



The Water Cycle: Nature's Infinite Loop

The water supply on Earth is essential for all life to exist and thrive. The **water cycle** is the continuous process that keeps water moving on, above, and around the Earth in different forms.

1. The Stages of the Cycle

Each stage of the cycle is an important part of a process that waters our plants, dries up puddles, and helps manage floodwaters.

- **Evaporation:** The process of liquid water warming up and changing into water vapor.
- **Transpiration:** A special kind of evaporation where water is released from plants.
- **Evapotranspiration:** The combined name for when moisture evaporates from the soil and transpires from plants into the atmosphere.
- **Condensation:** The process where water vapor cools down and changes back into a liquid.
- **Precipitation:** Any type of water—like rain, snow, or sleet—that falls from the sky to Earth.
- **Collection:** When water gathers in bodies like lakes or rivers after falling.

2. Clouds and the Atmosphere

- **Atmosphere:** The layer of air surrounding Earth. Its current state—including temperature, wind, and rain—is what we call **weather**.
- **Clouds:** Visible masses of tiny water droplets or ice crystals suspended in the air.
- **Cloud Condensation Nuclei:** Tiny particles (like dust) that water vapor sticks to so it can become a raindrop.
- **Fog:** Simply a cloud that is touching or very near the ground¹⁴.
- **Humidity:** A measure of how much water vapor is currently in the air¹⁵.
- **Wind:** Air moving from high-pressure areas to low-pressure zones¹⁶.

3. Water on the Land (Freshwater)

Animals rely on **freshwater** sources like lakes, rivers, or springs to drink¹⁷.

- **River:** A large, flowing stream of fresh water¹⁸.
- **Lake:** A body of water completely surrounded by land¹⁹.
- **Runoff:** Excess fluid that overflows from areas like farms or factories²⁰.
- **Snowmelt:** The water created when snow melts and begins to flow²¹.
- **Glacier:** A massive "river of ice" that moves very slowly across the land²².

4. The World Beneath Our Feet

- **Aquifer:** An underground layer of rock or soil that holds water²³.
- **Groundwater:** The actual water found stored inside an aquifer²⁴.

5. Ecology and Conservation

- **Ecosystem:** A community where living things (like fish and plants) and nonliving things (like water and rocks) work together²⁵.
- **Erosion:** When soil is worn away by the power of wind, water, or ice²⁶.
- **Pollutant:** A harmful substance that damages natural resources²⁷.
- **Greenhouse Gas:** Gases in our atmosphere that trap heat, causing the air to warm up²⁸.

About the Calapooia Watershed Council

Established in 1999, we are dedicated to **Education, Habitat Restoration, and Community**. Our mission is to protect the health of our local watershed for generations to come.