Water on Earth

Groundwater Aquifers

Earth Science Study Guide

Mechanics of Aquifers

- A good aquifer needs to have good **porosity** and **permeability**.
- **Porosity** is the spaces between the grains, and water droplets can be found in these small pores.
- **Permeability** refers to the connections between pores. An aquifer with good permeability can transfer water well.

Water Flow in Aquifers

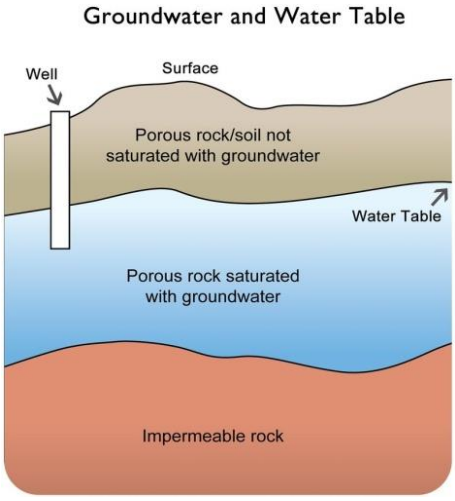
- When the recharge and the discharge are transferring water at different rates, the amount of water in the aquifer changes as well.
- The **water table** represents the surface of the stream in the aquifer: it represents how much water is in the aquifer at that moment.
- Groundwater can provide feed streams in wet regions, and people can draw water from aquifers as well.

Harnessing Groundwater

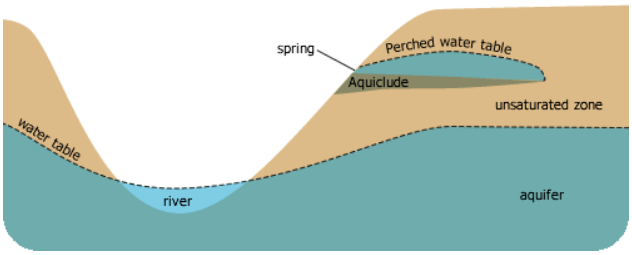
- A **spring** is where groundwater meets the surface of the Earth. Springs with a lot of water in the aquifer can flow year-round, while other springs are seasonal.
- A **well** is drilled or dug into the Earth in order to reach groundwater reserves. A high water table aids in the creation of a well because the well does not have to be as deep.

Study Tip

By seeing how much it rises or falls, the water table can show how much water is in the groundwater system.



This diagram shows how water forms into an aquifer through porous rock.



This diagram shows how the water table and the surrounded ground interact with each other.

Concept Check

- What makes a good aquifer?
- Can you determine how much water an aquifer can hold?