



Private Water Systems Home Study Course

Lesson I Frequently Asked Questions

Does groundwater move or is it stored in large pools underground?

Groundwater does move from upland recharge areas to lowland discharge areas (i.e. streams and lakes). Most often groundwater flows are similar to the natural topography of the land, but it flows much more slowly than water at the surface since it flows through soil pores and rock fractures. In confined aquifers, the water is under pressure and moves from areas of high pressure to low pressure.

Does groundwater flow in rivers underground?

No. Although it is common for people to believe that water flows in rivers underground, most groundwater flows very slowly through soil pores and rock fractures. In general, water flows much slower underground than it does on the ground surface. Groundwater may flow at different rates depending on the type of rock that it is flowing through. In areas dominated by limestone, large fractures or caverns may form allowing groundwater to flow more rapidly than in many other geologic formations.

What exactly is an aquifer and how do they work?

An aquifer is any rock or soil unit that stores and transports groundwater. The groundwater within aquifers is always moving and the rate that the water flows depends on the permeability of the material making up the aquifer. Aquifers gain new water through groundwater recharge in upland areas and eventually the water discharges to nearby streams, lakes, or wetlands in low-lying areas. There are three different aquifer types: unconfined, confined, and perched.

Is groundwater safer than surface water for supplying drinking water?

In general, groundwater is naturally a safer source of drinking water because it is not as exposed to contaminants as surface water sources. Surface water must undergo treatment before it is safe for human consumption, while groundwater does not necessarily need water treatment to supply safe drinking water. However, poor landuse practices and improper well construction can easily cause contamination of groundwater supplies. For this reason, all water systems should be periodically tested to ensure the water is safe for consumption.