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EXTENSION NOTES

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Maintaining Conventional Septic Systems

Septic systems are used in Kentucky where municipal sewage treatment is not available. They are an effective, long-standing method of collecting, treating and disposing of homeowner wastewater, provided they are properly sited and installed. However, a well-sited, properly sized and installed system will fail if not properly maintained. A failed septic system creates problems such as noxious odors, lower property values, surface water contamination and groundwater pollution and may be a health hazard. Repair and replacement costs are considerable.

You can find additional information on assessing septic system performance and reducing the potential risk of groundwater contamination from a KY-A-Syst publication: Household Wastewater Treatment (IP-44) available online at https://tinyurl.com/homewastewater. You can use this self-evaluation to determine performance and keep the system maintained.

You can assemble several components to create an effective septic system. But the most common system Kentucky homeowners use is called a conventional system and consists of a septic tank and drainfield. The septic tank is a reinforced, watertight, concrete box buried in the ground near the house to provide primary treatment of the wastewater.

Sound operation and maintenance practices include water conservation, keeping harmful substances out of the system and having your system inspected and pumped on a regular basis. Good operation and maintenance practices start with everyone in the household knowing what damages the septic system. Having a diagram of the complete system indicating distances and locations of the tank and drainfield helps avoid practices that can harm the drainfield and assists in regular maintenance activities.

Pumping the septic tank regularly is probably the single most important thing you can do to protect the system. You should remove the solids that settle out in the tank every three to six years depending on water usage and the amount of inorganic materials entering the system. A guide to follow with a 1,000-gallon tank is to pump every three years for a household of four or more people and pump every six years for one with two people (increase times by one-half for 1,500-gallon tanks).

You also can determine when you need to pump by opening the top of the tank and making some measurements and observations. Never inspect a tank alone, and never go down into a tank. Toxic gases are produced by the natural treatment processes in the tank and can kill quickly. Pump the tank when the sludge layer at the bottom of the tank is 18 inches deep or the scum layer thickens to within 3 inches of the outlet baffle or sanitary tee outlet.

Solids should be removed by a certified tank pumper and disposed of in an approved manner and location. Be sure that the pumper removes all of the material in the tank. It is not necessary to leave some sludge to "restart" the biological processes; nor is it necessary to scrub or disinfect the tank.

When not removed in a timely manner, overflowing solids from the tank accumulate in the drainfield clogging the soil and backing up the system. This damages the drainfield and may require constructing a new drainfield in a different location on the property.

The drainfield is the most important component of a conventional septic system. It provides final treatment of wastewater. The more water used in the household, the greater the possibility of having problems with the drainfield. Careful and regular maintenance of the tank extends drainfield life.

Water conservation reduces the amount of wastewater delivered to the drainfield. Keeping faucets and toilets from leaking with periodic checks and repairs certainly reduces wastewater. Do not allow foundation drains, roof gutters and other surface waters to enter the septic system.

Be aware of products or household systems that can damage or reduce the effectiveness of the septic system. Reducing garbage disposal use reduces the amount of solids going to the septic tank. Households with garbage disposal units produce about double the solids as those without such units.

The scum layer on top of the wastewater in the septic tank is primarily made up of oils, fats and grease from the kitchen. When homeowners use hot water to flush grease or fat down the drain, it may pass through the tank directly into the drainfield lines where it can rapidly clog soil pores.

Placing even small quantities of pesticides, paint thinners, solvents, drain cleaners, poisons and other harsh household chemicals into the septic system can kill the microbes in the tank and drainfield that decompose solids and purify the wastewater. Unfortunately, some organic solutions are not treated in the septic tank and can flow directly into the drainfield where they are not effectively treated by the soil before reaching the groundwater.

You need a generic groundwater protection plan for all septic systems in Kentucky, which you may find at your local county extension office, local libraries and most local health departments. Questions related to these plans should be addressed to the Kentucky Division of Water.

For more information, please visit https://water.ca.uky.edu/content/septic-systems or contact the Carter County Cooperative Extension Service. For more information about pest prevention and management, contact your Carter County Cooperative Extension Service. Educational programs of the Cooperative Extension Service serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expressions, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability.

Upcoming Events:

- **Beef Quality Care & Assurance Training** – Friday, March 7th @ 10:00 AM – Call 474-6686 to register.
- **Private Pesticide Applicator Training** – Monday, March 10th @ 5:30 PM – Call 474-6686 to register.
- **Extension Council & District Board Meeting** - Tuesday, March 11th @ 3:00 PM
- **Backyard Apple & Pear Care** – Monday, March 17th @ 6:00 PM – Cost is $40 and participants receive either two pear or apple trees. Call 474-6686 to register.