

## Taking Care of Your Septic (Wastewater) System



In areas without public sewer service, household wastewater (from the bathroom, kitchen, and laundry) is treated in individual septic systems. A septic system has two major components: a septic tank and a drain field.

Wastewater sewage flows from the house to the septic tank, which retains wastewater long enough for the heavy solids to settle to the bottom and then releases the untreated

wastewater into the drain field. A solid pipe leads from the septic tank to a distribution box, where the wastewater is channeled to the drain field—one or more perforated pipes set in trenches of gravel. Here the water slowly infiltrates into the underlying soil. Dissolved or suspended wastes and bacteria in the water are trapped or absorbed by soil particles or decomposed by microorganisms.

These microorganisms perform the only treatment of the water before it percolates through the soil to the groundwater table. Under normal conditions, the microorganisms perform well, unless very toxic materials overwhelm the septic system. Microorganism performance can also be diminished if the drain field becomes saturated with stormwater.

A Best Available Technology (BAT) for septic systems is an advanced onsite sewage treatment system that will greatly reduce the amount of nitrogen emitted from a septic system. BAT units combine settling of solids, extended aeration, and recirculation to produce a greatly reduced amount of nitrogen in the effluent. The average user of a septic system produces 3.8 pounds of nitrogen per year that eventually ends up in surface waters. The anticipated load from septic systems in Maryland is estimated at 5.1 million pounds per year to the surface waters of the state.

### Tips for Septic System Care

- Tanks generally need to be pumped out every two to five years, depending on use, the size of the tank and the number of people in the house. If the tank gets too full, sludge particles will flush out of the tank and clog the drain lines. The EPA recommends tanks be pumped before sludge and scum accumulations exceed 30% of the tank volume.
- Don't add "starter enzymes" or yeast to your system. Additives have not been scientifically proven to improve the performance of your system.
- Do not pour fats and oils, chlorine bleach, solvents, chemicals, pesticides, paint thinner, or auto products down the drain. These substances can kill the bacteria that make the system function.

## From My Backyard to Our Bay

- Do not put trash in the toilet such as paper towels, tissues, cigarette butts, disposable diapers, sanitary napkins, tampons or condoms. These items do not break down quickly and can fill the septic tank.
- Direct downspout discharges and runoff away from the septic field to avoid saturating the drain field area with excess water.
- Do not overload the system—this is the primary cause of system failures. Early morning and bedtime are peak use times in the bathroom. Run dishwashers and washing machines at other times of the day. Don't do all the family laundry in one day.
- Dense grass cover and other shallow-rooted plants are beneficial over a drain field. However, do not plant trees near a drain field because large plant roots can clog or break the pipes.
- Avoid compacting the soil over a drain field to ensure proper percolation of effluent.
- Using a garbage disposal can double the amount of solids in the tank. Instead, consider composting organic matter. See the “Composting” section for tips.
- Look into getting a BAT unit for your septic system. BAT systems are more expensive than a regular septic system but are now made more affordable to the property owner through the use of grant money collected through the Bay Restoration Fund. To find out more, contact John Boris, Project Manager at the Maryland Department of the Environment (MDE), at 410-537-3678 or by email at [jboris@mde.state.md.us](mailto:jboris@mde.state.md.us).

### Where To Get Help for septic system information

- If you have a septic system problem, contact the Cecil County Health Department Environmental Health Services at 410-996-5160
- For Frequently Asked Questions; <http://www.cecilcountyhealth.org/ccdhxx/pdf/FAQ%20-%20Bay%20Restoration%20Fund.pdf>
- A Guide to Maintenance; [http://www.epa.gov/owm/septic/pubs/homeowner\\_guide\\_long.pdf](http://www.epa.gov/owm/septic/pubs/homeowner_guide_long.pdf)
- MDE BAT Grant; <http://textonly.mde.state.md.us/PROGRAMS/WATER/BAYRESTORATIONFUND/ONSITEDISPOSALSYSTEMS/Pages/Water/cbwrf/index.aspx>