

Septic Systems: Out of Sight should not mean Out of Mind

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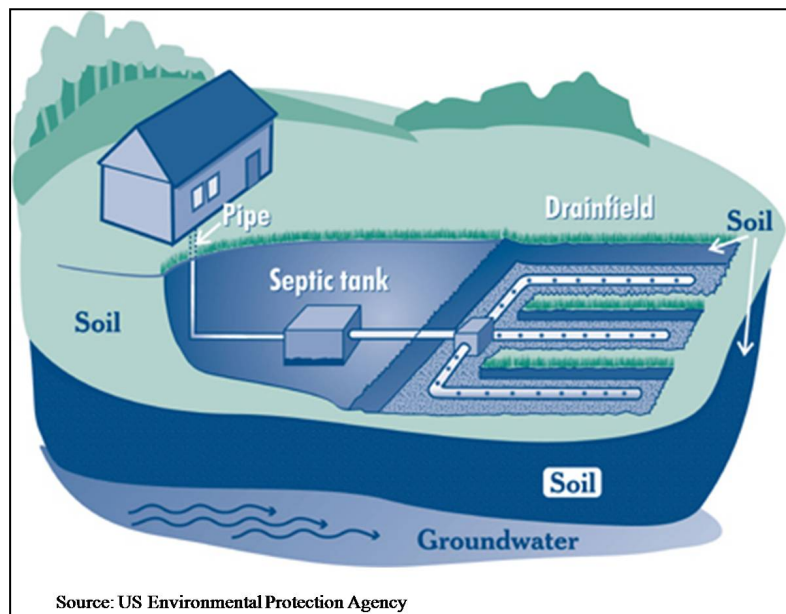
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Homes that are not connected to a centralized wastewater treatment system and municipal sewer line typically are served by their own **septic systems**. This is often referred to as *decentralized wastewater treatment*, and when functioning properly can provide long-term, effective treatment of human and household waste. It is important to see these systems as not only serving a very critical function for your household, but also as an investment. They are costly to install and very costly to replace when things go wrong. However, when properly maintained, septic systems can function well for a very long time.

Plus, failing septic systems are a threat to human and environmental health. Dangerous bacteria, viruses and high levels of nitrogen can be discharged to the groundwater table, which may lead to contamination of groundwater drinking wells down-gradient of the failing system. These same pollutants may be fed into nearby waterways by groundwater, resulting in pollutant discharge to streams and lakes used for fishing, swimming, shellfish harvesting and so on. Pollutants of this nature can lead to sicknesses, skin irritations, economic losses due to beach and shellfish bed closings and be harmful to aquatic life.

So, what can you do to protect your investment and prevent failures leading to public and environmental health risks? It is helpful to first understand how your septic system functions. Conventional septic systems rely on simple principles and components to work effectively:

1. Settling Tank: *solids* settle out in the tank while floating grease and scum rise to the top.
2. Absorption/Leach Field: piping from the tank transfers *liquid* waste to perforated pipes usually laid out like a fork over gravel beds. Liquid waste drains out of the pipes and into the underlying gravel and soil, where it is microbially degraded before reaching the groundwater table several feet below the system. A healthy community of microorganisms is critical to cleaning up this waste!



Additionally, use the following tips to care and maintain this waste treatment system that lies in your own yard... and prevent it from failing:

- **Know where your septic leach field is in your yard.** You should never park or drive over your leach field or install an above-ground pool over your leach field. These activities may compact the soils needed for the treatment of waste and possibly destroy components of the system. Also, never plant a tree or deep-rooting plant on or near the leach field.
- **Inspect and pump** (if deemed necessary by a professional) at least every 3-5 years.
- **Reduce the amount of solids and grease that go down the drain** to extend the life of your system. This means that homes with a septic system should NOT utilize a garbage disposal.
- **Avoid water-intensive activities.** For instance, avoid running the dishwasher and washing machine at the same time. Too much water entering the tank at once can re-suspend solids, which can clog your leach field. Similarly, making Monday “Wash Day” can push so much liquid through the system that there is no time for settling. Instead, spread laundry times over the course of the week.
- **Avoid tank additives.** The use of additives containing yeast, enzymes, bacteria and solvents is not a proven method to help septic system performance.
- **Remember that a healthy population of microorganisms is key to the treatment of your household and human waste.** Therefore, never put harsh chemicals down the drain. This includes pesticides, solvents, disinfectants, paint thinners and items mentioned below.

What should **NOT** go down the drain when you have a septic system:

- Kitchen scraps,
- Condoms,
- Diapers,
- Cigarette butts,
- Tampons,
- Paper towels,
- Cat litter,
- Oil-based paints,
- Strong chemical cleaners,
- Excessive bleach and
- Pharmaceutical products.

To avoid the public and aquatic health risks that may accompany failing septic systems, it is good to know the signs of a failing septic system. Has your tank been inspected in the last five years? If not, it is time to call a professional. Signs that failure has begun include toilets and drains backing up and not flushing completely, liquid is ponding over the leach field, unpleasant odors near the leach field, and wastewater is seeping into the basement.

For additional advice on septic system care, maintenance and alternative options, consult your local health department. Clemson Extension is also willing to help, and more information and fact sheets can be found at www.clemson.edu and www.clemson.edu/carolinaclear.