

On-Site Sewage Program (Septic Systems)

The goal of the On-Site Sewage Program is to protect public health and the environment from the adverse affects and impacts of failing or inadequate on-site sewage systems by ensuring the proper design, installation, and maintenance of on-site sewage systems.

- [Septic Process](#)
- [Homeowner's Guide to Septic](#)
- [Applications and Forms](#)
- [Washington State on-site sewage \(septic\) system rules & regulations \(WAC 246-272A\)](#)

On-Site Sewage Basics

A conventional septic system consists of two main parts: the septic tank and the soil drainfield (also referred to as a leachfield, absorption bed or absorption field). At the head of the drainfield a distribution box (D-box) or a manifold distributes wastewater to several absorption trenches. Some locations require that newly installed drainfields include a designated replacement area should the existing septic system need an addition, repair or replacement, the replacement area can then be used. How the System Works

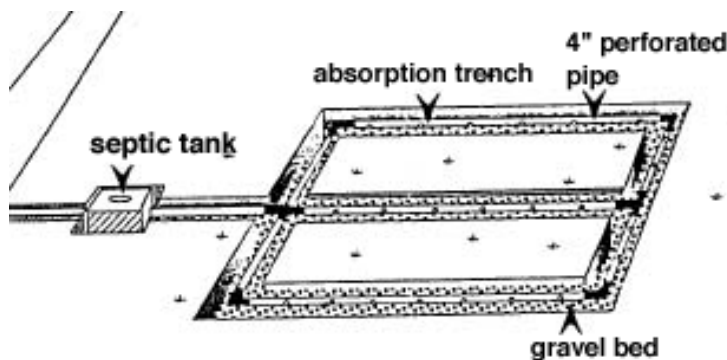


Figure 1: Septic System

Courtesy National Small Flows Clearinghouse

The septic tank. A septic tank is a large, underground, watertight container, typically about 9 feet long, 4-5 feet wide and 5 feet tall that is connected to the home's sewer line. While typically designed with a 1,000-gallon liquid capacity, the size of the tank is legally determined by the number of bedrooms in the home. Septic tanks may be rectangular or cylindrical and may be made of concrete, fiberglass or polyethylene. Raw waste water from the bathroom, kitchen and laundry room flows into the tank where the solids separate from the liquid. Light solids, such as soap suds and fat, float to the top and form a scum layer. This layer remains on top and gradually thickens until you have the tank cleaned. The liquid waste goes into the drainfield, while the heavier solids settle to the bottom of the tank where they are gradually decomposed by bacteria. But some non-decomposed solids remain, forming a sludge layer that eventually must be pumped out. Septic tanks may have one or two compartments.

Two-compartment tanks do a better job of settling solids and are required for new installations. Tees or baffles at the tank's inlet pipe slow the incoming wastes and reduce disturbance of the settled sludge. A tee or baffle at the outlet keeps the solids or scum in the tank.

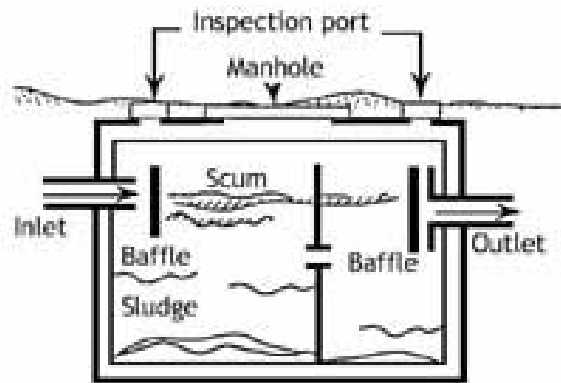


Figure 2: A Two-Compartment Septic Tank
Courtesy National Small Flows Clearinghouse

