



What is the water cycle?

The water cycle is nature's way of recycling water. Water in our oceans and lakes is constantly evaporating into the air. This separates pure water from any contaminants or salt that it's mixed with, so it is usually clean enough to drink when it falls back to earth. Evaporated water cools and condenses into clouds, and then falls back to earth as precipitation, such as rain or snow. Some of the water collects in water bodies, such as rivers, lakes, or oceans, and some seeps into the land where it replenishes underground reservoirs called aquifers. After water returns to earth, the cycle starts over.

How is the water cycle different from human-made water recycling?

In nature, evaporation, soil, and plants remove pollution and contaminants to clean water. In man-made water recycling, filters and technology are used to clean water.

What is recycled water?

Typically, water is used once before it is returned to the nature where it is naturally recycled. **Recycled water** is water that is used more than once before (or without) returning it to nature.

What water can be recycled?

All water can be recycled. Water used for day-to-day activities, like brushing your teeth and flushing the toilet, can be recycled. Water used by businesses, such as farms, factories, and power plants, can also be recycled. Water that has been used, but not yet recycled, is called wastewater.

How is wastewater from homes recycled?

One of the most common kinds of water recycling occurs when wastewater from our showers, sinks, and toilets flows through sewers to a central treatment facility. There, water is cleaned using filters and technology to make it safe to reuse for a specific purpose. The recycled water is then distributed back out to homes and businesses for a variety of uses, such as irrigating farms, cooling power plants, or even drinking! Water can also be recycled within a home or a building without going to a central treatment facility. Home examples include using laundry machine water or water collected in rain barrels for watering your garden. In bigger buildings, water recycling can mean collecting water from bathrooms, cleaning it, and using it again within the building.

Fun Facts:

- Earth has the same amount of water now as it did when dinosaurs roamed the earth.
- About 70% of the earth is covered by water.
- Only about 3% of water on earth is safe enough to drink.
- Water that is recycled for non-drinking uses like watering parks and flushing toilets flows through special purple-colored pipes, to differentiate it from regular water pipes.
- Less than 10% of wastewater in the U.S. is currently recycled.

Examples of Water Recycling in Georgia:

- The Kendeda Building at Georgia Tech in Atlanta is designed to get all the water it needs without a pipe from elsewhere. Special composting toilets mean less water gets flushed, special tanks collect rain water to run the sinks, and water harvested from sink drains and air conditioning is used to water plants.
- In Jonesboro, the Clayton County Water Authority can transform 24 million gallons of wastewater each day into clean and safe drinking water using a high-tech treatment plant and a special marsh called a "constructed wetland" that uses plants to clean the water.
- In Buford, the technologically-advanced F. Wayne Hill Water Resources Center can treat water to a very high quality before returning it to Lake Lanier, where it helps supply the region with drinking water.