

Hennepin County Landowner Guide

for
Conserving
Natural
Resources

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This guide is intended to help landowners care for their land and the natural resources on their property. The guide recommends practices that can be implemented to protect and enhance natural systems. Each section also suggests resources and publications that offer additional, more specific information for each subject area.

This guide provides information regarding natural areas such as prairies, wetlands, water resources and woodlands. Information about the control of noxious weeds and invasive plants, management of pastures and livestock, maintenance of private wells and septic systems, care of wildlife habitat, and management of household wastes is also included. By promoting environmental stewardship, we hope to preserve and enhance the environment in Hennepin County for current and future generations.

This resource was produced by Hennepin County Environmental Services in partnership with the University of Minnesota Extension Service of Hennepin County.



Hennepin County
Environmental Services
612-348-3777



www.hennepin.us/landownerguide



Maintaining Septic Systems

Many landowners have a septic system on their property instead of being connected to city sewer service. Septic systems act as personal sewage treatment systems by carrying waste away from the home and safely storing and processing it in a septic tank. All pipes in the house from sinks, toilets, showers and bathtubs drain directly into the septic tank. The waste is held in the tank long enough for the solids and liquids to separate.

Three layers are eventually formed in a septic tank. Solids that are lighter than water form the top layer called scum. The second layer is partially purified water. The bottom layer is made up of the solids heavier than water called sludge.

Naturally occurring bacteria work on the layers of sludge and scum to further break them down. Waste that cannot be broken down remains in the tank until it is pumped out.

The liquid layer is carried to the drain field, which is a series of trenches or drain tile lined with gravel or coarse sand. The wastewater is further treated by bacteria in the gravel and the soil as the wastewater slowly drains out of the drain field pipes. The gravel and sand act as biological filters that purify the groundwater.

Have your septic system pumped regularly

Septic tanks should be pumped periodically to remove the scum and sludge that accumulates. If either is allowed to enter the soil treatment system or drain field, it will cause expensive and often irreparable damage to the drain field.

Businesses that work on septic systems must obtain a state license. The Minnesota Pollution Control Agency (MPCA) has a searchable list of licensed septic system contractors, available at www.pca.state.mn.us/programs/ists/search_business.cfm.

Pumping frequency

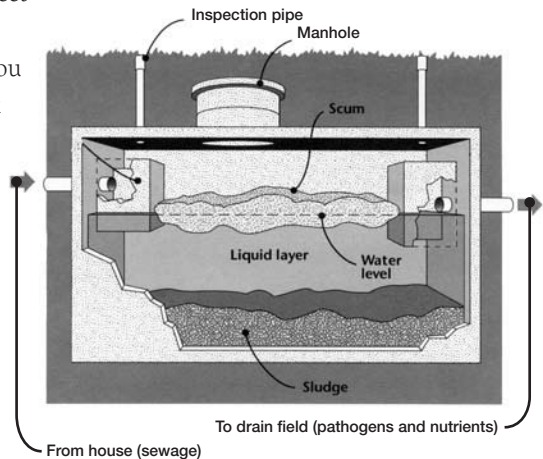
Septic tanks should be pumped every one to three years to remove all solids. No tank should go more than three years between being pumped or evaluated.

The size of the system, how it is used and the number of people using it will determine how often a septic tank needs to be pumped. The University of Minnesota Extension has a worksheet available at septic.umn.edu/, search: pumping frequency guidelines, to help you determine how often your septic tank needs to be pumped.

Maintain your septic system

Proper maintenance of your septic system is critical for personal and environmental health. Poorly functioning or failing systems can be a source of contamination in your home and in the groundwater. Take the following steps to maintain your septic system.

- Conserve water. The most common cause of septic system failure is excessive water entering the system. Conserving water will help ensure the performance of your system. Some ways to conserve water include installing low-flow fixtures or water efficient appliances and looking for ways to reduce the amount of water used in the bathroom, kitchen and laundry room.
- Check for leaks in water fixtures and toilets. Repair any leaks immediately.
- Do not put any additives or cleaners into your septic tank. These products may be harmful to your system and have not been proven effective.



