

Managing Your Septic System

WQ-39

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MICHIGAN STATE
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Grand Traverse County Septage Treatment Facility
http://www.co.grand-traverse.mi.us/departments/public_works/Septage_Treatment_Facility.htm
231.995.6039

Prepared by Eckhart Dersch, Extension specialist in water management (retired),
Department of Resource Development, Michigan State University

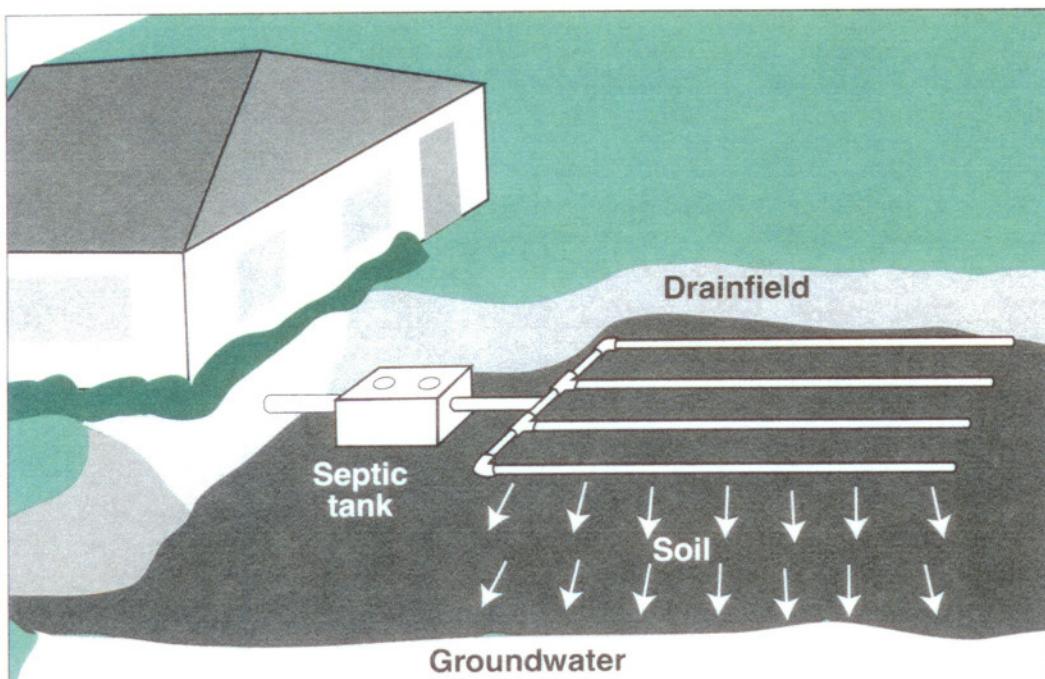
Households that are not served by public sewers usually depend on septic systems to treat and dispose of wastewater.

When Your Septic System is correctly located, adequately designed, carefully installed and properly managed, you will have a waste disposal system that is simple, economical, effective, safe and long-lasting. A failing system may result in property damage, odor,

surface and possibly groundwater pollution, disease potential, and costly repairs or replacement.

MANAGEMENT IS THE KEY TO A LASTING WASTEWATER DISPOSAL SYSTEM.

This file contains information that will help you manage your septic system. It also provides a place to record and store vital information about your system. It should be kept with other documents about your home and property.



Septic System Components

A septic system has two basic parts: a **septic tank** designed to intercept, hold and partially treat solids contained in wastewater coming from the home, and a soil absorption field or **drainfield** to facilitate treatment and dispersal of clarified wastewater after it leaves the septic tank, as illustrated at left.

Helpful Sources of Assistance and Additional Information

Questions and concerns about your septic system can be directed to the sanitarian in your county or regional health office, to a septic system contractor or to your local Michigan State University Extension office. Additional information can be found in:

On-site Domestic Sewage Disposal Handbook, MWPS-24, Midwest Plan Services; request from Department of Agricultural Engineering, Michigan State University, \$6.

Septic Tank Systems: A Homeowner's Guide, Michigan Environmental Health Association, www.meha.net.

