

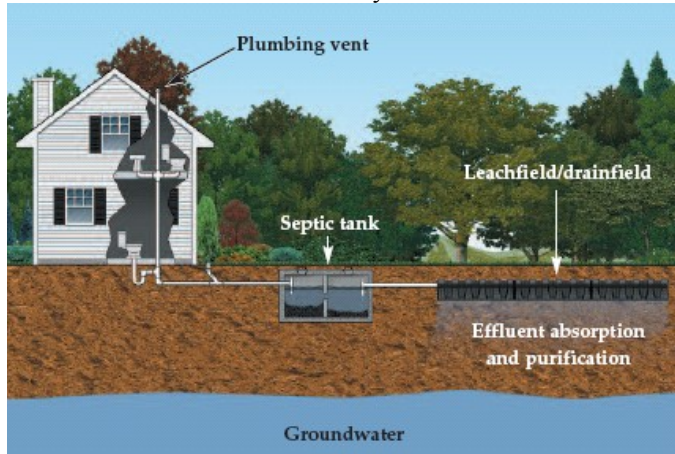


Septic Tank Problems?

We live in a 35 year old home, and we had our septic tank pumped out last summer. Since then we have had numerous problems with the system backing up into the downstairs. Since we've never seen a septic system, would you explain what it does and why we are having a problem?

A septic system is an onsite wastewater treatment system that processes and purifies household waste (effluent). The effluent consists of blackwater (toilet wastes) and greywater (kitchen sink, bathtub and laundry wastes).

A septic system has two components: a septic tank and a leachfield or drainfield. Primary treatment occurs in the

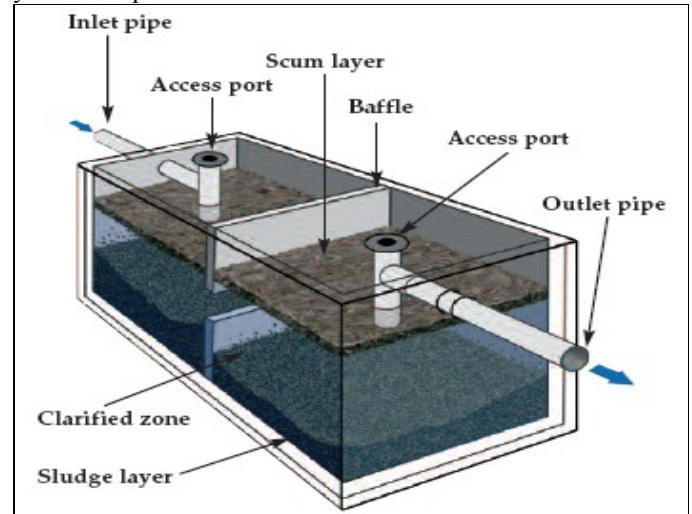


septic tank, where bacteria digest organic materials in the wastewater. The effluent then flows into the leachfield for secondary treatment. Here, bacteria complete the digestion and purification process as the wastewater slowly leaches or infiltrates into the soil.

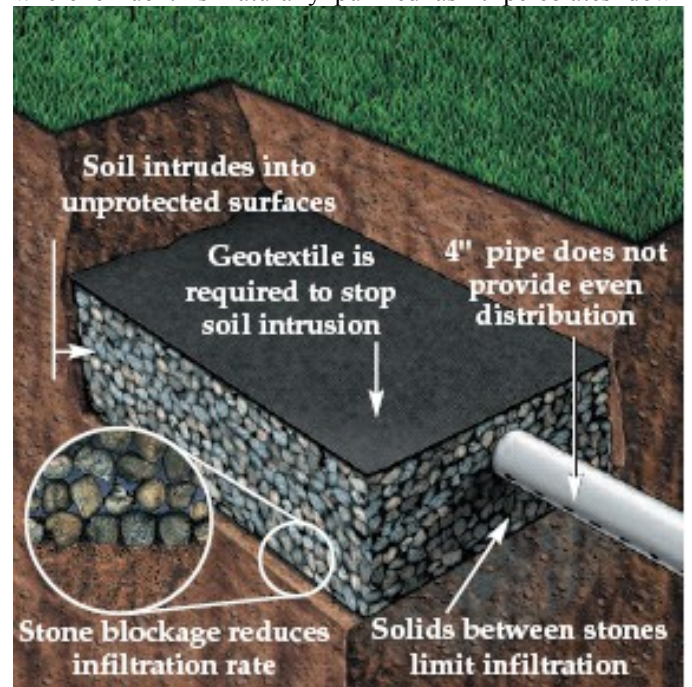
The septic tank is a “watertight” underground box, usually concrete, about eight feet long, four feet wide, and five feet deep. It has at least a 1,000-gallon capacity for retaining, storing, and treating solids, in addition to releasing effluent into the leachfield, sometimes called a drainfield. As wastewater flows into the tank, heavy solids settle to the bottom into a sludge layer, while grease fats float to the top forming a layer of scum. Between these two layers is a clear zone of liquid called the clarified zone.

Found in all three of these layers are billions of bacteria that live naturally in the tank and perform the first phase of treatment to break down solid matter. They digest the solid materials. In the process, gases are produced, which are

vented from the septic tank through the plumbing vent on your rooftop.



From the septic tank, partially treated effluent flows into a drainfield, which typically has two or more trenches. This is where effluent is naturally purified as it percolates down



through the soil.

The soil acts as a biological filter, removing harmful substances before the effluent reaches the groundwater. Older systems use gravel or crushed stone in the leaching trenches to create void space to store the effluent and release it slowly. However, such systems are prone to eventual failure as the voids (empty spaces) around the gravel become plugged. This phenomenon occurs over time as solids build up between the

