

Potential Problems (continued)

In a system that fails to function properly, the wastewater is not treated prior to reaching a water source. This can result in contamination of ground and surface water sources (including residential wells), odor problems and health risks.

In some locations such as flood plains, a conventional system may not be suitable. Alternative systems or designs may be needed.

Design and Installation

Taken from Wyoming Department of Environmental Quality Water Quality Division Rules Chapter 11, Part D

Obtain a permit from the Wyoming Department of Environmental Quality. The permit requires general information on the type of system and facility. These permits are a requirement of State and County law and installation or upgrading a system without a permit is illegal.

Select Tank. Tanks need to be watertight and resist corrosion. Metal tanks are not recommended.

Determine Tank size. A minimum 1000 gallon tank is required for residences with up to four bedrooms (not bathrooms). An additional 250 gallons is required for EACH bedroom over four. Tanks should be sized to allow some retention time for solids to settle out. (For a complete list of requirements for residential and commercial units, contact the Crook County Natural Resource District or the Crook County Clerk's Office.)

Determine size of the absorption field. The size is based upon the size of the dwelling and tank, and the quality of the soil.

Determine location of tank and leach field. See the Crook County Rules and Regulations for Small Wastewater Treatment Facilities Installation.

Soil Exploration. Soil exploration should be used to determine the distance to groundwater or bedrock and to examine the soil texture, structure and color.

Conduct percolation tests. See the Crook County Rules and Regulations for Small Wastewater Treatment Facilities Installation.

Maintenance

Inspect and Pump Regularly. You should have your septic system inspected by a professional at least every three years and your tank pumped every 3 to 5 years. The capacity of the tank and the volume of solids in the wastewater influence how often a tank should be pumped. Always use caution if inspecting a system without professional assistance; toxic gases can be lethal.

Avoid overloading the system. Conserve water and repair leaky fixtures. Space laundry water throughout the week, rather than in one day. Install low flow toilets and aerators on sinks and shower heads. Divert other water and runoff from gutters, etc. away from the absorption field. Garbage disposals will cause rapid accumulation of sludge in the septic tank, and their use should be minimized or eliminated to keep the septic system functioning properly.

Watch your drains. Dental floss, feminine hygiene products, diapers, paper towels and other kitchen and bathroom items can clog and potentially damage septic system components. Paints, thinners, waste oils, pesticides and other harmful chemicals and cleansers may kill the bacteria in the tank and cannot be effectively treated in the soil layers. In general it is not recommended to use septic tank additives. In most cases, they do not help and may even be harmful to your system.

Avoid damage to the leach field. Plant only grass

Poor maintenance is a common cause of septic system failure. However, it should be recognized that a septic system does NOT have an infinite life-span. Even well-designed and maintained systems eventually need replaced. Your local conservation district has information on financial assistance opportunities.

on the absorption field and do not drive or park over the system.

Where do I go for help?

If after completing the self-assessment you discover a majority of your responses fall into a high risk category, it is recommended that you seek further assistance from the Crook County Natural Resource District. Even if you have marked only a few as High Risk, it is recommended that you explore options to address the potential risk.

For More Information Contact:

Crook County Natural Resource District
PO Box 1070
Sundance, WY 82729
Phone: (307) 283-2501
Fax: (307) 283-2170

