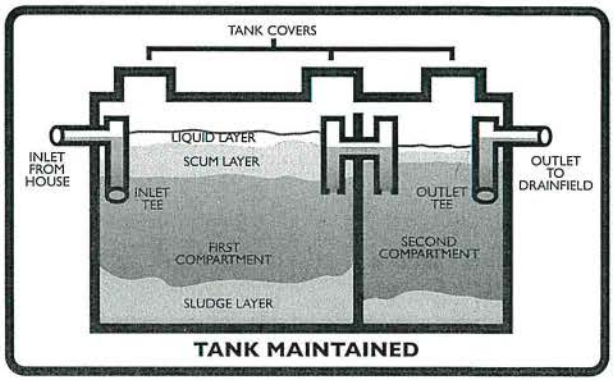
How Your Septic System Works:

A septic system is an individual wastewater treatment system using soil to treat small wastewater flows from a home or small group of homes. There are two parts to a conventional system:

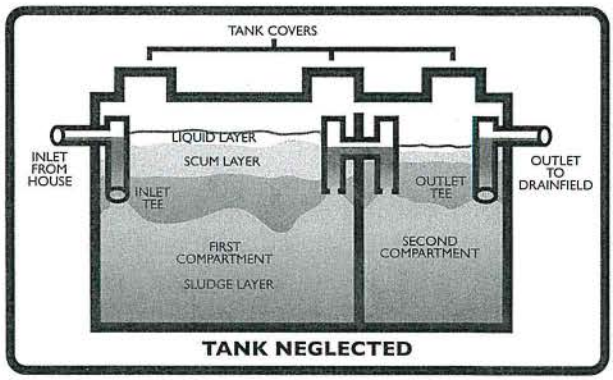
- the septic tank
- an absorption or "leach" field

Septic Tank:

The septic tank is a watertight container, usually made of concrete, buried underground. The size of the tank is based on the number of bedrooms in your home. The tank is the first stage of wastewater treatment. All the water used in your home is diverted to this underground tank (unless you have a graywater system, that pulls out some of the water). Wastewater is temporarily held in the septic tank while heavy solids settle out. These solids are partially decomposed by bacteria. It is important to pump the tank on a regular basis, to maintain a properly functioning system.



TANK MAINTAINED



TANK NEGLECTED

How Often Should I Pump?

Years Between Pumping If Garbage Disposal Present*

Tank Size (Gallons)	Number of People Using Tank			
	1	2	3	4
1000	6 yrs	3 yrs	2 yrs	1.5 yrs
1250	8 yrs	4 yrs	2.5 yrs	2 yrs
1500	10 yrs	5 yrs	3 yrs	2 yrs
2000	13 yrs	6 yrs	4 yrs	3 yrs
2500	16 yrs	8 yrs	5 yrs	4 yrs

*If garbage disposal is not present, time between pumping can be increased by 50%.
Data from Pennsylvania State University Cooperative Extension adapted by Greene County.

Absorption Field:

The absorption field (or leach field) is excavated at the time of installation, and filled with rock or other porous material. Effluent (the liquid left after the solids have settled out) flows from the septic tank into pipes going throughout the absorption field. These pipes will usually have tiny holes in them to allow the effluent to seep into gravel and then into the soil. This is the second stage in the water treatment process. Nutrients, organic materials, and pollutants in the effluent are held by the soil and are digested by soil microbes.

Engineered Systems:

A conventional system is not always the best approach. Some sites require special engineering because of inappropriate soils, shallow bedrock, or a high groundwater table. Engineered systems require professional design and installation. These systems include:

- Evapotranspiration
- Sand Filters
- Trickling Filter Systems
- Drip Irrigation
- Recirculating Sand Filters
- Low Pressure Pipe System (LLP)
- Mounded Systems
- Aerobic Systems

Your installer will have tips for the operation and maintenance of these special systems.

Maintenance:

Pump your tank using the recommended pumping schedule. The costs for inspection and pumping are $100 to $250 as compared to $3,500 to $12,000 for a new system.

Control the amount of water discharged into your system:

Extend you absorption field's life by controlling the amount of water it must absorb and treat:

- divert runoff
- conserve indoor water
- repair leaks
- do not water the grass over your leach field
- extend indoor washing throughout the week

Do NOT allow the entry of these materials into your septic system:

- strong and toxic chemicals
- latex paint
- water with high suspended solids, such as water used in ceramics studio or sheet rock mud. The solids in this water will not settle out, and will ultimately clog the porous leach field.
- household items such as facial tissues, tampons, cigarette butts, egg shells, bones, cooking grease, etc. They will not decompose in your septic tank and will require pumping more often.

Moderate use of these materials is fine:

- bleach
- drain cleaner
- soaps and detergents

Additives:

Additives have not been consistently shown to be effective in either restoring a septic system or decreasing the need for pumping. It is more effective to save the money you might spend on these chemicals and put it towards pumping out the tank.

Absorption Field:

The absorption field works by infiltrating through the soil pores. The field will not function correctly if compacted or disturbed by tree roots. Do not park on top of your absorption field or drive over the top, as this results in compaction. Do not plant a vegetable garden or plants with woody roots, such as shrubs or trees, over the field, as these will interfere with the pipes. Native grasses are a good choice, as these do not require watering. Do not build over the top of your septic system, as this will inhibit proper functioning, inspection, and pumping. Some professionals recommend two leach fields for a longer system life. You may alternate the use of these, switching every year.

Signs of Failure:

If you smell sewage, or see a sunken, wet spot in your lawn, or a place of lush growth, you septic system may be malfunctioning. Call a professional immediately, as septic system failure is costly, and a new site for a replacement system may not be available on your property.

Your Septic Checklist

DO

- ✔ Do use a certified installer, inspector and pumper. Schedule regular maintenance.
- ✔ Do keep septic tank cover accessible and locked.
- ✔ Do divert down spouts and sump pumps away from lateral lines.
- ✔ Do read labels to find low-phosphate detergents.
- ✔ Do maintain good grass cover over lateral lines.
- ✔ Do have health department test your well each year.
- ✔ Do repair plumbing leaks and conserve water to extend the life of your system.

DON'T

- ✗ Don't put grease, solvent, paint, kerosene, gasoline, motor oil, pesticides, chemical drain opener, septic tank additive or cooking fat into drains or toilets.
- ✗ Don't dig in, build over or drive on your lateral field.
- ✗ Don't allow trees and shrubs nearby (roots clog lateral lines).
- ✗ Don't go down into septic tank (may contain deadly gasses).
- ✗ Don't put any trash except toilet paper in toilet.