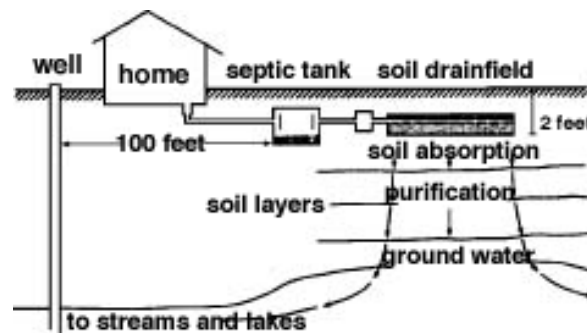


Figure 3: Wastewater Treatment and Disposal In the Soil
Courtesy North Carolina Extension Service

The Drainfield. Further treatment of wastewater occurs in the soil beneath the drainfield. The drainfield consists of long underground perforated pipes or chambers connected to the septic tank. Liquid waste or effluent flows out of the tank and is evenly distributed into the soil through the underground system. The soil below the drainfield provides the final treatment and disposal of the septic tank effluent. After the effluent has passed into the soil, most of it percolates downward and outward, eventually entering the groundwater. A small percentage is taken up by plants through their roots, or evaporates from the soil. The soil filters the effluent as it passes through the pore spaces. Chemical and biological processes treat the effluent before it reaches groundwater, or a restrictive layer, such as hardpan, bedrock, or clay soils. These processes work best where the soil is somewhat dry and permeable, and contains plenty of oxygen for several feet below the drain field. The size and type of drainfield depends on the estimated daily wastewater flow and soil conditions.

Property Owners

Operation and Maintenance of your System

Septic systems are usually not considered an essential part of a home. But replacing a residential septic treatment system may cost between \$7,000 and \$15,000! Periodic inspection and timely repair of your system components can prevent damage to the soil and water in the ground around your home, and may extend the life of your system. Washington Administrative Code chapter 246-272A requires homeowners whose property is not connected to a municipal sewer system to ensure that the property includes an approved, correctly functioning on-site septic system. Proper maintenance is defined in the code as:

- Determining the level of solids and scum in the septic tank every three years.
- Employing an approved pumper to remove septage from the tank when necessary.
- Protecting the system components and required reserve septic area from damage by structures or materials, surface drainage, soil compaction, soil removal or grade alteration.
- Keeping the sewage flow at or below designed quantity and waste strength.
- Directing roof drains away from the area of the sewage treatment system.
- Operating and maintaining alternative sewage disposal system.

Why should you maintain your septic system?

- To protect public health.
- To protect our drinking water.
- To protect your investment.

Type of system	Frequency of inspection
Simple gravity with or without pump	Every 3 years
Pressure distribution*	Yearly
All alternative systems (sand mounds, ATU, Glendons, etc.)All food establishments	Yearly <i>Note: Some systems are so complex the manufacturer recommends inspection more often for the first 2 years; be sure to meet the conditions of your warranty.</i>
All systems	Ensure that a current report of system status is on file with SCCDD when a property served by an on-site septic system is offered for sale. <i>The report of system status is considered current for purposes of this subsection if it was completed within one (1) year of the date of sale.</i>

Maintaining your Septic Tank

The lack of septic tank maintenance can cause sewage to back up into your house or solids to overflow to the drainfield. Once solids overflow and leave through the tank outlet, they can quickly clog a drain field to the point that a new one is required. Most septic tanks need to be pumped every three to five years, depending on the tank

size and the amount and type of solids entering the tank. The inspection of the sludge and scum levels is the only way to determine when a tank needs to be pumped. This is not necessarily a pleasant task, but can be done relatively easily. Septic tank pumping firms are available to perform the inspection. See our list of licensed OSS Pumpers [here](#).

Help for Failing Septic Systems

Please contact Skamania County Community Development Department (SCCDD) at (509) 427-3900 or email us at permitcenter@co.skamania.wa.us for further information and technical assistance for homeowners with failing septic systems in need of repair or replacement.