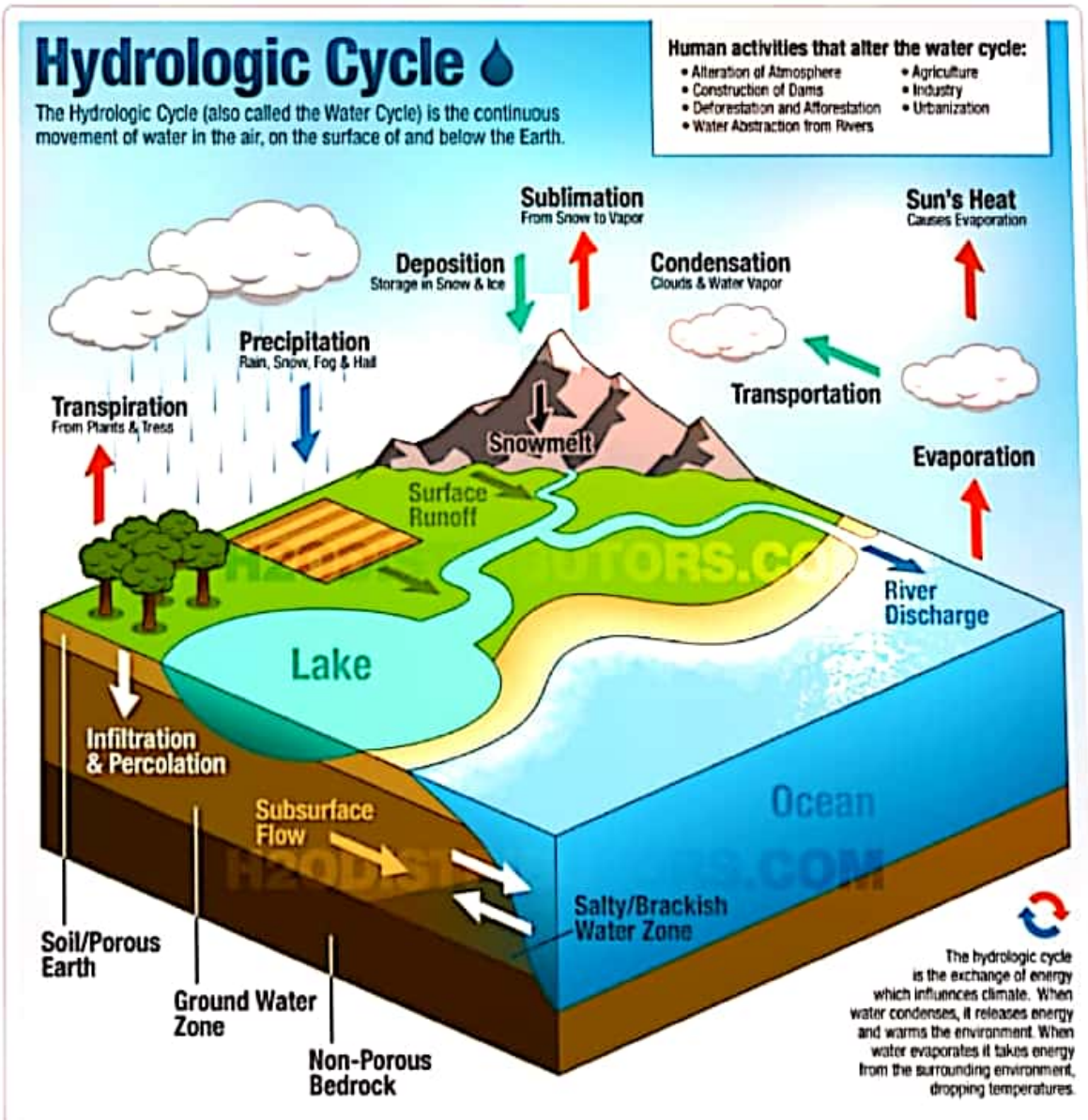
The Hydrologic Cycle (Water Cycle)

Water Cycle Diagram

The Hydrologic Cycle (also called the Water Cycle) is the continuous movement of water in the air, on the surface of and below the Earth. This cycle is the exchange of energy which influences climate. When water condenses, it releases energy and warms the environment. When water evaporates it takes energy from the surrounding environment, dropping temperatures.



Process Definitions:

Condensation

The transformation of water vapor to liquid water droplets in the air, creating clouds and fog.

Deposition

Also known as desublimation, is a thermodynamic process, a phase transition in which gas (vapor) transforms into solid (ice).

Evaporation

The transformation of water from liquid to gas phases as it moves from the ground or bodies of water into the overlying atmosphere.

Percolation

Water flows horizontally through the soil and rocks under the influence of gravity.

Precipitation

Condensed water vapor that falls to the Earth's surface. Most precipitation occurs as rain, but also includes snow, hail, fog drip, graupel, and sleet.

Sublimation

The state change directly from solid water (snow or ice) to water vapor.

Transpiration

The release of water vapor from plants and soil into the air. Water vapor is a gas that cannot be seen.

Drought Impact

Hotter temperatures would cause more evaporation from both open water and the soil. As a result, river and lake levels would drop, and soils would dry out. Plants would transpire more in the heat, drawing even more water from the ground. There would be less water on and in the ground just when hot weather was increasing water demand.