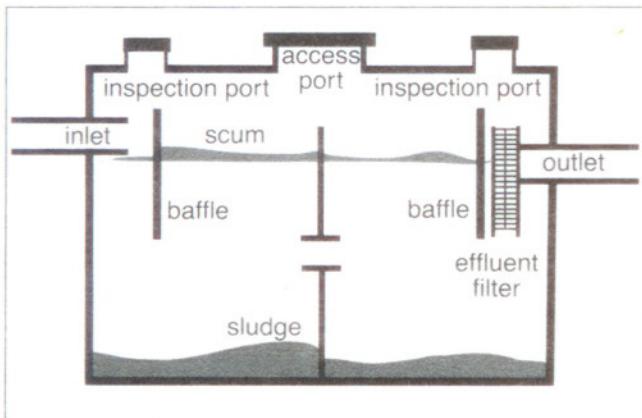
So...now you own a septic system; *Groundwater protection and your septic system*, and several additional on-site waste

Onsite Works! An Introduction to Decentralized Wastewater Treatment Systems, Housing Education and Research Center (HERC) at Michigan State University, www.canr.msu.edu/cm/herc/onsite/index.html.

Several bulletins on septic systems are available in Michigan State University Extension's WQ (water quality) bulletin series, including: *Home*A*Syst* (WQ-51); *Managing Shorelines to Protect Water Quality* (WQ-52); *What to Do if Your Septic System Fails* (WQ-14); *Buying or Selling a Home? What To Find Out About Your Water and Septic Systems* (WQ-15); and *How to Conserve Water in Your Home and Yard* (WQ-16). Contact your local MSUE office or the MSU Bulletin Office, 117 Central Services Bldg., MSU, East

How the Septic Tank Functions

The typical septic tank is a large, buried, rectangular or cylindrical container made of concrete, fiberglass or polyethylene usually located 10 or more feet from the point where the sanitary drain leaves the house. Wastewater from your bathroom, kitchen and laundry flows into the septic tank. There, heavy solids settle to the bottom where bacterial action partially decomposes the solids into sludge and gases. The lighter solids, such as fats and greases, rise to the top and form a scum layer. The partially treated effluent then leaves the septic tank and flows to the drainfield. Septic tanks have one or two compartments specifically designed to capture the solids and prevent them



Cross-section of a two-compartment septic tank

from entering the drainfield. Two-compartment tanks do a better job of capturing the solids and may be required in new installations. Tees and baffles are essential parts of the septic tank. Some tanks are equipped with an inlet tee or baffle to slow incoming waste and direct it downward. The outlet tee or baffle prevents floating solids or scum from leaving the tank and then clogging the drainfield. Some tanks are also equipped with an effluent filter to further prevent the movement of solids into the drainfield. All septic tanks should have accessible covers for checking the condition of the baffles and for pumping out the accumulated sludge and scum mat. **If accumulated solids are not regularly removed from the septic tank, they will overflow into the drainfield and cause premature failure of the drainfield resulting in costly repairs or replacement.**

Servicing the Septic Tank

Regular servicing of the septic tank is the single most important maintenance requirement of a septic system. Required frequency of service depends on septic tank size, the number of persons in the household and whether occupants are minimizing the release of unnecessary solids into the wastewater. **Most septic tanks should be pumped every three to five years.**

How do I determine when to pump?

Most homeowners prefer to give this responsibility to a reputable septic tank pumping firm. Its representative will periodically check your system to determine the rate of solids accumulation and design a pumping schedule tailored to your situation. As a general rule, the tank will require pumping when any of the following occurs: the top of the sludge deposit is within 12 inches of the **bottom** of the outlet baffle; the **bottom** of the floating scum mat is within 6 inches of the bottom of the outlet baffle; the top of the floating scum mat is within 1 inch of the **top** of the outlet baffle or; the floating scum mat is more than 12 inches thick.

Should I use special products to enhance the operation of my septic tank?

No. Though many products are claimed to improve septic tank performance or reduce the need for routine pumping, they have not been found to make a significant difference. Some of these products can actually cause solids to be carried into the drainfield and lead to premature clogging. Other products containing organic solvents can contribute to groundwater contamination.

Where is my septic tank located?

The tank is usually located about 10 to 15 feet from the point where the sanitary drain leaves the house. It can be found by gently inserting a steel rod (soil probe) into the ground where the tank is most likely to be or by waiting for a light snowfall and observing where the snow first melts.

Safety Considerations

Certain features of the septic tank can cause serious injury or death, so the tank should be treated with extreme caution.

- **Never enter the septic tank.** It contains life-threatening gases and little oxygen.
- **Explosion or electrical shock** can occur when lights, appliances or tools are used in or near the septic tank. Smoking can also trigger an explosion.
- **Infectious diseases** can be acquired from contact with liquids and solids in the septic tank.
- **Secure exposed manhole covers and inspection ports** to prevent tampering or entry by children.
- **If sewer gas odors are detected in the home,** immediately call your plumber or a septic system maintenance firm. Evacuate the building if the odor is strong.
- **Keep children and spectators away** when septic system is being maintained or excavated.