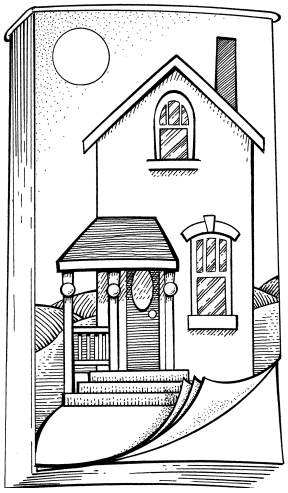
Household Wastewater

Septic Systems and Other Treatment Methods



Assessment 1:

Septic system design and location

This work sheet is used with Fact Sheet 4, which provides information and resources to address household wastewater problems that may be revealed through the use of this work sheet.

Use the assessment table below to begin rating your risks related to septic system design and location. For each question, mark your risk level in the right-hand column. Although some choices may not correspond exactly to your situation, choose the response that best fits.

Responding to risks

Your goal is to lower the risks. Use the action checklist at the end of the work sheet to record medium- and high-risk practices. Use recommendations in Part 1 of the fact sheet to help you make plans to reduce your risks.

Septic system design and location

	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
Capacity of system	Tank is designed to handle more wastewater than required, based on the size and number of occupants of the home.	Capacity just meets load requirements, but I watch out for factors indicating system overload. Water conservation measures are taken.	Bathrooms, bedrooms or water-using appliances are added without reexamining. the capacity of the wastewater system.	❑ Low ❑ Medium ❑ High
Separation distance	Drainfield is at least 100 feet from any well or surface water.	Drainfield is between 50 and 100 feet from a well or surface water.	Drainfield is less than 50 feet from a well or surface water.	❑ Low ❑ Medium ❑ High
Age of system or holding tank. Year installed: _____	System is five years old or less.	System is between six and 20 years old.	System is more than 20 years old.	❑ Low ❑ Medium ❑ High
Effluent filter	An effluent filter is installed and cleaned regularly.	An effluent filter is installed but not cleaned often enough.	There is no effluent filter installed on the septic tank outlet.	❑ Low ❑ Medium ❑ High
Safety devices	An alarm on the pumping chamber or holding tank indicates that the tank is full or power has been cut off to the pump.		There is no alarm to indicate tank overflow or that power has been cut off to the pump.	❑ Low ❑ High
Backflow protection	A backflow valve is installed to prevent backup during floods.		No backflow valve is installed to prevent backup during floods.	❑ Low ❑ High

Assessment 2:

On-site system maintenance

Use the table below to begin rating your risks related to system maintenance. For each question, indicate your risk level in the right-hand column. Although some choices may not correspond exactly to your situation, choose the response that best fits.

Responding to risks

As always, your goal is to lower your risks. Use the action checklist at the end of this worksheet to record your medium- and high-risk practices. Use recommendations in Part 2 of Fact Sheet 4 to help you make plans to reduce your risks.

On-site system maintenance

	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
Maps and records	I keep a map and good records of repairs and maintenance.	The location of my tank and date of last pumping are known but not recorded.	The location of my system is unknown. I do not keep a record of pumping and repairs.	❑ Low ❑ Medium ❑ High
Tank pumping (including holding tanks).	The septic tank is pumped on a regular basis as determined by an annual inspection, or about every three to five years. The holding tank is pumped as needed.	The septic tank is pumped, but not regularly.	The septic tank is not pumped. The holding tank overflows or leaks between pumpings.	❑ Low ❑ Medium ❑ High
Condition of tank and baffles	The tank and baffles are inspected for cracks; repairs are made promptly.		The condition of the tank and baffles is unknown.	❑ Low ❑ High
Drainfield protection	Vehicles and other heavy objects or activities are kept from the drainfield area.	Occasionally, the drainfield is compacted by heavy objects or activities.	Vehicles, livestock, heavy objects or other disturbances are permitted in the drainfield area.	❑ Low ❑ Medium ❑ High
Diverting surface water	All surface runoff is away from the drainfield.	Some surface water flows into the drainfield area.	Runoff from land, rooftops, driveways, etc. flows into the drainfield.	❑ Low ❑ Medium ❑ High
Plantings over the drainfield	Grass or other shallow-rooted plantings are over the drainfield.		Trees and shrubs are growing on or near the drainfield.	❑ Low ❑ High
Signs of trouble	Household drains flow freely. There are no sewage odors inside or outside. Soil over the drainfield is firm and dry. Well water tests negative for coliform bacteria.	Household drains run slowly. Soil over the drainfield is sometimes wet. There are depressions over trenches and distribution lines.	Household drains back up. Sewage odors can be noticed in the house or yard. Soil is wet or spongy in the drainfield area. Well water tests positive for coliform bacteria.	❑ Low ❑ Medium ❑ High

Assessment 3:

Septic or sewage system inputs

Use the assessment table below to begin rating your risks relating to system inputs. For each question, indicate your risk level in the right column. Although some choices may not correspond exactly to your situation, choose the response that best fits.

Responding to risks

As always, your goal is to lower your risks. Use the action checklist on at the end of the work sheet to record your medium- and high-risk practices. Use recommendations in Part 3 of Fact Sheet 4 to help you make plans to reduce your risks.

Septic or sewage system inputs

	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
Solid wastes	There is no garbage grinder in the kitchen. No grease or coffee grounds are put down the drain. Only toilet tissue is put in the toilet.	There is moderate use of a garbage grinder, and some solids are disposed of down the drain.	There is heavy use of a garbage grinder, and many solids are disposed of down the drain. Many paper products or plastics are flushed down the toilet.	❑ Low ❑ Medium ❑ High
Cleaners, solvents, and other chemicals (also applies to holding tanks)	There is careful use of household chemicals (paints, cleaning products). No solvents, fuels, or other hazardous chemicals are poured down the drain.	There is occasional disposal of hazardous household chemicals in the wastewater system.	There is heavy use of strong cleaning products that end up in wastewater. Hazardous chemicals are disposed of in the wastewater system.	❑ Low ❑ Medium ❑ High
Water conservation	Only water-conserving fixtures and practices are used. Drips and leaks are fixed immediately.	Some water-conserving steps are taken (such as using low-flow shower heads or fully loading washing machines and dishwashers).	Standard high-volume bathroom fixtures are used (toilets, showers). No effort is made to conserve water. Leaks are not repaired.	❑ Low ❑ Medium ❑ High
Water usage	Laundry and other major water uses are spread out over the week.		Several water-using appliances and fixtures are in use in a short period of time.	❑ Low ❑ High

Action checklist

Review the work sheets to make sure that you recorded all the high and medium risks you identified in the action checklist. Write down the improvements you plan to make for each medium and high risk. Use recommendations from this guide and from other resources to decide upon an action you are likely to complete. A target date will keep you on schedule. You don't have to do everything at once, but try to eliminate the most serious risks as soon as you can. Often it helps to tackle the inexpensive actions first.

Household wastewater

Write all high and medium risks below.	What can you do to reduce the risk?	Set a target date for action.
Sample: Low area over drainfield is always wet.	Have drainfield inspected for blockages, and clean as needed. Divert runoff water.	One week from today: May 2

This guide prepared by Steve Mellis, Water Quality Associate, University of Missouri Outreach and Extension, Columbia, Mo. Adapted from a work sheet by Alyson McCann, University of Rhode Island Cooperative Extension.

The Missouri *Home•A•Syst* series was produced with funding from the United States Department of Agriculture and was adapted for use in Missouri from the National Farm•A•Syst/Home•A•Syst Program in Cooperation with the Northeast Regional Agricultural Engineering Services (NRAES).