

A Sustainable Environment: Our Obligation to Protect God's Gift

by
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Water Conservation is More Critical than Ever

This year, 2021, may be the warmest year ever recorded along with June being the warmest month since data have been collected. We have experienced this in Western United States, Canada and even in the Arctic which hit an unbelievable 121° F. Despite all the attention given to global warming, what may be an even bigger environmental issue is the decreasing availability of fresh water.

Although the planet is covered greatly by water, 96.5% of it is salt water. Other saline water accounts for about 1% and fresh water 2.5% of the total. Of the total fresh water, about 68.7% is in icecaps and glaciers, and another 30.1% is groundwater. Of the remaining 1.2% of all of the freshwater, 21% of it is found in lakes. So basically, although we have plenty of water on this earth, very little of it is available for our use. In general, 70% of the available fresh water is consumed by agriculture, 20% by industry and 10% by humans. As California grows about 80% of all the fruits and vegetables in the U.S., this state consumes most of the available fresh water but its availability is decreasing.

A great alternative to support our agriculture industry is the expansion of urban farming. With a large increase in empty office buildings, this may be the right time for growth in this industry. Urban farming consumes about 10% as much water per crop compared to agricultural land, and it can also operate 12 months per year. In addition, the crops can be grown right in the consuming market which would reduce transportation costs and carbon emissions.

All buildings whether industrial, commercial or residential should be built by applying LEED guidelines, or some other comparable green building certification, whether the goal is to achieve certification or not. Part of all the building guidelines include the efficient use of water.

We must do whatever we can as individuals to reduce the unnecessary consumption of water. However small it may be, every little bit helps. One way to start this initiative is to stop drinking bottled water. This industry has consumed the majority of the available water in underground springs and is now bottling mostly tap water. Tap water is regulated by the EPA while bottled water is regulated by the FDA since it is a food product. Since the EPA standards for drinking water are more stringent than those of the FDA, tap water in most cases is cleaner. Also, it takes almost twice the volume of a plastic bottle in water just to produce the bottle. So when you are drinking water from, say, a 12 ounce bottle, you are really consuming about 36 ounces of water, and only about 10% of the plastic bottles are even recycled. Depending on whether you purchase your bottled water from a supermarket or a concession stand, you are probably paying between 300 and 3,000 times the cost of tap water.

Restaurants use large amounts of water in the food preparation process but also providing drinking water for their customers. This is great but maybe they should find a way to offer more water only when the customer needs it. The tables should not consist of glasses filled with water after the customers leave.

The various industrial consumers of large quantities of water are probably all doing as much as possible to minimize the consumption. The garment and textile industry uses large quantities of water just for the dyeing process. Fortunately, with more people working from home, the demand for garments has decreased. The beverage industry consumes an enormous quantity of water to produce its line of soda or beer. Another major user is the power industry that consumes water for cooling and steam generation. Less water will be consumed as we move away from coal fired power plants and towards renewable energy.

But what can the individual consumer do? There are ways to conserve water at home. Everyone should have one or more dual flush toilets. If you are not in a position to change out to a dual flush toilet, you can buy a kit for about \$25 to convert an old toilet to a dual flush model.

You can also go one step further on using your water more than once. Have you ever thought about the fact that the water we use to flush toilets is of the same quality as that which we drink. Does it have to be that clean? In Australia, there are many areas that have had a drought for over 15 years. In order to minimize the consumption of water, they have designed bathroom sinks so the water discharge is directed to the toilet tank. So after you use the toilet, when you wash your hands, the waste water will then be used for the next toilet flush. There are many new designs that incorporate this concept and is not really noticeable. These bathroom sink-toilet combinations should be used more here in the U.S.

A similar design was developed by Kaspars Jursons of Latvia when he designed the STAND. This is a combination of a urinal and a sink mounted above the urinal. After the urinal is used, the person remains there to wash his hands and the wash water flushes the urinal. Again, the water is used twice. This product is sold in about 25 different countries but not in the U.S. or Canada as it does not meet code. But it really makes sense.

In many public bathrooms, after washing your hands you may have the option to dry them with an air blower. In most cases the blown water goes on the floor. There is at least model of a blower that sits above the sink so the blown water is collected in the drain which could be directed to the toilet tank.

One last recommendation for preserving our supply of fresh water has to do with our lawns. I have not watered my lawn in over 15 years. And one of the reasons can be read [here](#).