



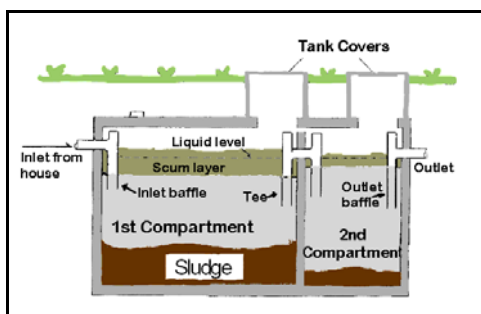
Assessing Your Septic System to Protect Water Quality



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Service

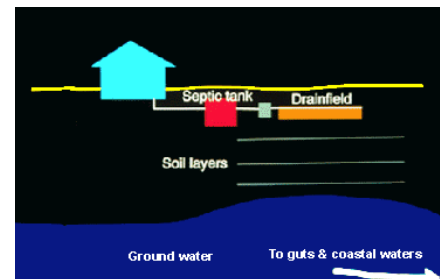
Most homes in the Virgin Islands use a **septic system**. A septic system uses the soil to treat **waste water** from your bathroom, kitchen, and clothes washer. The most common type of septic system has two parts: a **septic tank** and a **drainage area**, or soak-away. A drainage area is either a gravel-filled pit (**a seepage pit**) or gravel-lined trenches (**drain field**). Seepage pits are most common in the Virgin Islands. If you have a septic system, you need to know how it works and how to care for it to avoid health hazards and costly repairs.



Cross section of a septic tank.

A **septic tank** is a watertight container made of concrete, fiberglass, or thick plastic. Waste water flows from the house to the septic tank. The septic tank treats waste water by holding it long enough so that solids settle to the bottom of the tank (**sludge**). Lighter soap scum, oil, grease, and fats float to the top to form the **scum** layer. Helpful bacteria that live in your septic tank break down the waste water. They convert most of the scum and sludge into a liquid. This liquid is easier for the soil to clean and won't clog the drainage area. Most harmful germs in waste water are killed in the septic tank. **Baffles** in the tank help retain sludge, prevent scum from getting into the drainage area and keep inlet and outlet pipes from clogging. **All septic tanks should have easy-access covers for you to check baffles and pump out the tank.**

Waste water is pushed out of the septic tank and into the **drainage area** every time new waste water enters the tank, but scum and sludge stay behind. The waste water slowly seeps from the drainage area into the soil around and below where plants and soil organisms break it down. It then moves through the soil and rock into ground water or guts and bays. To work well, the drainage area **must** be in flat, deep, well-drained soils; be at least 2 feet below the ground surface; and have at least 3 feet of soil between the drainage area and rock or high water tables.



How septic systems treat sewage and pathways to ground and coastal waters.

Public health officials report that **more than 400 septic systems fail in the territory each year**. Many septic systems fail in the Virgin Islands because of poor siting or up-keep. Waste water from failing septic systems can pollute cisterns, wells, guts, ponds, and beaches. Sewage can also overflow onto the soil around your septic system. Sewage pollution is a **human health risk**. People can get sick with stomach or intestinal infections, giardia (a parasite), staph infections, infectious hepatitis, or typhoid fever from contact with waste water on the ground or in polluted drinking water or sea water. Waste water also can cause algal blooms in ponds, lagoons, and coastal waters that kill fish and shell fish.

Fill out the following table to find out if you have a risky septic system. It will help you reduce health risks and water pollution caused by failing septic systems and prolong the life of your septic system. If you rank a category **"high risk,"** you may not have a failing septic system, but it might be more at risk. If you have checked areas of high risk, you should create a plan to reduce your potential risks. The plan should list:

- T Things that you ranked as high risk ("1").
- T Your options (short-term actions that can reduce risks or long-term actions: re-construction or high cost).
- T The step(s) you will take to fix the problem.

SEPTIC SYSTEM RISK ASSESSMENT

	Low Risk - 3	Medium Risk - 2	High Risk - 1	Your Rating
Distance to Cistern or Well	Your septic system is more than 100 feet downhill from your cistern, well or water pipe.	Your septic system is 50 to 100 feet down hill from your cistern, well or water pipe or more than 25 feet uphill.	Your septic system is less than 50 feet down hill from your cistern, well or water pipe, less than 25 feet uphill, or you do not know where it is.	
Distance to Surface or Ground Water	Your septic system is at least 50 feet away from a gut, pond or shoreline and the bottom of the system is at least 2 feet above the water table.	Your septic system is 25 - 50 feet away from a gut, pond or shoreline and the bottom of the system is at most 1½ feet above the water table.	Your septic system is less than 25 feet away from a gut, pond or shoreline or the bottom of the system is less than 1 ½ foot above the water table.	
Soil Type	You have deep, well-drained, loamy soils.	You have deep, fairly well-drained, non-shrink-swell clay soils or deep sandy soils with a low-pressure pipe system.	You have thin soils with fractured rock, hard rock, or very sticky clay soils, you do not have a pre-treatment system, or you do not know your soil type.	
Slope	Your septic system is located on land with less than 10% slope.	Your septic system is located on land with 10% - 25% slope.	Your septic system is located on land with greater than 25% slope.	
Tank Size	Your septic tank is big enough for the total number of people living in the house plus visitors.		Your septic tank is too small for the number of people using it or you do not know the tank size.	
Cleaning Frequency	Your septic tank was inspected less than 1 year ago and pumped out less than 3 years ago.	Your septic tank was inspected over a year ago and/or pumped out 3 - 5 years ago.	Your septic tank was inspected or pumped out over 5 years ago, or your tank has never been inspected and pumped.	
Water Use/Conservation	You use water-savers on all your faucets and showers, you have low-flow toilets, and use other water-saving practices.	You have some water-saving faucets or showers or a low-flow toilet or you use some water-saving practices.	You have standard toilets, faucets, and showers and use no water-saving practices.	
Oil & Grease Disposal	You never dump grease and oil down the drain. You wipe oil and grease from pots, pans and dishes with a paper towel before you wash.	You often rinse grease and oil down the drain when washing dishes.	You always wash grease and oil down the drain from cook pans, fryers and dishes or you do not know .	
Household Cleaners & Chemicals	You use few or no household chemicals. You don't throw harmful chemicals (pesticides, chlorine, solvents, thinners, paints) in the toilet or sink.	You use household chemicals (chlorine bleach, de-greasers, pipe de-cloggers, harsh cleaners) more than once a week.	You use harsh cleaners and chemicals daily or pour large amounts of chemicals down the drain.	
Signs of Trouble	You do not have slow drains, bad smells or wet ground over your septic system.	You have some signs of septic system problems, like slow drains.	You have signs of a failing septic system, bad smells, wet or soggy ground over the septic system.	

This "Risk Assessment" is a voluntary, private evaluation of your septic system. It is part of the VI*A*Syst "Protecting Your Water Through a Home & Farm Assessment" program. All your answers are confidential.

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