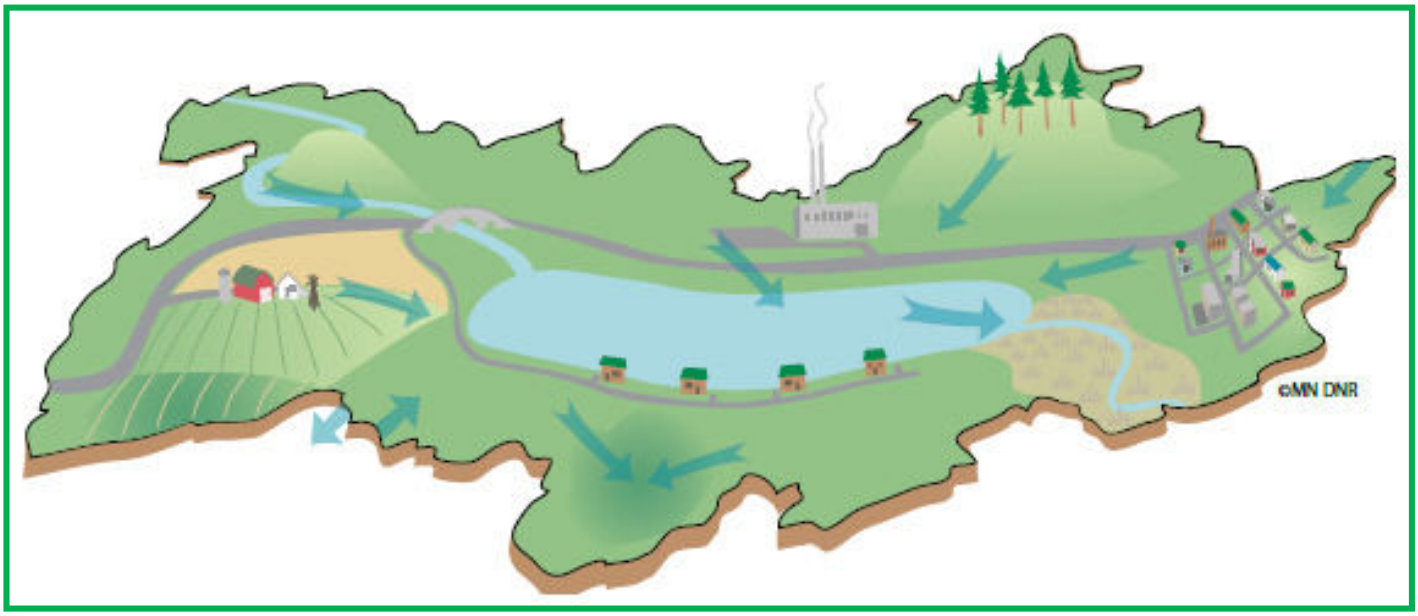
# Watersheds and The Water Cycle:

**A watershed is <u>an area of land</u> that catches precipitation** (rain, sleet, snow) that flows & drains into a body of water such as a wetland, stream, river, lake, or groundwater.




**A watershed is an area of land that drains into a body of water.**

**Every place on Earth has its watershed, and we all live within a watershed.**

**Anywhere you travel, you are in a watershed.**

**Most of us drink water that comes from somewhere within a local watershed**. All people & wildlife & plants depend on the quality of our lake, river, and stream waters within every watershed!

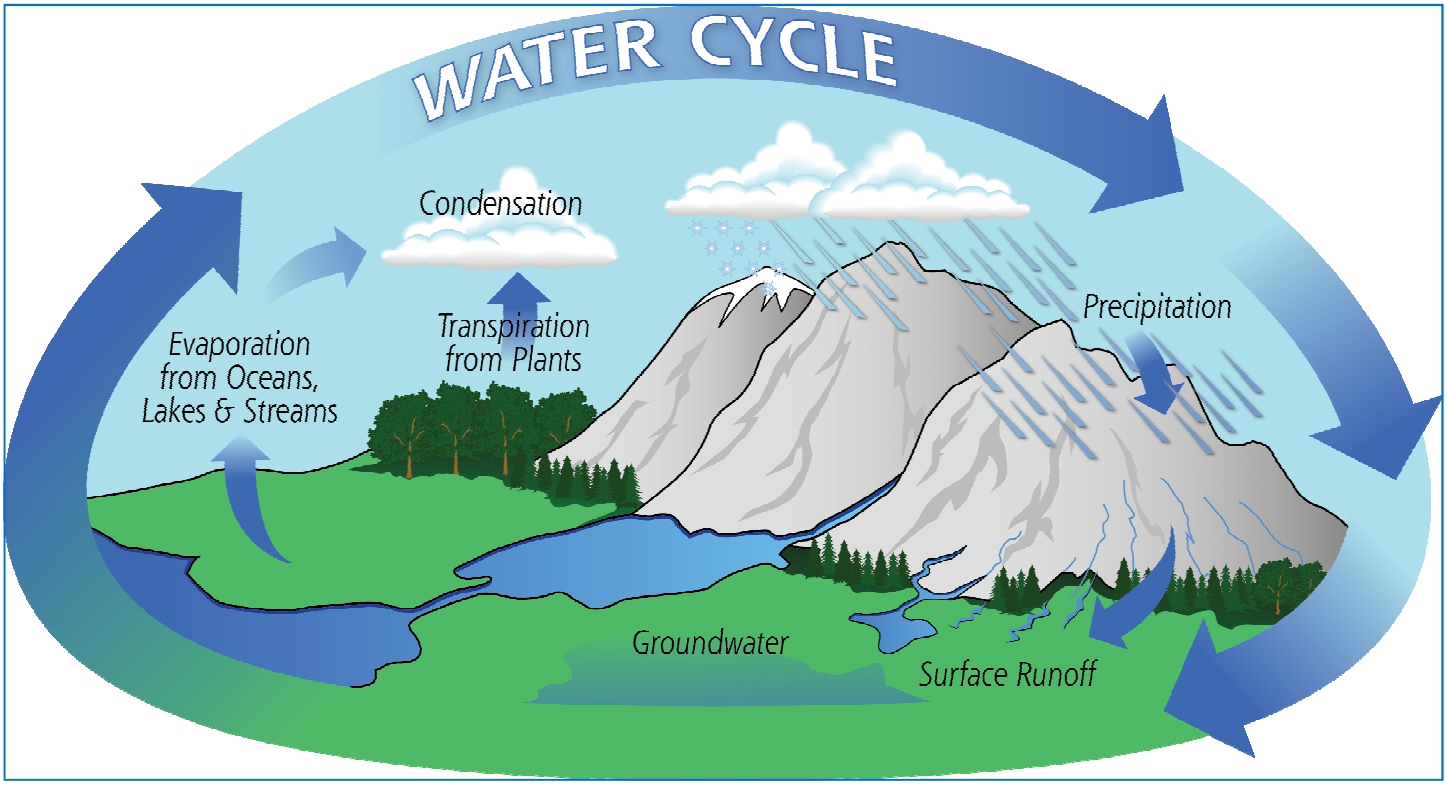
When you think of something that sheds water, you usually think of a raincoat or an umbrella. But a watershed also catches water.

