

Citizen's Guide to the Michigan Wellhead Protection Program



Adopted from
Michigan Rural Water Association's
Source Water Protection Program Article Series

1.1

WATER SPECIFICS: WHERE DOES YOUR DRINKING WATER COME FROM?

WHAT IS WATER?

Water is an odorless, tasteless, colorless liquid made up of hydrogen and oxygen. Water is a necessary component of human survival and is a vital part of Michigan's economy. In fact, Michigan is home to approximately 20% of Earth's usable fresh water. There are two types of water – groundwater and surface water:

Groundwater is water that is underground in cracks and spaces in the soil, sand and rocks.

Surface Water is water that is above the surface of the land (i.e. lakes, rivers, streams).

WHAT IS THE WATER CYCLE?

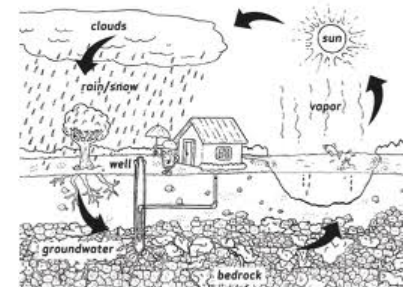
Water moves through a continuous cycle known as the Water Cycle. The Water Cycle is the path that water takes through its various states as it moves throughout the atmosphere.

First, a vapor becomes a liquid through **condensation**.

Second, the liquid (rain, snow, sleet) falls to the ground through **precipitation**.

Third, the water either seeps into the ground, forming groundwater, or it runs off the surface of the land, forming surface water.

Finally, the liquid converts back into a vapor and evaporates up into the atmosphere through **evaporation**.

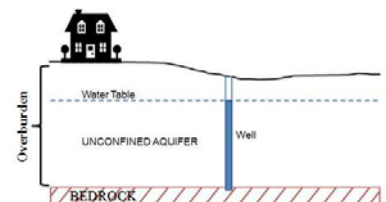


WHAT IS GROUNDWATER?

Groundwater fills the small spaces between rock particles (sand, gravel, etc.) or cracks in solid rock. Rain, melting snow, or surface water becomes groundwater by seeping into the ground and filling these spaces. An aquifer is any type of geologic material, such as sand or sandstone, which can supply water to wells or springs.

Groundwater, which supplies wells, often comes from within a short distance (a few miles) of the well. How fast the groundwater moves depends on how much the well is pumped and what type of rock particles or bedrock it is moving through.

Typical Cross-Section of Soil, Groundwater and Bedrock



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