Private Treatment: The Septic Tank

In many areas where houses where built prior to city sewerage installation or are spaced so far apart that a sewer system would be too expensive to install, people or builders installed private sewage treatment plants. They are called **septic tanks**.

A septic tank is simply a big concrete, steel, or plastic tank buried in the yard. The tank may hold up to 1,000 gallons (4,000 liters) of water. Wastewater flows into the tank at one end and leaves the tank at the other. The "typical" tank looks something like this in cross-section:



In this picture you can see three layers. Anything that floats rises to the top and forms a layer known as the "**scum**" **layer**. Anything heavier than water sinks to form the **sludge layer**. In the middle is a fairly clear water layer. This body of water contains bacteria and chemicals like nitrogen and phosphorous that act as fertilizers to break down the sewage, but it is largely free of solids. As new sewage enters the tank it displaces water already there. This water flows out of the septic tank to a **drain field**. A drain field is "typically" made of perforated pipes buried in trenches filled with gravel. The following diagram shows an overhead view of a "typical" septic tank, distribution

box and drain field:



A "typical" drain field pipe is 4 inches in diameter and it is buried in a trench that is 4 to 6 feet deep and 2 feet wide. The gravel fills the bottom 2 to 3 feet of the trench and dirt covers the gravel. The water is slowly absorbed and filtered by the ground in the drain field. The size of the drain field is determined by how well the ground absorbs water.

It is important that you understand that the "typical" system is not designed to accept anything except household wastewater from the kitchen and bathrooms including no solids other than human waste, toilet paper, any animal fats, and/or grease. If you have a dishwasher or clothes washer connected to the septic system be sure to use "Septic Safe" biodegradable detergents.

Your system may also need periodic cleaning and maintenance. Signs that the septic system is not functioning properly may include drains that drain slowly, toilets that flush slowly, or possibly an odor of sewage and a wet area around the drainfield

You can also promote the bacteriological process and smooth operation of the system by using a commercial product such as "RID-X" which is available at local discount or home improvement stores (i.e.: Wal-Mart, Home Depot, Lowes, etc.). Additional Information on the care and maintenance of the Septic Tank and System is available from a Licensed Septic Contractor, your local library, the Internet, or home improvement center (i.e.: Home Depot, Lowes, etc.).