THIS MONTH

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Water, Water Everywhere

Managing a Precious Resource

by Stacy Clark

Seventy-one percent of the Earth is covered with water. This fact might lead us to believe that there is plenty of water to go around, and that we'll never run out. But consider:

More than 97 percent of the Earth's water is salt water, found in oceans and seas. Two percent is stored in glacier ice caps and on snowy mountain ranges, in the form of ice and snow. Only *one percent* is available for our daily needs. Wow! So, where does this one percent come from?

Water Supply 101

The one percent of available water breaks down to water stored in soil and bedrock fractures, (*groundwater)*, and water stored in lakes, rivers and streams (*surface water).*

Groundwater accounts for 36 percent of available water. We access this supply by installing wells in the ground and pumping the water to the surface. Most groundwater comes from municipal town wells (88 percent), but some comes from private wells (12 percent), located primarily in rural communities.

Surface water accounts for the remaining 64 percent.

But remember…this is 64 percent of *only one percent*. WOW! When you think about it, there really isn't that much water to go around!

Water Distribution

Water use varies greatly around the world.

In the United States, for example, where there are many competing demands for water, 42 percent of the water is used in agriculture; 39 percent is used in the production of non-

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renewable electricity (in coal- and gas- fired power plants); 11 percent is used to supply homes, offices, and hotels; and 8 percent is used in all other manufacturing and mining.

In many developing countries, drought, civil conflict and poor technology have made it difficult to distribute water to everyone who needs it. In times of acute crisis, it is not uncommon for families to walk hours or days in search of clean water! In regions where civil wars divide people, warring leaders will often take control of what are already limited water supplies to weaken or threaten opposing forces. By using water as a weapon, they can gain a significant political advantage. But as anyone can see, it is hard to justify their means. Unless conflicts can be resolved more humanely, it would be difficult to predict whether safe drinking water supplies could be made more reliable in these parts of the world.

The Challenge

With world population *and* industrial demand growing, access to safe drinking water supplies may be the single largest environmental issue we face in the 21st century! With the amount of water available at any given time fixed at *one percent*, how will we work to ensure clean water for everyone?

The Solution

When agricultural, industrial, and manufacturing operations are designed to protect and conserve natural resources, the environment benefits.

Global businesses—from food growers to power producers to manufacturers—all have an important role to play in protecting water supplies. They need to evaluate how they can reduce their use of water. After all, in the United States, these industries collectively use 89 percent of the water available in North America!

Agribusinesses, for example, could lower their consumption of water by adopting less wasteful irrigation techniques. Manufacturers could develop new processes that require less water. It is true that agricultural and industrial "re-tooling" can be expensive. But, with worldwide demand for water increasing and reserves fixed at one percent, there do not appear to be any viable alternatives.

Each one of us can make our own contribution as well. We can cut back on the amount of water we use each day. And, we can encourage our families to switch to energy providers that produce electricity from renewable resources. Producing electricity from wind power, for example, requires no water at all!

We're Putting YOU in Charge!

Should agribusinesses, conventional power producers, manufacturers and industry be charged higher rates for their water usage to encourage water conservation?

Should governments impose environmental taxes on businesses which fail to adopt water reduction practices?

Should families be charged more for water, when their use exceeds what they need for drinking,

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bathing, and cooking?

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Additional Resources on this Article

Learn more about water supply and use on the EPA's Drinking Water for Kids website

Learn about Drinking Water Week, May 2-8, 2004

Actions You Can Take

Each person in the world needs to consume 2.5 gallons of clean water a day to stay healthy. That means, collectively, human beings require over *15 billion gallons* of water a day—just to live. WOW! Here are a few ways you can help conserve water today and in the future:

Turn off the faucet while you are brushing your teeth. *You'll save 2 gallons each time*!

Keep a container of water in the refrigerator instead of running the faucet to get a cold drink. *You'll save a half-gallon each time!*

Take a short shower instead of a bath. *You'll save 25 gallons!*

In one day alone, you can easily conserve 30 gallons of water. That's enough water to meet the needs of 12 other people in the world!