Keep garbage out of your septic system

Many common household products can damage your septic system. The following is a list of products that should not be put down drains or pipes. Instead of putting these items down the drain, throw garbage in the trash and dispose of hazardous waste properly.

(See *Managing Your Waste*, pg. 46)

Do not put the following items down the drain:

Garbage

- Dental floss
- Feminine hygiene products
- Condoms
- Diapers
- Cotton swabs
- Cigarette butts
- Cat litter
- Paper towels
- Medication
- Grease or fat
- Food scraps

Hazardous products

- Bleach
- Anti-bacterial soap
- Gasoline
- Oil
- Pesticides
- Antifreeze

Follow septic system safety guidelines

- Do not smoke near your septic tank. Potentially combustible gases such as methane may be present.
- Do not drive over the drainage field as this could compact the area and damage the drain tile or pipes.
- Make sure that your septic tank is covered with vegetation such as shallow rooted grasses. Vegetation will help to insulate your septic system and prevent freezing. Do not plant trees over the septic tanks because their roots will interfere with the tank.
- Never enter the septic tank or put your head over the opening because toxic gases can quickly overcome you.
- Be sure that the tank and its access ports have sound and secure covers that are not at risk of collapsing and cannot be removed by children.

For more information

- Hennepin County
Environmental Health Division
Septic inspection and enforcement program
www.hennepin.us/septic
612-348-5200
- Minnesota Pollution Control Agency,
Subsurface Sewage Treatment Program
www.pca.state.mn.us/programs/ists/homeowners.html
651-296-6300
- National Onsite Wastewater Recycling Association –
Septic Locator
www.septiclocator.com
- *Septic System Owner's Guide*
Brown, Laurie, Sara Christopherson,
David M. Gustafson, Barbara Liukkonen,
Nicholas Haig, Doug Malchow,
Kenneth M. Olson, Valerie Prax,
Dan Wheeler, Jessica Wittwer.
University of Minnesota Extension
St. Paul, Minnesota. 2008.



Resources

Resources

- Hennepin County Environmental Services
www.hennepin.us/naturalresources
612-348-3777
Hennepin County provides a variety of information and technical assistance for managing your land.
- University of Minnesota Extension – Hennepin County
www.extension.umn.edu/county/hennepin
612-596-2110
The University of Minnesota Extension provides outreach for the University of Minnesota and delivers educational programs and technical assistance on a variety of land management topics.
- Minnesota Department of Agriculture
www.mda.state.mn.us
651-201-6000
- Minnesota Department of Natural Resources (DNR)
www.dnr.state.mn.us
651-296-6157
- USDA – Natural Resources Conservation Service (NRCS)
www.mn.nrcs.usda.gov
763-241-1150, ext. 3
- Minnesota's bookstore
www.minnesotasbookstore.com
Minnesota's bookstore sells a variety of publications from Minnesota state agencies including many of the publications listed in this guide.
- Midwest Plan Services
www.mwps.org
Midwest Plan Services, based out of Iowa State University, sells a variety of low-cost agricultural publications.

Books & publications

- *A Quick Reference Guide for Earth Friendly Home Landscaping*
Hennepin County Environmental Services.
www.hennepin.us/sustainablelandscaping
- *Beyond the suburbs – A landowner's guide to conservation management*
Preece, Kathleen. Minnesota Department of Natural Resources, St. Paul, Minnesota. 2001.
- *Guide to Rural Living*
University of Minnesota Extension, St. Paul, Minnesota. 2001.
www.extension.umn.//ruralliving
- *Living on Acreages*
Carroll, Natalie and Don Jones.
Midwest Plan Services, Ames, Iowa. 2006.
- *Small Scale/Small Field Conservation*
NRCS, Washington, D.C.
landcare.sc.egov.usda.gov



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