

DEC Staff Encourages Public to Embrace EPA's SepticSmart Week (Sept. 22-26)

- By Chris Russo, Dept. of Environmental Conservation Permit Compliance



Did you know that according to the U.S. Census Bureau 55% of Vermont homes and businesses utilize private on-site septic systems (wastewater systems) to treat wastewater and the national average is 25%? The Department of Environmental Conservation (DEC) Drinking Water & Groundwater Protection Division staff are embracing EPA's "SepticSmart" week as an opportunity to educate system owners of the importance of understanding and properly maintaining their systems.

Do septic systems cause health or water quality problems?

Failure to properly use and maintain a septic system can lead to back-ups, overflows and system failure. This can result in costly repairs for the homeowner and create a public health hazard. The most serious problems involve contamination of Vermont's surface and groundwater with disease-causing pathogens, nitrates and phosphorus. Excessive nitrogen and phosphorus pollution increases algal growth and lowers dissolved oxygen levels in surface waters. Many owners of septic systems also rely on private wells for their drinking water. Failing septic systems may contaminate nearby wells putting families' health at risk.

Do your Part - Be Septic Smart!

During SepticSmart Week EPA and DEC staff offer septic system owners simple tips that will help protect their home, health, and Vermont's environment.

- **Protect It and Inspect It:** Homeowners should generally have their septic tank pumped when necessary to avoid the flow of solids and scum into the drainfield, typically every three to five years. It is recommended that the drainfield be inspected at the same time. Inspection can be performed by a licensed designer or knowledgeable person such as an installer or the person who pumps the tank. Many septic system failures occur during the winter or spring. Therefore, EPA encourages homeowners to get their septic systems inspected and serviced before the winter season.
- **Think at the Sink:** Avoid pouring fats, grease and solids down the drain. These substances can clog a system's pipes and drainfield. Paints, varnishes, thinners, waste oils, unwanted pharmaceuticals and pesticides can be toxic to the microorganisms that digest your waste.
- **Don't Overload the Commode:** Only put things in the drain or toilet that belong there. For example, coffee grounds, hair combings, dental floss, paper towels, disposable diapers and wipes, feminine hygiene products, condoms, cigarette butts and cat litter can all clog and potentially damage septic systems.
- **Don't Strain Your Drain:** Be water efficient and spread out water use. Fix plumbing leaks and install faucet aerators and water-efficient products. Spread out showers, laundry and dishwasher loads throughout the day or week— too much water at once can overload a system.
- **Shield Your Field:** Remind guests not to park or drive on a system's drainfield where the vehicle's weight could damage buried pipes or disrupt underground flow.

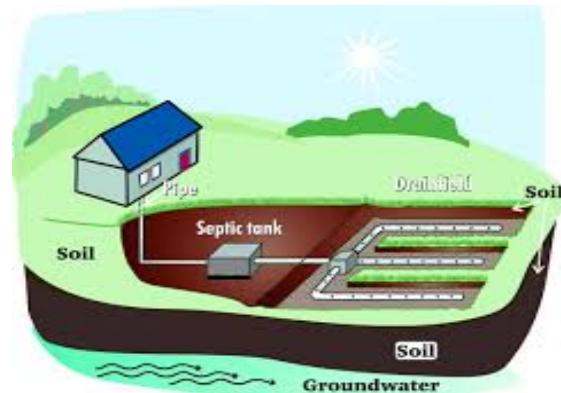
How do septic systems work?

Septic systems are used to treat and dispose of wastewater from houses and businesses. The typical treatment system includes a septic tank, which digests organic matter and separates floatable materials (e.g., oils and greases) and settleable solids from the wastewater. The septic tank effluent then flows to a distribution box where the flow is separated into several perforated pipes in stone trenches or beds. There are alternative drainfield components like plastic chambers or large diameter pipe. The drainfield is designed to release the effluent into the soil that naturally removes harmful bacteria, viruses and nutrients. If the drainfield is overloaded with too much liquid it may flood causing sewage to flow to ground surfaces or create backups in toilets and sinks. Mounds are drainfields built in sand fill in order to overcome soil limitations to bedrock, impervious soils or groundwater tables.

Innovative/Alternative (I/A) systems use pumps or gravity to help septic tank effluent trickle through aerated water, sand, organic matter (e.g., peat), or other media to remove or neutralize pollutants prior to discharging to a drainfield. While the I/A system may require additional maintenance, they also reduce the size of the drainfield by 50% and reduce the separation to groundwater and bedrock.

Why do septic systems fail?

Most septic system failures are related to inappropriate design, poor maintenance or age. Some soil based drainfields were installed prior to current regulations and are on sites with inadequate or inappropriate soils, excessive slopes or high groundwater tables. These conditions can cause hydraulic failure and water resource contamination. Failure to perform routine maintenance, such as pumping the septic tank, can cause solids to migrate into the drainfield and clog the system. Innovative systems with pumps, floats, distribution boxes and filters need routine maintenance to insure all the components are functioning properly.



How long does a septic system last and what if my site does not meet current standards?

The average lifespan of a typical septic system is about 25 years. If an existing system must be replaced and there are site limitations, the designer will design the “best-fix” for your property that will typically include allowed variances. In the worst case, you may need to install a holding tank and reduce flows. Vermont approves and permits the use of Innovative Alternative Systems for sites that cannot accommodate a conventional soil-based system.

“By taking a few small steps to care for their home’s septic system, homeowners can help protect the health of their community and their local waterways, while preventing potentially costly repairs to their system that can occur if it is not properly maintained,” said EPA Acting Assistant Administrator for Water Nancy Stoner. “Water Quality is everyone’s responsibility,” added Vermont Dept. of Environmental Conservation Commissioner David Mears. “Proper maintenance of a home’s septic system is one way for Vermonters to take action to protect the quality of Vermont’s water resources.”