

Septic System Maintenance

The best designed and properly installed on-lot sewage disposal system still can malfunction if the homeowner does not properly operate and maintain the system. In addition to requiring costly repairs, malfunctioning systems can contaminate surface and ground waters, cause various health problems, and create unsightly messes and foul odors when raw sewage surfaces or backs up into the home. Homeowners can help prevent malfunctions and ensure the long-term use of their on-lot system by doing the following:

- Conserving water and reducing wasteflow into the septic tank.
- Having the septic tanks pumped at least once every 3 years.
- Avoid putting chemicals in the septic system.
- Not using the toilet to dispose of bulky, slowly decomposing wastes.
- Inspecting the septic tank, pipes, and drainage field annually.
- Maintaining accurate records of the septic system (design, installation, location, inspections, pumpings, malfunctions, repairs).
- Preventing run-off from downspouts, sump pumps, and paved surfaces from getting into the septic system.
- Keeping heavy vehicles, equipment, and livestock away from the septic system.
- Not planting trees and shrubs over or close to the septic system.

CONSERVING WATER AND REDUCING WASTEFLOW

On-lot systems not only treat and dispose of domestic sewage from toilets, they also receive wastewater from various other household fixtures, including baths, showers, kitchen sinks, garbage disposals, automatic dishwashers, and laundries. Conserving water and reducing the amount of wasteflow from these household activities is an important step to ensuring long-term use. The more water-using devices in the household, the greater the burden on the on-lot system. Following are some helpful water conservation tips and a comparison of water usage between conventional fixtures versus water-saving fixtures.

- 1. Use the dishwasher and laundry washer only when they are loaded to capacity.
 - Top Loading Laundry Washer 35-50 gal./load
 - Front Loading Laundry Washer 22-25 gal./load

- 2. Fix leaky faucets and plumbing fixtures quickly. Install flow control devices on faucets.
 - Regular Faucet Aerator 2.5-6 gal./min.
 - Flow Regulating Aerator 2.5-.5 gal./min.
- 3. Take short showers instead of baths. Install flow control or water-saving devices on showerheads and other plumbing fixtures.
 - Conventional Showerhead 3-15 gal./min.
 - Water-Saving Showerhead 2-3 gal./min.
- 4. Reduce water each time you flush the toilet. Put a heavy device such as a brick in a plastic bag or a water-filled plastic bottle in the reservoir, or install a low-flow toilet.
 - Conventional Toilet 4-6 gal./flush
 - Water-Saving Toilet 1.6-3 gal./flush
- 5. Use the garbage disposal sparingly. These wastes place a greater burden on the septic system. If you have garden space, compost the material instead.

PUMPING YOUR SEPTIC TANK

A septic tank accumulates solids (sludge) and scum which should be pumped out at least every three to five years. The frequency of pumpings depends upon tank size and household size. Larger households generally require more frequent pumpings (every one to two years). Water conservation measures can extend the period between pumpings. In Pennsylvania, specific tank sizes are required based on the number of bedrooms in the home. For example, a home with three bedrooms must have a 900-gallon or larger septic tank. The more bedrooms, the larger the septic tank. For more information on the required frequency of pumpings as it pertains to the Lake Wynonah Subdivision, please refer to the Plum Creek Municipal Authority's Sewage Management Program.

YOUR TOILET IS NOT A TRASH CAN

Trillions of living, beneficial bacteria constantly decompose and treat raw sewage in the septic system. The effectiveness of these bacteria can be impaired if harmful substances and chemicals are put into the septic system. Harmful substances/chemicals include oils and greases, gasoline, antifreeze, varnishes, paints and solvents, harsh drain and toilet bowl cleaners, laundry detergents with high sudsing elements, bleach, and pesticides. Remember, what goes into your toilet and drains may eventually end up back in your drinking water.

So instead of using caustic toilet bowl cleaners or bleach, try mild detergent or baking soda, or one half cup of borax per gallon of water. Also, NEVER flush bulky, hard-to-decompose items such as sanitary napkins, diapers, paper towels, cigarette filters, plastics, eggshells, bones, or coffee grounds down the toilet because they can clog the system.

HOW A SEPTIC SYSTEM FUNCTIONS

There are two types of anaerobic (without oxygen) on-lot systems -- gravity distribution systems and pressure distribution systems. In both types, there are three major components: (1) the septic tank (2) the distribution box (gravity system) or dosing tank (pressure system) (3) the absorption area. Sewage flows to the septic tank where the primary treatment takes place. In the tank, the heaviest matter settles to the bottom (forming sludge) and the lighter matter (scum) floats on the top of the clear liquid. The sludge and scum must be pumped out regularly. The clear liquid flows out of the tank to a distribution box or dosing tank, which is then directed to the absorption area. This effluent exits through pipes into a layer of gravel and then percolates through the soil for additional treatment. The bacteria in the soil neutralizes many of the contaminants in the wastewater. Septic tanks were never intended for lifetime use without maintenance. With environmental and use factors constantly changing, a correctly designed and installed system will not operate without proper maintenance. Neglecting maintenance of the septic system only leads to failures. If the septic system is not periodically pumped out, solids will build up, overflow into the absorption field, and then clog the system. Chemical or biological additives are not recommended as a substitute for pumping. In addition to solids buildup in the tank, baffles at the inlet and outlet pipe can deteriorate and even drop into the tank. Without the baffles, sewage can short circuit the tank or scum can enter and clog the absorption field. Signs of an on-lot system in trouble include:

- Toilet runs sluggish.
- Sewer odors in the house and/or drinking water.
- Sponginess around the septic tank, distribution box or dosing tank and absorption area.
- Surfacing raw sewage.
- Dosing pump runs constantly or not at all.
- Dosing tank alarm light is on.
- Backup of sewage into laundry tubs or other fixtures.

