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WHAT TO DO IF YOUR SEPTIC SYSTEM FAILS

Discovering that your septic system has failed is a miserable experience. This bulletin is designed to help you recognize this problem, determine what to do if it happens and, most importantly, learn how to prevent it. These tips are best used in conjunction with Extension bulletin WQ-39, "Maintaining Your Septic System."

WHAT IS SEPTIC SYSTEM FAILURE?

A septic system should effectively accept liquid wastes from your house and prevent biological and nutrient contaminants from getting into your well or nearby lakes and streams. Anytime these things do not happen, the system is failing.

For example, when waste backs up into your home or liquid is bubbling up in your backyard, the system has obviously failed. If significant amounts of biological or nutrient contaminants reach your well or surface waters, the system is also failing, even though it may appear to be working just fine.

WHY SEPTIC SYSTEMS FAIL

Most septic systems will fail sometime. These systems are designed to have a lifetime of 20 to 30 years, under the best conditions. Eventually, the soil around the absorption field becomes clogged with organic material, making the system unusable.

Many other factors can cause the system to fail well before the end of its natural lifetime. Pipes blocked by roots, soils saturated by storm water, crushed tile, improper location, poor original design or poor installation can all lead to major problems.

But by far the most common reason for early failure is improper maintenance by homeowners. When a system is poorly maintained and not pumped out on a regular basis, sludge (solid material) builds up inside the septic tank, then flows into the absorption field, clogging it beyond repair.

HOW TO KNOW IF YOUR SYSTEM IS FAILING

Look for these symptoms to determine if you have a serious problem:

• Sewage backup in your drains or toilets. This is often a black liquid with a disagreeable odor.

• Slow flushing of your toilets. Many of the drains in your house will drain much slower than usual, despite the use of plungers or drain cleaning products.

• Surface flow of wastewater. Sometimes you will notice liquid seeping along the surface of the ground near your septic system. It may or may not have much of an odor associated with it.

Lush green grass over the absorption field, even during dry weather. Often, this indicates that an excessive amount of liquid from your system is moving up

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through the soil, instead of downward, as it should. While some upward movement of liquid from the absorption field is good, too much could indicate major problems.

• The presence of nitrates or bacteria in your drinking water well. This indicates that liquid from the system may be flowing into the well through the ground or over the surface. Water tests available from your local health department will indicate if you have this problem.

• Buildup of aquatic weeds or algae in lakes or ponds adjacent to your home. This may indicate that nutrient-rich septic system waste is leaching into the surface water. This may lead to both inconvenience and possible health problems.

• Unpleasant odors around your house. Often, improperly vented or failing systems cause a buildup of disagreeable odors around the house.

HEALTH AND ECONOMIC EFFECTS OF A FAILING SYSTEM

The most serious effect of a failing system is the potential for serious disease from the leaking and improperly treated waste. Dysentery and hepatitis can be spread by these wastes. In addition to the diseases themselves, mosquitoes and flies that spread some illnesses can breed in areas where liquid waste reaches the surface.

Chemical or nutrient poisoning can also be a problem. Many of the synthetic products you use around the house, such as strong cleaning products, can be poisonous to humans, pets and wildlife if they travel through soil to your well or on the surface to lakes, streams or ponds. Excess nitrate levels in drinking water can pose serious health threats to infants.

The health of plants around your home can be seriously affected, too. The waste from failing systems can kill many species or cause increased growth of undesirable plants.

The economic costs of failure are no less important. The most obvious effect is the direct expense of replacing your septic system. This could cost $2,000 to $4,000. Also consider the indirect cost of losing the use of your house while the system isn’t working and the long-term inconvenience of a system that doesn’t operate properly.

WHAT TO DO IF YOUR SYSTEM FAILS - IMMEDIATE ACTIONS

Follow these steps if you notice any of the symptoms listed above:

• Call your local health department. This is the first thing you should do. Health department staff members have the expertise to assess your situation quickly and offer advice on how to cure the problem.

• Have your septic tank pumped. Frequently, this will help the problem temporarily, especially when it is combined with drastic water conservation. The empty tank can hold several days of waste. (This won't be effective if a clog exists between the house and the septic tank, or if very high water levels are the cause of the problem.)

• Conserve water in your home. This is particularly effective if your system has not failed completely. It can help lessen the problem for a short time. Water-saving devices and reduced consumption, especially in your bathroom, can have a significant effect.

• Fence off the area. If liquid waste is seeping to the surface, prevent people and pets from getting in contact with the effluent.

WHAT TO DO IF THE SYSTEM FAILS - LONG-TERM OPTIONS

In many, if not most, cases redesigning and replacing the system in a new location is the only practical long-term solution. This type of work should be completed only by a qualified. contractor. Local health department permits are required before construction can begin. The chemical cures sometimes advertised are ineffective remedies for severely damaged systems.

Other solutions may be of help in some situations, including:

C Increase the size of the absorption field. This will help if the original field was too small for the size of your family or if the soil does not allow water to percolate very well.

• Conserve water in your home on a long-term basis. The smaller the amount of water flowing through your system, the longer it will last. For systems that perform marginally or leak nutrients into nearby lakes and streams, this is a good alternative.

• If periodically saturated soils are a main cause of problems, consider installing perimeter drains. This system involves installing tile drains underground at a specified distance around the absorption field to help lower water levels. It works in some but not all situations and requires the assistance of a qualified contractor. Its location should also be evaluated by your local health department.

• Connect to a community sewage system, if one is available. Although the long-term costs may seem high, the benefit of reduced worry and greater responsibility are often worth this price.

• If septic system failures are common in your area, consider participating in the development of a small community "cluster" system or other similar alternatives. These systems are designed for small communities and some rural areas and are generally much more cost effective than large sewer systems.

HOW TO PREVENT THE PROBLEM

The key to preventing your septic system from failing is **proper maintenance** Regularly pumping the tank, being careful in what you put down the drains, and avoiding such things as planting trees over the field or covering the system with permanent patios and home additions are important to keep the system running well.

Proper initial design is another critical aspect in preventing your system from failing. Many septic systems are doomed from the start because they are put in poor locations or constructed improperly. Be sure a new system is installed in an area with proper soil conditions and at sufficient distances from your house and well (these factors are regulated by local health department codes). Also make sure the system is designed to meet your present and future needs. If, for example, you are building a small home with plans to enlarge it as your family grows, design the septic system to accommodate the largest size you expect your family to grow to. Consider asking your contractor to include such useful features as junction boxes and observation ports, which aid in assessing the condition of the system.

Water conservation was mentioned earlier as a method to keep a marginal system operating, but it is also an excellent method of preventing future problems from occurring.

WHERE TO GO FOR HELP

If you believe your system is failing or just want advice about its operation or condition, contact your local health department. The people there can also assist you in finding reputable septic system installers and pumpers in your area.

FOR MORE INFORMATION ABOUT YOUR WATER AND SEPTIC SYSTEM

Check other Extension bulletins in this series:

WQ-16, "How to Conserve Water in Your Home and Yard."

WQ- 15, "Buying or Selling a Home? What to Find Out About Your Water and Septic Systems. "

WQ- 13, "Maintaining Your Septic System: Special Considerations For Shoreline Property Owners."

plus...

Extension bulletin **WQ-39,** "Maintaining Your Septic System."

MWPS-24, "On-site Domestic Sewage Disposal Handbook."

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