"Care and Feeding" of Your Septic Tank

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Since the septic tank is such an essential part of a sewage system, here are some points to remember about the "care and feeding" of that part of the onsite sewage treatment system.

• A "starter" is not needed for bacterial action to begin in a septic tank. Many bacteria are present in the materials deposited into the tank and will thrive under the growth conditions present.

• If you feel that an additive is needed, be aware that some may do great harm. Additives that advertise to "eliminate" tank cleaning may cause the sludge layer to fluff up and be washed out into the drainfield, plugging soil pores. Some additives, particularly degreasers, may contain carcinogens (cancer-causing) or suspected carcinogens that will flow into the ground water along with the water from the soil treatment unit.

• Send all sewage into the septic tank. Don't run laundry wastes directly into the drainfield, since soap or detergent scum will plug the soil pores, causing failure.

• Normal amounts of household detergents, bleaches, drain cleaners, and other household chemicals can be used and won't stop the bacterial action in the septic tank. But don't use excessive amounts of any household chemicals. Do not dump cleaning water for latex paint brushes and cans into the house sewer.

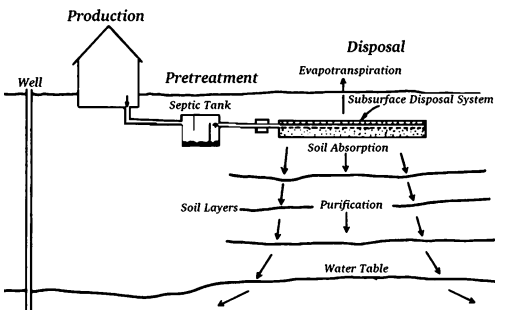
• Don't deposit coffee grounds, cooking fats, wet-strength towels, disposable diapers, facial tissues, cigarette butts, and other non-decomposable materials into the house sewer. These materials won't decompose and will fill the septic tank and plug the system. To use a five-gallon toilet flush to get rid of a cigarette butt is also very wasteful of water. Keep an ash tray in the bathroom, if necessary.

• Avoid dumping grease down the drain. It may plug sewer pipes or build up in the septic tank and plug the inlet. Keep a separate container for waste grease and throw it out with the garbage.

• If you must use a garbage disposal, you will likely need to remove septic tank solids every year or more often. Ground garbage will likely find its way out of the septic tank and plug up the drainfield. It is better to compost, incinerate or deposit the materials in the garbage that will be hauled away. As one ad says, "You can pay me now, or pay me later."

• Use a good quality toilet tissue that breaks up easily when wet. One way to find out is to put a hand full of toilet tissue in a fruit jar half full of water. Shake the jar and if the tissue breaks up easily, the product is suitable for the septic tank. High wet-strength tissues are not suitable. As long as the tissue breaks up easily, color has no effect on the septic tank. Many scented toilet tissues have high wet strength.

• Clean your septic tank every one to three years. How often depends on the size of the tank and how many solids go into it. A rule of thumb is once every three years for a 1,000 gallon tank serving a three-bedroom home with four occupants (and with no garbage disposal).



Here is a word of caution: Never go down into a septic tank. The gases present may poison or asphyxiate you. Only trained professionals should enter a septic tank or any other confined space.

• To properly clean a septic tank, the manhole cover or the tank cover must be removed. This is the only way to be sure that all the solids have been pumped out. A septic tank cannot be cleaned adequately by pumping out liquids through a four inch inspection pipe. Doing so often results in some of the scum layer plugging the outlet baffle when the tank refills with sewage. Be sure that the tank is opened when it is cleaned. At this time the baffles should be inspected and replaced if necessary.

• Recharge wastes from a properly operating water softener will not harm septic tank action, but the additional water must be treated and disposed of by the drainfield. If the softener recharge overloads the sewage system, this waste water can be discharged to the ground surface since it contains no pathogens. But it must be discharged in a location where it will not be a nuisance or damage valuable grass or plants.

• Using too much soap or detergent can cause problems with the septic system. It is difficult to estimate how dirty a load of laundry is, and most people use far more cleaning power than is needed. If there are lots of suds in your laundry tub when the washer discharges, cut back on the amount of detergent for the next similar load. It's generally best not to use inexpensive detergents which may contain excessive amounts of filler or carrier. Some of these fillers are montmorillonite clay, which is used to seal soils! The best solution may be to use a liquid laundry detergent, since they are less likely to have carriers or fillers that may harm the septic system.

Each septic system has a certain capacity. When this capacity is reached or exceeded, there will likely be problems because the system won't take as much sewage as you want to discharge into it. When the onsite sewage treatment system reaches its daily capacity, be conservative with your use of water. Each gallon of water that flows into the drain must go through the septic tank and into the soil absorption unit. Following are some ways to conserve water that should cause little hardship in anyone's standard of living:

• Be sure that there are no leaking faucets or other plumbing fixtures. Routinely check the float valve on all toilets to be sure it isn't sticking and the water isn't running continuously. It doesn't take long for the water from a leaking toilet or a faucet to add up. A cup of water leaking out of a toilet every minute doesn't seem like much but that's 90 gallons a day! So be sure that there is no water flowing into the sewer when all water-using appliances are supposed to be off.

