



## **Caring For Your Septic System**

**By Greg Wayman, ASHI Certified Inspector**

### **How Septic Systems Work**

Before we jump into providing pointers on how to maintain your septic system, we need to first cover the basics of how a septic system works. A septic system consists of 2 main components: the septic tank and the absorption field. When you flush your toilet, run your faucets, drain your tub, have your dishwasher drain, your washer empty, or your water softener discharge the brine, the waste water runs down your sewer lines, and empties into the septic tank. The average person uses 100 gallons of water per day. In the septic tank, the solids sink to the bottom and the liquids drain out through the laterals into the absorption field. Solids from human waste have bacteria in it that breaks down the solids in the tank. If the septic tank is kept at equilibrium where the proper amount of anaerobic bacteria constantly breaks down the solids entering, then the tank should be pretty self-sufficient. There's also aerobic bacteria in the laterals that breaks down the liquids as it drains through the absorption field. If maintained properly, a septic system should last a very long time.

### **Septic System's Location**

A septic tank must be a minimum 15' from the foundation, a minimum 10' from surface water, a minimum 50' from a well, and a minimum 10' from a property line. The absorption field must be a minimum 30' from the foundation, a minimum 50' from surface water, and a minimum 100' from a well. The trench for the absorption field is typically 4'-5' deep by 100' long.

### **Tank Sizing**

The general rule of thumb is a 2 bedroom home or smaller should have 1,000 gallon septic tank and a 3 bedroom home should have a 1,500 gallon tank.

### **What NOT To Put Down the Drain**

Garbage disposals are a septic system's enemy. What will go down a disposal doesn't mean it should. Avoid starches and stringy greens. They float and will clog your laterals. Use common sense here. Plastics, diapers, condoms, etc. should NOT go down the drain. Chemical cleaning products that aren't labeled 'septic safe' shouldn't be dumped down the drains either. The natural anaerobic bacteria in your tank can be adversely affected causing sludge and solids to build up faster, in turn, clogging your laterals. When choosing your toilet paper, look for the 'septic safe' label. If the toilet paper takes too long to biodegrade, it too can clog the laterals.

### **Maintaining Your Absorption Field**

During the summer months, approximately 60% of the water evaporates off of the field. It's very important to make sure proper surface drainage is maintained around the field and that you don't pour concrete over the area. Don't plant trees or shrubs on the field. Their roots can clog the laterals. Don't drive on the field with any vehicles. This may cause the laterals to break or become blocked. Your lawnmower would be about the only exception. When doing laundry, space the loads out so you don't cause a hydraulic overload. A hydraulic overload is when you push too large of a volume of water into your septic tank too fast. It can cause the sludge and solids to churn, clogging your laterals. If you have a water softener, I would strongly recommend turning it off. The huge volume of water that a softener dumps into the septic tank when discharging the brine can cause problems.

### **Septic Tank Pumping**

A septic tank should regularly be pumped as solids and/or sludge will accumulate. The general rule of thumb is to have your tank pumped every 2-5 years. If you have a large family, you'll want to pump your tank more frequently. If you wait too long, the solids or sludge can buildup and cause your laterals to be clogged. When this happens, your absorption field will need to be dug up and a new one installed.

## Septic Inspections

In Nebraska and Iowa, you need to be state licensed to perform a septic inspection. When you hire a state licensed contractor to conduct the inspection, they should check the water level in the tank, then push 100 gallons of water into the tank and monitor the tank level. If the water level rises, then that is an indicator of a clogged or partially clogged lateral. They should judge the thickness of the sludge, inspect the sidewalls for cracks, check the condition of the inlet and outlet baffle, check the condition of the access port, and use a 'T'-bar to probe the laterals. If the 'T'-bar finds moisture, that's an indicator that the absorption field is partially saturated. The 'T'-bar is also used to determine the size of the septic tank.

*I would like to thank Jim Sandvold from S&S Pumping out of Blair, Nebraska for sharing his knowledge on the subject. His company installs septic systems, does pumping, and performs septic inspections in the Blair and Omaha area. He can be reached 402-426-4671.*

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