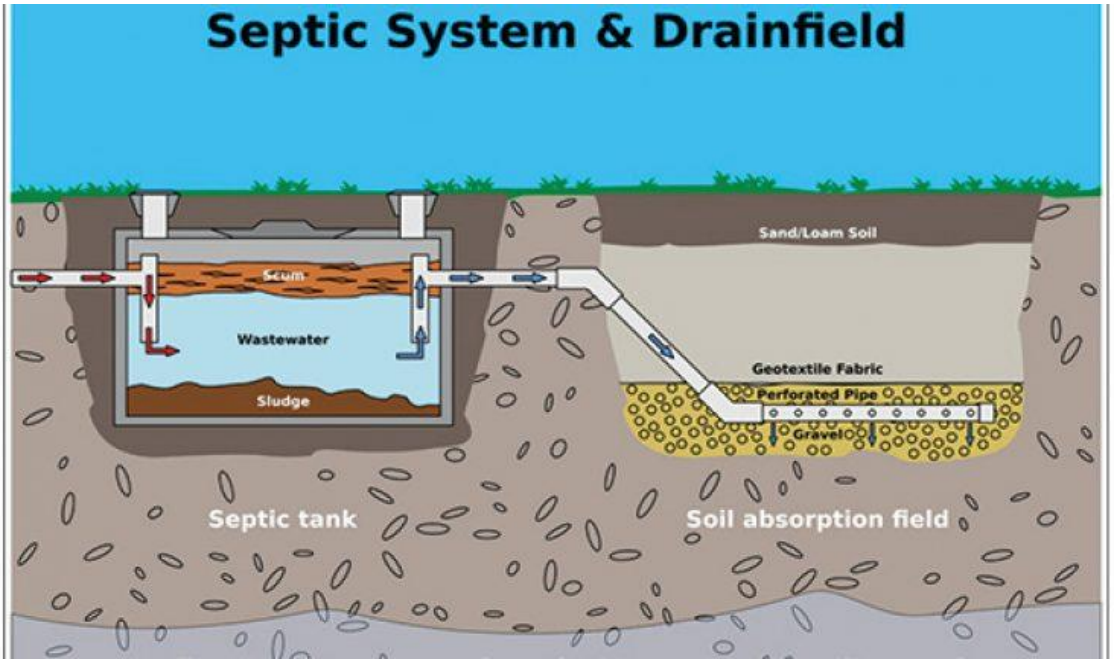
Households that are not served by public sewers usually depend on septic systems to treat and dispose of wastewater. Septic systems represent a significant financial investment. If cared for properly, a well-designed, installed, and maintained system will provide years of reliable, low-cost service.

A failing system can become a source of pollution and public health concern, causing property damage, ground and surface water pollution (such as well water—both yours and your neighbors), and disease outbreaks. Once your septic system fails to operate effectively, you may need to replace it, costing you thousands of dollars. Plus, if you sell your home, your septic system must be in good working order. Therefore, it makes good sense to understand and care for your septic system.

There are many different types of septic systems that fit a wide range of soil and site conditions. The following will help you understand the main components of a standard (gravity fed) septic system and how to keep it operating safely at the lowest possible cost.

A standard septic tank system has three main parts:

- **The Septic Tank** — a septic tank's purpose is to separate solids from the wastewater, store and partially decompose as much solid material as possible, while allowing the liquid (or effluent) to go to the drain field.
- **The Drain field** — after solids settle in the septic tank, the liquid wastewater (or effluent) is discharged to the drain field, also known as an absorption or leach field.
- **The Soil** — the soil below the drain field provides the final treatment and disposal of the septic tank effluent. After the wastewater has passed into the soil, organisms in the soil treat the effluent before it percolates downward and outward, eventually entering ground or surface water. The type of soil also impacts the effectiveness of the drain field; for instance, clay soils may be too tight to allow much wastewater to pass through and gravelly soil may be too coarse to provide much treatment.



MAINTANNCE TIPS

Home owners and residents have a great effect on septic system performance. Using more water than the system was designed to handle can cause a failure. Also disposal of chemical or excess organic matter, such as that from a garbage disposal, can destroy a septic system. The following maintenance tips can help your system provide long-term, effective treatment of household waste.

Inspect and Pump Frequently

The most important step to maintaining your septic tank is to remove sludge and scum build-up before it washes into the drain field. How often your tank needs pumping depends on the size of the tank, the number of people in your household, the volume of water used, and amount of solids (from humans, garbage disposals, and any other wastes) entering the system. Generally, tanks should be pumped every 3 to 5 years.

Use Water Efficiently

Excessive water is a major cause of system failure. The soil under the septic system must absorb all of the water used in the home. Too much water from laundry, dishwasher, toilets, baths, and showers may not allow enough time for sludge and scum to separate. The less water used, the less water entering the septic system, resulting in less risk of system failure.

MAINTANNCE TIPS CONT.

Minimize Solid Waste Disposal

What goes down the drain can have a major impact on your septic system. Many materials do not decompose and consequently, build up in your septic tank. If you can dispose of it in some other way, do so, rather than putting it into your system.

Keep Chemicals Out of Your System

Keep household chemicals out of your septic system, such as caustic drain openers, paints, pesticides, photographic chemicals, brake fluid, gasoline, and motor oil. Improper disposal of toxic chemicals down the drain is harmful to the environment, as well as the bacteria needed to break down wastes in the septic system.

Septic System Additives

Adding a stimulator or an enhancer to a septic tank to help it function or "to restore bacterial balance" is not necessary. The naturally occurring bacteria needed for the septic system to work are already present in human feces.

What Can Go Wrong?

Like an automobile, septic systems are designed to provide long-term, effective treatment of household waste when operated and maintained properly. However, most systems that fail prematurely are due to improper maintenance.

If you notice any of the following signs or if you suspect your septic system may be having problems, contact a qualified septic professional.

- Odors, surfacing sewage, wet spots, or lush vegetation growth in the drain field area
- Plumbing or septic tank backups (often a black liquid with a disagreeable odor)
- Slow draining fixtures
- Gurgling sounds in the plumbing system
- If you have a well and tests show the presence of coliform (bacteria) or nitrates, your drain field may be failing
- Lush green grass over the drain field, even during dry weather.