• Installing a water meter is a sure way to know how much water you are using and how much the water use will be reduced by doing certain things. A water meter for a home should cost from $50 to $100 plus installation.

• The most effective way to reduce the sewage flow from a house is to reduce the toilet wastes, which usually account for about 40 percent of the sewage flow. Many toilets use five to six gallons per flush. Some of the so-called low-water-use toilets are advertised to use only 3.5 gallons per flush. Usually the design of the bowl hasn't been changed, however, and often two flushes are needed to remove all solids. That's seven gallons! Toilets are available which have been redesigned and will do a good job with one gallon or less per flush. Using a one gallon toilet rather than a five gallon toilet will reduce sewage flows from a home by about a third. This reduction may be more than enough to make the sewage system function again. While prices may vary, one gallon toilets can usually be purchased in the $200 range, far less than the cost of a new sewage treatment system.

• With a water meter, you can determine how much water your automatic washer uses per cycle. Many washers now have settings to reduce the amount of water used for small loads. Front loading washers and suds savers use less water than top loading machines. If your sewage

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Urban Agriculture

Frozen Pipes

Frozen pipes aren't just an inconvenience. An average of a quarter-million families have their homes ruined and their lives disrupted each winter ... all because of water pipes that freeze, burst and destroy.

And if you think recovering from frozen pipes is as simple as calling a plumber, think again.

An eighth-inch crack in a pipe can spew up to 250 gallons of water a day, wrecking floors, furniture and keepsakes. Both plastic (PVC) and copper pipes may burst.

Imagine if your pipes were to freeze and break while you were away on vacation: Your homecoming would be a soggy one and your fix-it plea to a plumber would have to be accompanied by calls to a contractor, carpet-layer, painter and furniture store. Damage might be so severe that you and your family would have to move out of your home while repairs are made.

By taking a few simple precautions, you can save yourself the mess, money and aggravation frozen pipes cause. Here are a few simple steps to protect your home or apartment:

Before the cold hits, insulate pipes in your home's crawl spaces and attic. These exposed pipes are most susceptible to freezing. Remember: the more insulation you use, the better protected your pipes will be.

Heat tape or thermostatically controlled heat cables can be used to wrap pipes. Be sure to use products approved by an independent testing organization, such as Underwriters Laboratories Inc., and only for the use intended (exterior or interior). Closely follow all manufacturer's installation and operation instructions.

Seal leaks that allow cold air inside, near where pipes are located. Look for air leaks around electrical wiring, dryer vents and pipes. Use caulk or insulation to keep the cold out and the heat in. With severe wind chill, a tiny opening can let in enough cold air to cause a pipe to freeze.

Disconnect garden hoses and, if practical, use an indoor valve to shut off and drain water from pipes leading to outside faucets. This reduces the chance of freezing in the short span of pipe just inside the house.

A trickle of hot and cold water might be all it takes to keep your pipes from freezing. Let warm water drip overnight, preferably from a faucet on an outside wall.

Open cabinet doors to allow heat to get to uninsulated pipes under sinks and appliances near exterior walls.

If you're away, set the thermostat in your house no lower than 55 degrees.

Ask a friend or neighbor to check your house daily to make sure it's warm enough to prevent freezing, or shut off and drain the water system. Be aware that if you have a fire protection sprinkler system in your house, it will be deactivated when you shut off the water.

If your pipes freeze, don't take chances. If you turn on your faucets and nothing comes out, leave the faucets turned on and call a plumber. If you detect that your water pipes have frozen and burst, turn off the water at the main shut-off valve in the house; leave the water faucets turned on. (Make sure everyone in your family knows where the water shut-off valve is and how to open and close it.)

Never try to thaw a pipe with a torch or other open flame. Water damage is preferable to burning down your house. You may be able to thaw a frozen pipe with the warm air from a hair dryer. Start by warming the pipe as close to the faucet as possible, working toward the coldest section of pipe.

DO NOT use electrical appliances in areas of standing water because you could be electrocuted. (DJ)

Prevent Home Fires

The single largest cause of home fires in Nebraska is failure or misuse of heating devices. In many of these heating-related fires, the direct cause was combustible (burnable) objects placed too close to a heat source like a fireplace, wood stove or portable electric heater.

Burnable materials should be kept back several feet from heating devices. Surface temperatures of heating elements and fire boxes can reach several hundred degrees. Follow manufacturer's recommendations for separation distances and proper venting.

Overloaded electric cords are also a source of home fires. Many household extension cords are not heavy enough to run devices like power tools and portable heaters. Read the label to find the allowable load (amperage) that the cord can carry. Also make sure that extension cords are never placed under carpets or rugs that can trap heat and cause the cord to overheat.

Being aware of potential fire hazards and keeping working smoke detectors up in your home are your best lines of defense against deadly home fires. (DJ)