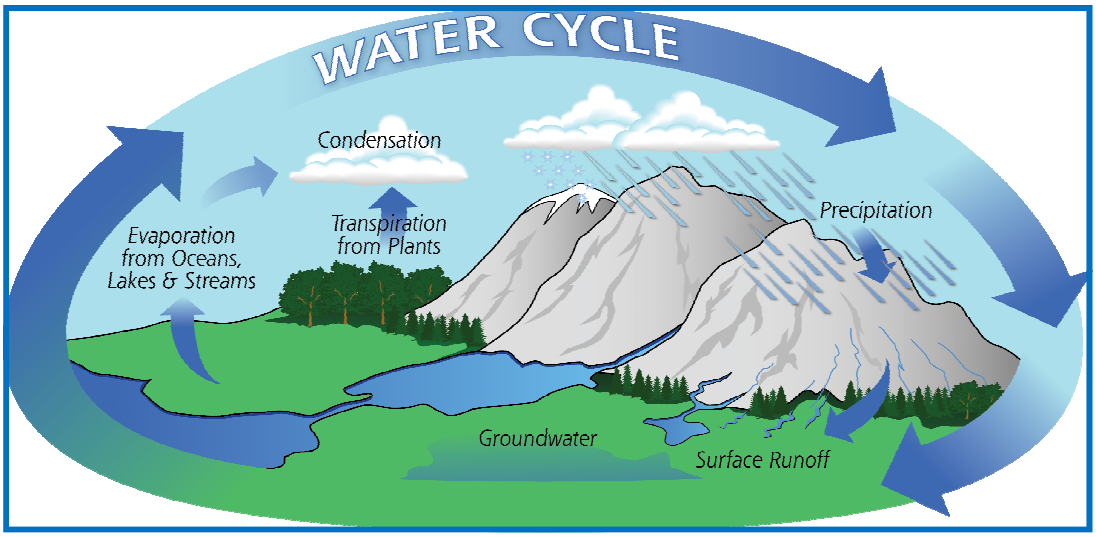
**Take an opened umbrella and turn it upside-down to imagine how a watershed works.**

Many small watersheds can be part of a larger watershed. For example, a small watershed may include a small stream like York's Codorus creek that flows into a larger river such as our Susquehanna River.

**Watersheds do not begin or end at man-made boundaries** like city, county, state, or national borders. Instead, all **watersheds are separated from other watersheds by natural features—** such as the highest mountain ranges,  ridgelines or even hilltops.

**The Water Cycle** describes how water moves through the environment—changing from a liquid to a gas to ice crystals and back into a liquid.  This is how water moves from the earth up into the atmosphere—and around the world—and back down to earth again.






When surface water—in puddles or lakes or oceans, etc.— is heated by the sun, it evaporates up into the atmosphere. During **Evaporation** water changes from a liquid into a gas.

Plant roots drink water by absorbing it from underground to help them grow. But when the sun warms the plants some of that water is transpired through their leaves. **Transpiration** is when water evaporates from plant leaves up into the sky.

**Condensation** occurs when evaporated water makes the air up in the atmosphere very wet and creates clouds. When the clouds get too heavy with moisture rain, sleet or snow begins to fall. The falling rain, sleet or snow—depending on air temperature—is called **Precipitation**.

As the precipitation falls back down to earth the rain, sleet or snow can settle into the ground or it can flow downhill over the ground or just fall back on to large bodies of water.

Any water that flows over the surface of the land is called **Surface Runoff.** Surface runoff that flows over the land on natural surfaces like fields, forests and meadows will eventually percolate or seep down into the soil. We call the water that ends up underground **Groundwater.**

Groundwater provides water that helps plants grow. Groundwater also conserves water since water underground is not exposed to sunlight & evaporation. Some groundwater will resurface at some point by seeping aboveground through springs—which in turn help feed water to small streams.

The wind blows clouds from one part of the county to another. Or from one state to another. **The wind can even blow clouds around world!** Water raining down on us might have evaporated out of a rainforest in China where wild pandas live!

**All water on earth is part of the water cycle. There is NO NEW WATER! EVER!** All water is constantly cycled. So it is important to care for our water and keep it clean.