



## Aquifer Basics

“An aquifer is a formation, group of formations, or part of a formation that contains sufficient saturated, permeable material to yield significant quantities of water to wells and springs.” Fetter (2001)

When rain falls, the water continues to move, slowly, after it hits the ground. Some finds lakes or rivers, some is used by plants, some evaporates and some finds its way into the ground.

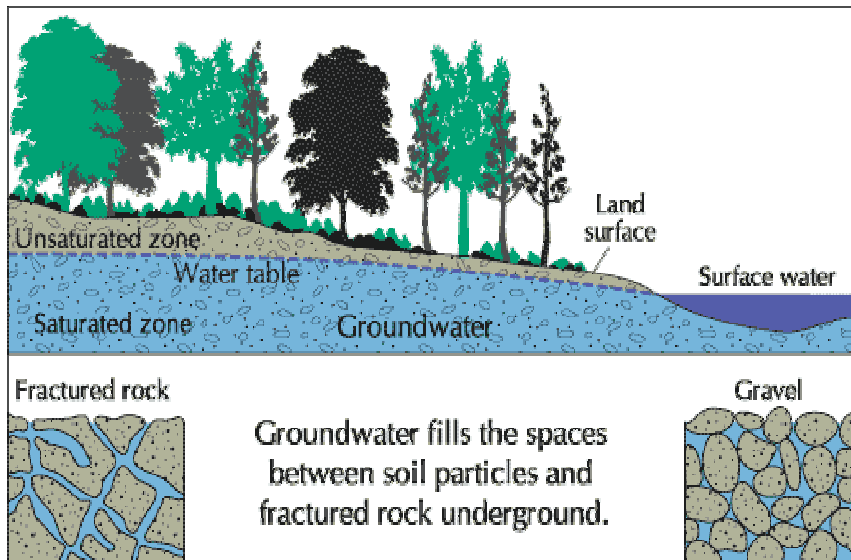


Image compliments of US Geological Survey, adapted by The Groundwater Foundation.

After moving through layers of sediment, water eventually reaches a place where it can be stored called an aquifer. Aquifers are composed of gravel, sand, or fractured rock and are permeable because they have spaces between the rock that water is allowed to collect in.

Aquifers are not flowing, underground rivers, but instead are areas beneath the surface of the earth that, because of their mineral composition, are able to contain water within

the confines of their area. Think of aquifers not as a tub containing water such as a lake or river, but as a sponge, which appears solid, but has the ability to hold water as well.

The saturation zone is the area where water fills the aquifer. The top of this zone is called the water table, and is the point underground where water is able to be stored.

Water from aquifers can find its way to the surface naturally through springs, but for community water supplies, a well is drilled into the aquifer from which groundwater can be extracted. Aquifer wells are different than the wooden wells that come to mind with a bucket and a crank. Wells are just a pipe that fills with water and the water is brought to the surface with a pump. If the water table falls below the bottom of the well, the well has the potential to go dry.