**THE WATER WE’VE GOT IS THE WATER WE’VE GOT**

The water available to planet Earth is the same water that has always been available and the only water that ever will be available. Because water covers three-quarters of the earth’s surface, it might appear that there is plenty to go around. In reality, however, we have a limited amount of usable fresh water.

Over *97 percent of the earth’s water is found in the oceans as salt water*. About two percent of the earth’s water is stored in glaciers, ice caps, and snowy mountain ranges. That leaves only 1 per-cent of fresh water that is easily available to us for our daily water supply needs. Our fresh water supplies are stored either beneath the ground, in soil or fractured bedrock, or in surface waters, such as lakes, rivers, and streams. We use fresh water for a lot of different purposes. Nationally, agricultural uses (**farms, feeding livestock like cows)** represent the largest user of fresh water, about 42 percent. 39 percent of our fresh water is used for creating electricity; 11 percent is used in urban and rural homes, offices, and hotels; and the remaining 8 percent is used in manufacturing and mining activities.

What can you now tell me about our fresh water supply from this paragraph?

THE NEVER-ENDING JOURNEY

Draw what you think the water cycle looks like here!

If you think about it, water never stays in one place for too long. Water is always on the move, traveling on a never-ending, cyclical journey between earth and sky. This journey is referred to as the **water cycle**. During its journey, water is continuously reused and recycled. It also changes form. It falls to the earth as rain, snow, sleet, or hail and **evaporates** from the earth back into the atmosphere as water vapor. What form water takes and where it goes once it reaches the earth depends on where it lands. It might **seep** into the ground and move along slowly with the ground water to a nearby lake, stream. It might sink into the ground, be taken

up by a plant, move through the plant to its leaves, and evaporate back into the atmosphere. It might land on a lake or pond and spend a season or two freezing and thawing—that is, changing from liquid to solid, and vice versa. It might land on a river or stream and continue on to the ocean. It might be heated by the sun, evaporate into the atmosphere, condense into tiny droplets, and become part of a cloud formation. Eventually, the water in the cloud falls back to the earth, and the journey begins again.

Getting Up to Speed: The Water Cycle and Water Conservation

If we understand that we have all the water that we will ever have, we can better appreciate why it is so important that we keep our water clean. The fresh water that is available for use by people, plants, and animals must be clean. And to this end, nature is very accommodating. The water that circulates between the earth and the atmosphere is continually restored and recycled thanks to Mother Nature’s impressive bag of tricks.

But sometimes human carelessness affects Mother Nature by loading harmful and unhealthy substances into the world too fast for Mother Nature to fix it! When harmful substances

are put into the environment, they may very well end up as part of the water cycle! Nature can also stir up some environmental problems as a result of natural events such as volcanoes, earthquakes, and tornadoes.

How can people affect the water cycle?

When chemicals are released into the air from smokestacks, for example, they might well return to the earth with rain and snow or by simply falling back down. When harmful substances are let go onto the land or buried in the ground, they might find their way into ground water or surface water, which may, in turn, be someone’s or some community’s drinking water. In nature’s water cycle, all things are connected.

In many ways, we, as a society, have had to learn about managing and caring for our water resources the hard way. By the early 1970s, many of our nation’s water supplies had become foul-smelling and unhealthful. In 1972, recognizing that we could no longer turn our collective backs on the problem, Congress passed the **Clean Water Act**, thereby setting in motion the beginning of a concerted effort to rehabilitate the nation’s degraded waters. Taking our cues from Mother Nature, we have over relatively few years developed biological, chemical, and mechanical technologies that effectively clean wastewater before it is discharged into waterbodies.

**Getting Up to Speed: The Water Cycle and Water Conservation**

THE WATER CYCLE AND WATER CONSERVATION

To some extent, we all share responsibility for ensuring the availability of a clean and healthy

water supply. We can try to reduce contamination by keeping the water, the ground, and the air free of pollutants as much as possible. We can use just the amount of water that we need.

Industries can recycle their process water or pretreat their wastewater so that it is easier to purify for drinking water and other purposes.

Communities can educate residents about local water resources and work together to implement land use strategies that will protect and sustain water supplies into the future. They can develop plans to handle water shortages without waiting for a water emergency and can help residents dispose of harmful products properly by offering hazardous waste collection days. By behaving responsibly in our use of water, we can be sure that there will be enough clean water when we need it.

After reading this article, what are some reasons we should help to conserve water?

Citation

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<http://www.epa.gov/region1/students/pdfs/gwa1.pdf>