Septic System Best Management Practices

UNIVERSITY OF MINNESOTA EXTENSION

http://septic.umn.edu

Septic systems protect human health and the environment by safely recycling wastewater and returning it to the natural environment. It is your job as the homeowner to be sure this happens effectively and safely. As with your car, regular maintenance and attention is needed to keep it operating efficiently in a cost effective manner.

Septic Tank

Functions:

- Separates into three layers: scum (stuff that floats), sludge (stuff that sinks), and the liquid.
- The solids and scum are held until removed by the maintainer. Anaerobic bacteria work to break down wastes, prepare the liquid for the drainfield.
- The liquid is delivered to the soil treatment area to complete the treatment process.
- If solids are not removed, they can end up in the soil treatment area, causing (often irreparable) damage.
- Factors that increase frequency of pumping: use of garbage disposal, water treatment unit that discharges into the septic system, in-home daycare or other reason a large number of people are present most of the time, laundry on the 2nd floor, excessive use of water and strong cleaning products.

Best management practices:

- Tanks need to be evaluated every two to three years and pumped if necessary. Some counties require pumping on a specified basis. New homes—pump within 3—12 months of occupancy the first time.
- Never allow a tank to be cleaned through the inspection pipe. This is not allowed by code, and it does not allow a good cleaning to occur. Scum can plug the baffle, baffles can be knocked off. Tanks should only be cleaned through the manhole or maintenance hole.
- Be sure baffles, effluent screen, pumps and other components are inspected when the tank is pumped.
- Install risers on the manhole covers to allow easier access. Insulate the cover and secure tightly.
- An effluent screen will prevent most solids from reaching the soil treatment area. Install and clean according to manufacturer recommendations.
- Never use additives. The cleaners are harmful to your system. They do not replace good management practices. Starters and feeders are not effective.
- **Warning:** NEVER go into a septic tank—there are dangerous gases and no oxygen!
- Do not ignore alarms—troubleshoot the problem.

Soil Treatment Area: Trench or Mound

Functions:

- Soil organisms destroy pathogens (bacteria, viruses).
- Remove phosphorus, reduce nitrogen content.
- Recycle clean water into the soil and ground water. Water and nutrients enter the ground water, evaporate through plants, and are used by plants.

Best management practices:

- Maintain vegetative cover (turf grass, native grasses, flowers). Mow, but do not fertilize, burn or over-water.
- Keep all vehicles, bikes, snowmobiles, etc. off.
- Do not plant trees or shrubs near drainfield.
- Inspect for cracked, missing inspection pipe covers.
- Follow practices to prevent freezing, including mulching the entire system if needed.

Household Best Management Practices

Manage water use:

- Repair all leaking faucets, toilets, fixtures.
- Change to low flow toilets, shower heads.
- Replace appliances with low water use models.
- Spread water uses evenly throughout the day and week..
- Re-route clean water sources: water softener, treatment unit recharge water, high efficiency furnace drip, sump pumps to separate drainage area.

Watch what goes down the drain:

- The toilet is not a garbage can—nothing should be flushed except human waste and toilet paper.
- Excess medications—return to pharmacy or land-fill.
- Limit or eliminate drain cleaner use.
- Do not use automatic toilet cleaners, disposable brushes.
- Do not use every-use or automatic shower cleaners.
- No hazardous waste, paints, solvents, chemicals. Use disposable paint brushes.
- Eliminate or limit use of garbage disposal.
- No chlorine treated water such as from hot tubs.

Manage product use:

- Minimize use of anti-bacterial soaps, cleansers.
- Detergents: measure accurately, use as little as possible.
- Limit use of bleach-based cleansers.

Septage—the solids from the tank are usually land-applied. Lime is added in the truck to destroy pathogens and help control odors. Septic pumpers must follow strict guidelines to protect public safety and water quality. Septage disposal is managed by the MN Pollution Control Agency (MPCA) and the Environmental Protection Agency (EPA).

For more information: Order the Septic System Owner's Guide. Call 800-876-8636 or go to http://shop.extension.umn.edu.
Onsite Sewage Treatment Program web site: http://septic.umn.edu. University of Minnesota Extension http://www.extension.umn.edu.

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