The Why and How of Maintaining Your Septic System

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In honor of the Environmental Protection Agencies Septic Smart week, let's discuss something that is generally out of site, but extremely important in our homes; our septic systems. Onsite wastewater treatment systems (OWTS), or septic systems, when properly maintained are an effective method for treating wastewater from homes and businesses. A conventional OWTS is a two-stage treatment process comprised of primary treatment (settling of solids in a septic tank), and secondary treatment (biological and chemical treatment within the soils of the absorption field). There are new innovative systems for sites with constraints (size, soils, proximity to water etc.) as well as systems that utilize composting toilets that can easily be installed in our homes.

The average lifespan of a properly maintained septic system is 30 years. Failing or ineffective OWTSs add excessive nutrients to our waterways feeding macrophytes (aquatic plants) and algae, causing excessive growth and nearshore algal blooms. This results in a slimy muck on rocks and docks. This muck can hinder recreation and decrease property values. Many camps and older homes near streams and lakes have old, undersized or ineffective systems that leach nutrients and other pollutants into surface water and groundwater.

Wastewater is comprised of raw sewage from toilet and graywater from showers, sinks and washers. Both contain nutrients that will feed algal growth. Raw sewage contains more nitrogen, while graywater contains more phosphorus. Depending on the limited nutrient of a waterbody, the sewage has the potential of causing a cyanobacteria toxic harmful algal bloom.

Out of sight, should not be out of mind. With our local water bodies already experiencing toxic algal blooms and some being impaired for E. coli, we know that dilution is not a solution to the problem. Even if we can't see or smell the sewage, it has an impact on the aquatic ecosystem. To protect our valuable water resources and property, we should follow septic system best management practices, which include:

- Pump out systems every two to three years and have it inspected by a professional;
- Use water efficiently, install low flow toilets and water saving fixtures, also use the proper setting on our washing machine and spread the washing out over the week and not all on one day;
- Do not use septic tank additives;
- Avoid chemical drain openers for clogged drains, try boiling water;
- Don't pour grease or oil down the drain;
- Don't rinse coffee grounds down the sink;
- Don't pour household chemicals (toxics or cleaners) or pharmaceuticals down the drain;
- Eliminate or limit use of garbage disposals;

- Don't flush non-degradable products;
- Don't allow roof drains, basement sump pumps or curtain drains to empty into your septic;
- Do not discharge water softeners backwash into your system: Know where your tank and system are and;
- Don't drive over or plant large trees within your absorption field.

Know the early warning signs of a system that is not functioning, such as slow draining, pipes that gurgle and have bubbles, soggy soil over drainage field and soil settling over the tank. Serious signs of a failure include smell of sewage and the septic backing up into your home.

Regular pumping and routine inspection of an OWTS is one of the most important aspects of a proper operation and maintenance schedule. Failure to maintain and inspect your tank can result in potential health hazards to you, your pets, the environment and cause aesthetic nuisances. Additionally, reduction of wasteflow through conservation and wise use of water and efficient fixtures reduces demand on the system and improves the lifespan of your system. Finally, eliminating harmful products from entering your septic system will increase the system's efficiency by protecting the vital biological components.

SepticSmart Week is an annual event focused on educating homeowners and communities on the proper care and maintenance of their septic systems. Federal, state and local governments, the private sector, communities and academia, all participate in SepticSmart Week. The WNRCD is pleased to have the above article featured in the social media toolkit that is being shared to help educate on this important topic.

The Winooski Natural Resources Conservation District is one of 14 conservation districts throughout Vermont. It encompasses all of Chittenden and Washington County as well as parts of Orange County (Orange, Williamstown and Washington). The district relies on grants and individual donations to complete its conservation work. The WNRCD focuses its resources on completing conservation projects within the areas of agricultural assistance, forestland enhancement, urban conservation and watershed stewardship.

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