



Saving Water:

Why Save Something That Covers Two-Thirds of the Earth?

By Marjorie Lamb

All life on the planet is supported by a fixed quantity of water. We use the same water over and over again, the same water which our grandparents used for brickmaking, the same water in which Shakespeare washed his feet, the same water in which Moses floated in a basket through the bulrushes, the same water the ancient Romans transported through their aqueducts to support life in their city. In fact, the water you that you used to brush your teeth this morning is over four billion years old. So have a little respect.



Of all water on our planet Earth, 97% is salt water. Only 3% is fresh water, and most of that is frozen in the polar ice caps. Less than 1% of Earth's water is available for our use.

We can't make new water, any more than we can make new land. If we misuse the water we have, we can't send out for some fresh stuff. Water comes out of the tap in unlimited quantities whenever we want it. We generally assume that we have vast reserves of water available.

And we generally assume that it's free, or almost free. But before clean water comes out of our taps, several things have to happen. We have to find a source of water, build pump machinery to pump it, piping to carry it, plants to treat it. Thanks to our treatment of water, chlorine has become an acquired taste in millions of households. We have to elect politicians who will run our municipal affairs, and look after our water treatment, and do the paperwork involved in supplying us with water. Once we get the water to our houses, we have to install pipes and valves and shut-offs and vents. We have to put in a separate line and a heater to heat some of the water.

Once we've got water, what do we do with it? We put it through our washing machines, toilets, sinks, dishwashers, car washes and pesticide-filled lawns. We use it to wash our windows, our sidewalks and streets. We spray it in the air for pretty fountains. We put out fires with it. We clean wounds with it. We make concrete with it. We use it in the production of plastics, steel and paper. We hose down chemical spills and industrial work sites with it. We clean paintbrushes in it. And we drink it.



What if we had water meters beside our kitchen sink? What if they read dollars and cents instead of gallons or liters?

Then we have to deal with getting rid of it. We need to build another whole network of drains to carry away our dirty water and sewage. We need to build treatment plants, and hire people to run them. And we need to elect politicians who will vow to "do something" to clean up the water that we've polluted.

The process costs billions of dollars worldwide, and still people suffer and die in many parts of the world for want of clean water, while we blithely open our taps and let our most precious resource pour down the drain.

There's not much we can do at home about the unequal distribution of water in the world. But the other major problems, contamination and waste, we can do something about. Although most of the advice in this chapter has to do with waste (we'll deal with contamination in other chapters), these two problems are connected in ways that might not be obvious.

The more we process our water, the more chance it has to become contaminated. That's because we have one sewage system for all purposes. We put our drinking water, our toilet waste and commercially contaminated waters all down the same system. We do our best to clean it up, then we pour it all out into the same river, lake or stream, and then we drink it again.

And of course, the more water we have to process, the more bleach we have to produce (which isn't a terrific thing to have around — it is, after all, a poison), and, naturally, the more we have to pay our governments for looking after all this stuff for us. So it's not easy to keep cleaning our water.

Yes, we could be drinking Shakespeare's bathwater, but more to the point, will our great grandchildren be able to drink the water we used to hose down the dog? Will there be any clean water left?

Does it make any sense for us to save water at home? Isn't our home usage just a drop in the bucket, compared to what agriculture and industry uses?



Household usage is about 5% to 10% of total fresh water used worldwide. Most of that is used in North America.

On average each of us consumes nearly 53 gallons of water a day at home. Some citizens of water-poor countries survive on as little as 4 gallons a day. We've grown used to seeing water flow out of our taps and down the drains. What if we had an automatic shut-off on our household water that limited us to, say, 13 gallons of water a day?

What to Do

1 Turn the tap on briefly to wet your toothbrush, and turn it off until it's time to rinse.

In our house, the average toothbrushing time is about a minute and 20 seconds. If we turn on the tap at the beginning of that time and don't turn it off until we're finished, we will have put down the drain approximately 2 gallons of water. In our little household of three people, we could waste over 4000 gallons of water per year just in tooth brushing.

Take the test in your household. How long does it take you to brush your teeth? Multiply that by the number of times you brush your teeth each day, then multiply that by the number of people in your household, and you'll soon see that you could have a terrific amount of water rushing uselessly down the drains.

My sister, Elizabeth, spent a great deal of time traveling the earth's oceans on sailboats, where she learned to brush her teeth with $\frac{1}{4}$ cup of water. The captain brushed without any water at all. We don't need to go that far, but we could all use less water than we do.

2 Keep a bottle of water in the fridge.

We used bottled water — from the tap. Have you ever let the tap run for a minute to get an ice cold drink? About 15 years ago, I filled an empty soft drink bottle with tap water and stuck it in the fridge. That same bottle is still in our fridge today. Of course it has different water in it.

Our water bottle has its own spot, in one of those bottle hangers that goes under the fridge shelf (it's been in the same place for years, even when we've moved houses and changed fridges), so that we never have to run the tap for a drink of water. It's always cold and handy. If you're just starting this system, be sure to label the bottle "Drinking Water." Once, years ago, when my Dad was visiting, he took a big swig from the bottle in our fridge, only to discover that someone had put a bottle of white rum in to cool.

3 Take a 5 minute shower instead of bathing.

Abandon the bathtub, and hit the showers. Sometimes it just feels great to soak in the tub, but that tub holds between nine and 33 gallons (40 to 150 liters) of water, depending on how full we fill it. We'd have to shower for 15 minutes before we used up the quantity of water it takes to fill the tub. When we were kids, we used to share a bath. We thought it was fun, but little did we know that our smart parents were saving on water heating. My daughter Caroline still enjoys a bath with her little cousin, Lisa.

4 Learn the cold water hand wash.

If every time you wash your hands, you turn on the hot tap and wait for the water to get warm, you could run anywhere from a few cups to a gallon or more of water down the drain. There are two problems with that.

First, it's water that has gone through the entire system of our waterworks for nothing. It's been pumped from the lake or river, using energy, it's been bleached, it's been pushed through miles of pipes, and then it just goes back down the drain to be processed all over again with our sewage, having done nothing.

Second, it's water that's already been heated in your home water heater, but has cooled before it gets to you. The energy that was used to heat it, which you pay for, has been wasted.

I even wash my face in cold water every morning and night. I'm trying to convince myself that cold water is kinder to my skin than hot, but frankly, I know of no studies that would back me up on this one. However, my friend Barry tells me he once read that Paul Newman soaks his face in ice water to stay young looking, so maybe I'm on to something here. Masochistic as it may sound, I find it refreshing to start my day with a cold splash. I confess that so far I've made very few converts to this theory, but I still swear by it.

Do you get as clean with cold water as with warm? The answer is yes, although there are exceptions. If your hands are greasy or oily, warm water will help to dissolve the grease or oil more quickly than cold water. But for ordinary, garden-variety dirt or stickiness, cold water works just as well as warm.

What about germs? Ordinary hand soap will take care of whatever germs are washable. If you want to be totally antiseptic, you would have to use boiling water, probably for several minutes. I think most of us would opt for just plain clean, thanks anyway.

Think of saving water this way: what if you had to carry home all the water you needed every day — in jars on your head?

