Most of us take the water we use for granted, but fresh water isn’t as easy to come by as you might think.

Less than one percent of all the water in the world can be used for drinking. Nearly 97 percent of the world’s water is salty or otherwise undrinkable. The other two percent is frozen away in ice caps and glaciers.

There is no “new” water. The water in your glass today is the same water that was on the planet when dinosaurs walked the earth.

Water may be the ultimate example of recycling. Every time water completes its cycle from vapor (clouds) to liquid (rain) or solid (snow and sleet) and back to vapor again, its quality is renewed. However, water quality can be damaged by pollution in the air, on land, and from other water supplies.

Every time we use water, it has a chance to be polluted. When we do laundry, there is detergent in the water that leaves the washing machine. Fertilizers and pesticides used by farmers wash into streams and enter our water supply. Anything that is thrown on the ground or poured down the drain can pollute our water.

Some materials can damage water quality enough to make it unusable. A single quart of motor oil, for example, can contaminate 250,000 gallons of water.

Water is vital for life. Fish, animals, and people all need it to survive. Our bodies are about 75 percent water. We use water to wash our dishes and ourselves. We cook with it and swim in it. The average American uses 80 to 100 gallons of water every single day.

If each of us does our share to conserve and protect our water, we can make sure this precious resource is available for all.
Save It for a Rainy Day

The amount of water on the planet right now is the same amount that existed in the days of cavemen. However, there are many, many more people today, and each one of us needs water to live.

The average American uses 80 to 100 gallons of water a day. About half a gallon is used for drinking. The rest is used for things like cooking, cleaning, flushing, and more.

In contrast, the average European uses about 53 gallons, and the average Sub-Saharan African uses only three to five gallons of water a day.

If we want to be fair to the rest of the planet, we should conserve where possible, and we’ll be reducing pollution at the same time. Water that stays in the tap is water that stays clean and fresh.

You can conserve water by changing just a few habits:

- Turn off the water while brushing your teeth and save as much as 10 gallons per day.
- Take a five-minute shower instead of a bath and save about 25 gallons.
- Wash a full load of dishes (or clothes) and save water that would be wasted washing a few partial loads.
- Leaks need to be fixed right away. Even a small drip can waste hundreds of gallons of water.
- Water the lawn or garden in the early morning or at night when the sun won’t cause as much evaporation.
- Washing the car with a running hose will use more than 100 gallons of water. Using a bucket and sponge cuts that by 90 percent.

If you or your class are interested in investigating your water use, you can visit the “Down the Drain” project on the web.

This Internet-based project lets students share information about water usage with other students from around the country and the world.

Based on data collected by household members and classmates, you can determine the average amount of water used by one person in a day. Then you can compare it to the average amount of water used per person per day in other parts of the world.

The project was created by CIESE (The Center for Innovation in Engineering and Science Education at Stevens Institute of Technology).

You’ll find it on the web at www.ciese.org/curriculum/drainproj/information.html

Words to Know

**Vapor**: The gaseous state of a substance (like water) that is liquid or solid under ordinary conditions. Water in its vapor form may appear as steam, fog or clouds.

**Liquid**: The state of matter in which a substance flows.

**Solid**: Solids have a definite shape and volume. One example of water in solid form would be an ice cube.

**Resource**: Any property of the physical environment, such as minerals, timber or water, which people can use to satisfy their needs.

**Ice Cap**: A mass of ice and snow that permanently covers a large area of land.

**Glacier**: A slowly moving mass of ice formed by an accumulation of snow.
Thinking Outside the Bottle

If you’re concerned about conserving water and stopping pollution, say goodbye to plastic, disposable bottles.

For every three liters of fresh water that goes into making bottled water, just one liter ends up in the bottle. The other two liters go to waste.

That’s not all. In one year, more than 900,000 tons of plastic was used to package 8 billion gallons of bottled water. Most of that plastic ended up as garbage or litter. Very little was recycled.

Bottled water takes up quite a bit of energy as well. If you turned all of the energy that goes into making a bottle of water back into oil, your bottle of water would be one quarter full of oil.

Bottled water is expensive too. It can cost 500 to 4,000 times more than tap water.

There’s a lot you can do to reduce bottled water use. Try:

♦ Drinking from reusable containers filled with tap water when you travel.
♦ At public events and at home, set out pitchers of water.
♦ Talk to your favorite restaurant about taking bottled water off the menu.
♦ If there’s a problem with water quality in your community, use a good quality water filter. It’s much less costly in the long run.

Sierra Club Books

Water, Water Everywhere
By Mark J. Rauzon and Cynthia Overbeck Bix.

Come Back, Salmon: How a Group of Dedicated Kids Adopted Pigeon Creek and Brought It Back to Life.
By Molly Cone, illustrated with full-color photographs by Sidnee Wheelwright. 48 pages. Ages: 7-11; Grades: 2-6.

Visit the bookstore at www.sierraclub.org/books
Tell us what you’re thinking!

Show us how you are going to do your part to cut down on water pollution and water waste. Or draw us a picture of your favorite lake or stream. Then cut on the dotted line and mail it to us! If we print your letter or drawing, you could get a FREE Sierra Club backpack, hat or children’s book. Go ahead — tell the world what’s on your mind!

What the Sierra Club is Doing to Keep Our Water Clean and Safe

There’s a lot to be done to protect our water and our wetlands. The Sierra Club is:

♦ Working to stop mountaintop removal coal mining which buries mountain streams under tons of mining waste and pollutes drinking water.

♦ Making sure the Clean Water Act — the law that keeps our water safe for drinking, fishing and swimming — is enforced.

♦ Training volunteers to collect water samples and monitor data through the Water Sentinels program.

♦ Educating members about the ways their actions affect water quality.

To learn more go to: www.sierraclub.org/cleanwater

TOMORROW’S PLANET

By Ann Pinkerton and Eileen Weckerle

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