Email: john.williams@wy.usda.gov (or)
christine.galloway@wy.nacdnet.net

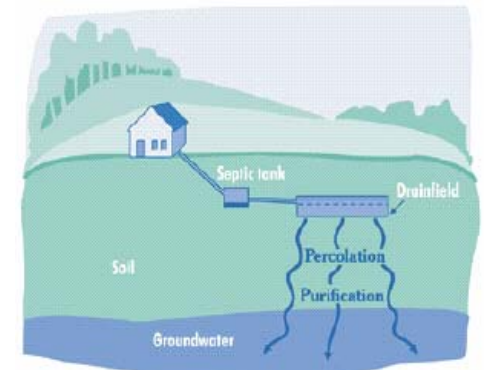
CROOK COUNTY NATURAL RESOURCE DISTRICT

A

Wyoming Homeowner's

**Guide
to**

Septic Systems



**Learn to Protect and Maintain
your septic system for your
health and safety**

Homeowner Self-assessment

Septic System Features	Higher Risk (H)	Lower Risk (L)	Self Assessment- Indicate H or L
Can you locate your septic tank?	No	Yes	
Is there a clean out between the house and the septic tank?	No	Yes	
Can you locate your leach field?	No	Yes	
What is the distance from the septic system to surface waters? (canals, streams, rivers, etc.)	Less than 100' away	More than 500' away	
Does terrain slope towards or away from surface water? What is the slope of terrain?	Toward Steep to Moderate	Away Flat	
What are the soil types?	Gravelly or rocky soils that water runs easily through or tight, clayey soils that water cannot penetrate	Medium textured soils that allow water infiltration	
What is the distance to any water wells?	Less than 100' away	More than 500' away	
Is the groundwater from any such well used for human drinking water?	Yes	No	
Determine the relationship between your septic tank size and the size of your household. Septic tanks are commonly 1000, 1250, or 1500 gallon tanks. To determine the relationship, divide the septic tank size (in gallons) by the number of bedrooms in your home. (1000 gallon septic tank / 2 bedrooms = 500 gallons per bedroom.	Less than 250 gallons per bedroom	250 gallons or more per bedroom	
Is an impermeable surface such as concrete, asphalt, or brick located over the leach field?	Yes	No	
Is there one or more of the following signs of system malfunction: septic odors, ponding, or wastewater break-out, burnt out grass or ground staining over leach field or patches of lush green grass over leach field?	Yes	No	
Are any trees, shrubs, or other plants with extensive root systems in the vicinity (10') of the leach field?	Yes	No	
Are heavy objects (cars, etc.) or evidence from such objects in the vicinity of the leach field?	Yes	No	
Is storm water, sump pumps, foundation drains, or roof runoff diverted to flow into the septic system?	Yes	No	
Is there an apparent cave-in or exposed component?	Yes	No	
When was the septic system last pumped?	More than 5 years ago	Less than 3 years ago	

Your Septic System Is Your Responsibility!

As a homeowner, you are responsible for maintaining your septic system. Maintaining your septic system protects your investment in your home.

If properly designed, constructed and maintained, your septic system can provide long-term effective treatment of household wastewater. A malfunctioning system can contaminate surface and groundwater.

Our Local Watershed

The Belle Fourche River Watershed provides the water resource that powers the recreational, agricultural, urban and wildlife opportunities for much of the Crook County area. Protection of this water resource is critical to maintain the quality of life enjoyed by residents and nonresidents alike.

States are required by the Clean Water Act to periodically conduct water quality assessments on waters of the state (streams, lakes and reservoirs). The state then identifies impaired or threatened waters which have data showing they do not meet applicable water quality standards. The absence of a septic system ("straight pipe") or a failed septic system can be one of the causes of a stream's impairment. A "straight pipe" to the stream, if discovered through a DEQ assessment or complaint investigation, would be considered an illegal discharge point and subject to state enforcement action.

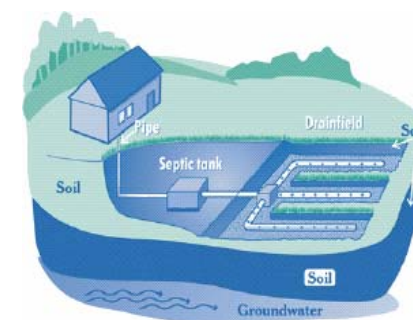
The Crook County Natural Resource District, using a locally-led planning process, is working in cooperation with the local citizens to address water quality concerns as an alternative to potential regulation.

How Does a Septic Work?

A typical septic system has four main components: a pipe from the home, a septic tank, a drainfield and the soil. Microbes in the soil digest or remove most contaminants from wastewater before it eventually reaches groundwater.

The septic tank is a buried, watertight container typically made of concrete, fiberglass or polyethylene. It holds the wastewater long enough to allow solids to settle out, forming a sludge, and oil and grease to float up to the surface as a scum.

It also allows partial decomposition of the solid materials. Compartments and a T-shaped outlet in the septic tank prevent the sludge and scum from leaving the tank and traveling into the drainfield area. Screens are also recommended to keep solids from entering the drainfield.



Potential Problems

In some older systems, the wastewater (with or without solids removed) is transported directly to a stream or other water source. These systems may never fail or back-up and residents may be unaware that a problem exists.

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