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## Maintaining A Septic System Tank

By Sharon Skipton, UNL Extension Water Quality Educator, and  
Jan Hygnstrom, UNL Extension Project Manager

In a septic tank/drainfield system, wastewater flows from the household wastewater plumbing into an underground septic tank. There, waste components naturally separate, with heavier solids settling to the bottom forming sludge, and lighter solids floating to the top, forming scum. Bacteria begin to treat wastewater by partially decomposing the solids. The liquid (effluent) flows through the outlet to the subsurface drainfield, also called a soil absorption field, leach field, soil treatment area, or laterals. A system will have a header, drop box, or distribution box between the septic tank and the drainfield to distribute effluent evenly between the drainfield trenches. The drainfield usually consists of a series of underground parallel trenches. For older systems, each trench contains a distribution pipe embedded in gravel or rock. Most systems installed since the late 1990s use plastic chambers set in trenches without gravel. The effluent flows through the distribution pipes or chambers where it moves through holes in the pipe or chambers down into the soil. The soil filters out remaining small solids and pathogens (disease-causing microorganisms). Also, bacteria and other microorganisms in the soil treat pathogens and other contaminants in the effluent. Water, carrying dissolved substances such as nitrate, slowly moves down to groundwater.

Proper maintenance of a septic tank and drainfield is critical to keep the system functioning properly. This protects human health and the environment. In addition, it delays the need to repair or replace a system, thereby saving money. The septic tank will require more maintenance than the drainfield. One of the most important things you can do to keep the system functioning properly is to have the septic tank pumped regularly. Only a Nebraska certified pumper, professional engineer or registered environmental health specialist may legally pump a septic tank.

Conserving water to reduce the amount of wastewater that needs to be treated and distributing water flow to the septic tank over an extended period of time will extend the life of a system. Wastewater should remain in the septic tank long enough, at least 24 hours, for heavy solids to settle out, forming sludge, and light solids to float to the top, forming scum. Except for the period immediately after pumping, a septic tank should contain wastewater to its full capacity at all times. A tank that is only partially full means it has a crack or some sort of leak. As a gallon of wastewater flows into the tank from the house, a gallon of effluent flows out of the tank into the drainfield. If wastewater moves in and out of the tank too rapidly, due to constant flow for extended periods, or heavy water flow at any given time, solids remain suspended in the wastewater. This means they may move with the effluent out of the tank and into the drainfield. One important tip is to wash one or two loads of laundry a day, rather than three or more loads in one day. Check for and repair leaky faucets, toilets, and other leaks in the plumbing system.

More solids in wastewater will require more frequent septic tank pumping. Follow these tips:

- Do not flush cigarettes, diapers, feminine hygiene products, paper toweling, or facial tissues.
- Do not overuse the garbage disposal or put grease or oils down the drain.
- Use liquid detergents instead of powdered detergents. Powdered detergents have “fillers” in them that add to the sludge layer.
- Use toilet tissue that breaks down rapidly.

The septic system is not the best way to dispose of some materials. While a septic tank and drainfield system can adequately treat many pathogens in wastewater, it cannot effectively treat all hazardous materials. Keep potentially hazardous materials including pesticides, paints and thinners, solvents, and excess medication, out of wastewater.