

Why Water Conservation Is Important

By **Amy Vickers**

As we peer into the 21st century, water conservation is looking far more like an imperative than an option.

Today, few areas of the U.S. are unaffected by the vagaries of drought, disputes over water rights, or long-term water supply shortfalls. The United Nations reports that more than one-third of the world's population in more than 40 countries is now impacted by water shortages. Pressure on nature's fixed water budget will feel even tighter over time as humanity swells and strains to draw from the collective well.

In the face of ballooning water demands, some eyes are quick to gaze at the seemingly limitless supplies available from oceans and treated wastewater flows. Such sources are indeed abundant, but their tapping fees amount to worrisome costs that few have yet to tally, including

- voracious energy demands in the face of growing competition—and prices—for the world's declining oil reserves;
- atmospheric dumping of energy combustion byproducts and greenhouse gases that degrade air quality and further fuel global warming;
- generation of solid and hazardous wastes, such as treatment membranes, corrosive salts, and spent chemical solutions;
- decimation of marine life and environments;

- shrinking aquifers, streams, and lakes denied the return flow of treated wastewater that is now diverted for spraying ever-multiplying soggy swatches of residential green, and;
- potential human health risks from exposure to reuse water, such as endocrine-disrupting residues that may be transferred by irrigation to food crops and grass where children play.

Good to the last drop?

Are we running out of water or are we engaged in a stampede to squander and exploit every last drop?

For all the urgent and plaintive calls for conservation over the past 20 years, to what extent have our practical actions fulfilled the promises of our heartfelt words? Most U.S. water systems still allow leaks and other unexplained losses to siphon 10 to 30 percent—and sometimes more—of the water they produce, a figure that is often higher when source-to-treatment plant conveyance leaks are also counted.

In water districts and communities rich and poor, many of the biggest and most profligate water users such as large businesses, golf courses, and affluent homeowners continue to feel little or no price incentive or regulatory mandate to put an end to water waste and invest in simple efficiency measures. For every low-volume toilet installed or "Save Water"

bumper sticker affixed, how many new multi-headed showerheads, swimming pools, or water gardens have found new homes and sent water meters spinning?

In our race to procure more water to meet consumer *demands*, have we paused to take stock of how much water society actually *needs*?

Water conservation is defined by action, not passive platitudes. The water managers in cities like Copenhagen, Singapore, and Fukuoka (Japan) have driven their water leaks and losses down to 5 percent, demonstrating a level of water system efficiency that is a practice, not a pipe dream. Likewise, since the Massachusetts Water Resources Authority launched its massive conservation program in the late 1980s, the authority has reduced its water demand by 30 percent—more than 100 million gallons per day, an amount that remains unprecedented. Yet it is just as possible for countless other water systems to dare to make good on the same commitment.

Efficiency or exploitation? Conservation or complacency? The choice is yours.

Amy Vickers is an engineer, water conservation specialist, and author of the award-winning *Handbook of Water Use and Conservation: Homes, Landscapes, Businesses, Industries, Farms* (www.waterplowpress.com).

