

SEPTIC SYSTEM GLOSSARY OF TERMS

Alarm:

An electromechanical device that provides audible and visual indication that the water level in a pump or holding tank is above what it is supposed to be.

Alternating leach field:

One of two or more leach fields designed to be used while the other(s) rest. They are generally fed via a manually operated diverter valve located in the line from the septic tank.

Baffles:

Pipe tees or partitions within a septic tank, which reduce turbulence at the inlet and prevent floating greases and scum from escaping into the leaching system at the outlet. (They are usually the first part of a steel tank to rust away, leaving the leach field or drywell unprotected from excessive solids overloading.)

Cesspool:

The original type of sewerage system, often still in use in older homes. They were simply a single hole in the ground loosely blocked up with locally available materials - stone, brick, block, or railroad ties - and capped either with ties covered with a layer of old steel roofing or a cast-in-place concrete lid with a cleanout hole near the center. All household wastewater entered and the liquid portion was absorbed into the ground. When the soil plugged, a new cesspool was added. Wiser installers placed an elbow, or better still, a tee in the outlet pipe from the first cesspool, creating a baffle to hold back the floating greases and scums.

In a sense, this created the first type of septic system, because the first cesspool in the line, sealed by its own demise, served as a septic tank and the subsequent tank provided a greater degree of settling and separation of soil-plugging solids and some absorption. (Owners often have the first tank pumped out to maintain system operation.)

Chambers or aeration chambers:

Open-bottomed precast concrete or plastic structures, which are placed next to each other in an excavation to take the place of crushed stone in a leach field. Unlike leach fields, heavy-duty chambers can be driven over.

Cleanout:

A removable plug in a "wye", or a "tee" in a sewer line, where a snake can be inserted to clear a blockage.

Distribution box or D-box:

Usually a small square concrete box within a leach field from which all pipes lead to disperse effluent within the field. Newer boxes should be marked at the surface to protect from vehicle traffic.

Drywell:

Constructed identically to a cesspool and differs only in that the clarified effluent from a septic tank or the wastewater from a washing machine or other grey water may enter. Modern drywells are often precast perforated rings surrounded by crushed stone to increase the absorption area. Drywells can also be used to return storm water to the ground or to relocate basement drainage water to another location above the water table.

Drywells are not commonly installed today because of laws requiring the bottom of a leaching system to be 4 feet above the seasonal high-water table.

Dug Well:

A water supply well that is simply a hole in the ground lined with stone, brick, concrete, plastic or steel to hold its shape. The lower portion of the lining is perforated, or pierced, to let in water from the Aquifer or ground water table. The upper portion of the lining is water tight to keep surface water from entering and contaminating the well. Dug wells are often called shallow wells to differentiate them from drilled or driven wells that extend much deeper into the ground. Dug wells in our area are often a minimum of ten feet or so into the ground and a maximum of 20 to 25 feet, a practical and safe limit for machines to dig.

Shallow wells for water supply are very similar in concept to dry wells which return wastewater or rain water back to the ground. Both are designed to exchange water between the structure and the soil. The major difference is that water wells are purposely built into the ground water table and dry wells are built above the water table to keep wastewater from entering untreated.

Effluent:

The liquid that flows out of the septic tank after the tank has "taken out the big pieces."

Filter Fabric:

Synthetic cloth-like material that is used for several different types of construction related applications such as erosion control, road stabilization and soil separation. Can consist of either woven or non-woven fibers in varying thicknesses or weights. Available in 12 to 15 foot wide rolls several hundred feet in length. Woven fabrics (usually black) resemble the stuff that modern day grain bags and weed control fabric are made from while non-woven fabrics can resemble a range of materials from soft felts to the stiff shiny house wrap (to which they are closely related) usually seen enveloping homes under construction.

Grease trap:

An in-ground chamber similar to a septic tank, usually used at restaurants, markets, and inns to trap grease from the kitchen wastewater before it reaches the septic tank. Unusual to find in

Grey water:

All liquid wastewater except for the toilet wastes (sink, shower, washer, etc.).

Leaching system:

The part of a septic system that returns water to the ground for reabsorption. Could be a drywell, leach field, trenches, chambers, etc.

Leach bed:

A leaching system which consists of a continuous layer of crushed stone about a foot deep, usually in a rectangular layout, with perforated pipes laid level throughout to disperse effluent as evenly as possible over the entire bed.

Leach field:

Term often used to describe either a leach bed or leach trenches.

Leach trenches:

Built essentially like beds, except that each pipe is in its own stone-filled level trench, usually 3 feet wide. Each trench can be at a different level than the other trenches. Well suited to sloping ground.

Mound (or raised) system:

A leach bed built on a mound of fine to medium-grained sand to elevate it above the seasonal high water table and/or to accommodate a system on a hillside.

Percolation test:

A shallow, hand-dug hole saturated with water, performed as a part of a septic design to determine the soils permeability - the rate at which water is absorbed by the soil - which dictates the system size.

Pump station, pump tank:

A watertight container, usually (but not always) separate from the septic tank, into which effluent flows by gravity and is then ejected by a submersible electric pump through a pressure line to the leaching system. Pump tanks often are hooked to an alarm to warn of pump failure.

Seasonal high water table:

The highest elevation that groundwater reaches within the year (usually in the spring). Many states require the bottom of a leaching system to be at least 4 feet above this point.

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Septic tank:

A watertight chamber, which all household wastewater enters for settling and anaerobic digestion of greases and solids. Original tanks were made of asphalt-coated steel. Modern tanks are made of concrete, fiberglass, or plastic. All tanks should have a set of baffles, which are critical to their operation.

Most tanks have an inspection hatch at both the inlet and the outlet and some have a third hatch in between for pumping access. Locations of each of these should be recorded and/or marked.

Steel tanks often have one round lid that covers the entire tank.

Septic tanks should be pumped every three years or so in normal operation. They should not be treated with any additives and should be protected from receiving any of the harmful chemicals used in many homes and commercial workshops. This includes disinfectants or bleaches, which

can kill bacteria in the tank, and solvents, darkroom chemicals, or other materials that could pollute the water supply.

Septic design:

Usually consists of a topographic survey, test pit, and percolation test plus information about the water supply and subdivision and a filing fee to the state prepared by either a licensed designer or the owner.

Test pit:

A hole dug to determine soil type, seasonal high water table, and depth to ledge. Some states require a test pit of specific depth (to determine that ledge is a minimum number of feet below bed bottom) while others require only a shallow pit to determine depth to hardpan soils.