Well·A·Syst

A voluntary program to assist private drinking well users evaluate and modify practices to protect their drinking water supply

Site Assessment

Why should you be concerned?

The physical characteristics of your property can affect water quality. Some of these factors include soil type, slope of the land, depth and type of bedrock, and depth to ground water.

Some soils are more susceptible to ground water contamination, while others are vulnerable to erosion that may cause surface water contamination. As most contaminant breakdown occurs in the soil, sites with shallow soils, sandy soils, soils over fractured bedrock, and areas with high water tables will have a higher potential for ground water contamination.

Evaluate the your well site by answering the following questions.

1. Is your soil sandy or less than 3 feet to bedrock?
2. Is the water level in your well less than 10 feet from the surface?

If you answered "yes" or you do not know the answer to any of these questions, use this worksheet to address those issues. The information will help you develop a voluntary plan of action to reduce the risks of contamination to your drinking water supply.

1. Is your soil sandy or less than 3 feet to bedrock?

Knowledge of the type of soils on your property is vital, as the soil provides a life support system for growing plants and filters potential contaminants.

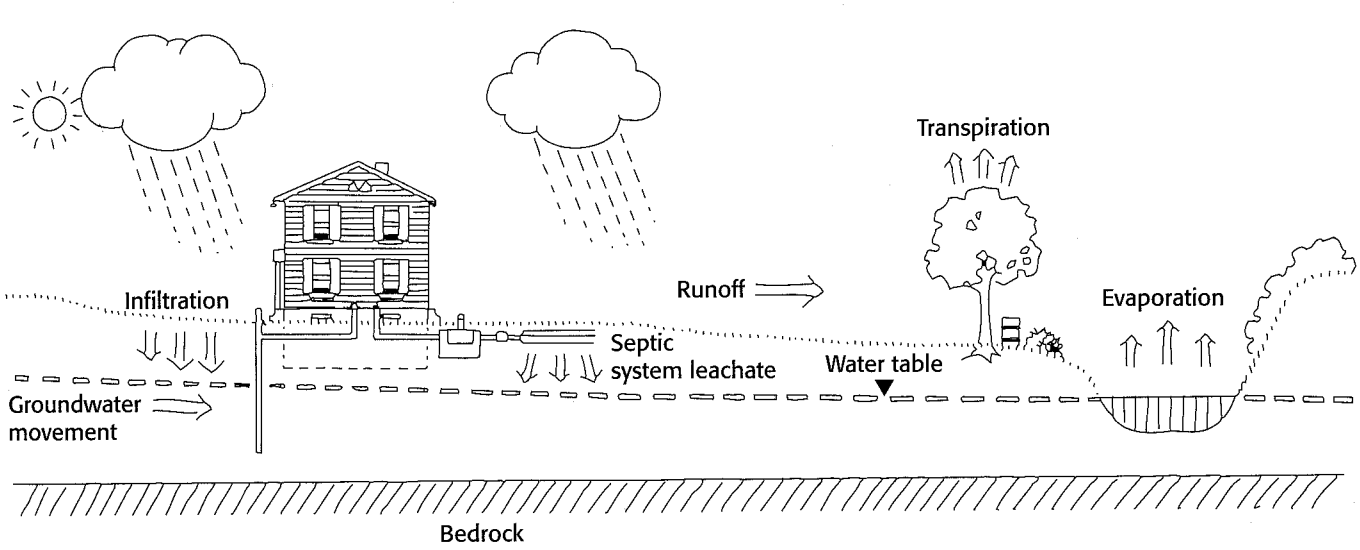
Coarse-textured soils such as sands have larger pore spaces between the soil particles, which allow water (and contaminants) to quickly flow to ground water.

The depth of soil over bedrock is a significant factor in reducing potential contamination to ground water. In Colorado, soils that are less than three feet to bedrock increase the potential for contamination. The type of bedrock below the soil is also a factor. Highly fractured rock can channel pollutants to the ground water very quickly.

2. Is the water level in your well less than 10 feet from the surface?

In most cases, your ground water supply comes from water that permeates the soil and rock under your property. Deeper aquifers are less vulnerable to contamination than shallow aquifers. Water tables that are less than 10 feet from the surface are generally considered to have a high contamination risk.

You should know how deep the aquifer is under your property. If necessary, it can be measured by inserting a conductivity meter into the well casing; the meter will peak when the water level is reached. You also could consult your well log, local well driller, or previous well owner for more information.



Glossary

aquifer
a substance which makes another substance impure or unsuitable for its original use; may include a chemical material, organic material, live organism, radioactive material or heated or cooled water

bedrock
the solid rock underlying all soil, sand, clay, gravel, and loose material on the earth's surface

ground water
all water below the surface of the land; ground water usually refers to subsurface water in a zone of saturation that can be pumped from a well or that flows from a spring or seep

ground water table
the upper surface of ground water in the zone of saturation

sandy soil
a soil having a high sand content, high infiltration rate, and a high rate of water transmission

Contacts

USDA Natural Resources Conservation Service,
Colorado State Office
(303) 236-2886

Colorado Geological Survey
(303) 866-2611

Colorado Association of Soil Conservation Districts
(303) 232-6242

Well*A*Syst Worksheets

Private Drinking Water Well Management
Cistern Management
Site Assessment
Septic System Management
Household Hazardous Waste Management
Livestock Management
Fertilizer Management
Pesticide Management
Petroleum Storage Management

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Assessing Your Site

If you answered "Yes" or did not know the answer to the previous questions	What to do	Who to call	What you did
1	Find out your soil type and the depth and type of bedrock under your property.	Natural Resources Conservation Service; Soil Conservation District; Colorado Geological Survey office	
2	Find out the depth to your water table and test your well for bacteria.	Natural Resources Conservation Service; Soil Conservation District; Colorado Geological Survey; County health department	