

**W**ithout water, life itself does not exist. Examples of water's importance (or lack of) is being played out this summer across agricultural fields and golf courses

through the southeastern and southwestern United States. As an industry, our staying abreast of the growing water crisis and subsequent water issues both locally (ex. Tri-State Water Wars – Alabama, Georgia, Florida) and globally (drinking water riots in India) helps us put in perspective water's worth, both economically and environmentally.

Highly conserved, the amount of water that was present at the formation of Earth is the same today. We don't need to explore for water; we know where it is. But water is not geographically evenly distributed. Thus, it is costly to transport it to where it is needed.

As you might suspect, water is least expensive around the Great Lakes, which contain 20 percent of the world's fresh water. In a 2010 survey of residential water use, Detroit, Chicago and Milwaukee had the lowest water rates, ranging from \$24.12 to \$28.36 per month for a family of four each using 100 gallons of water per day <sup>(1)</sup>.

However, prices for water around the Great Lakes are increasing, because — and it seems intuitively crazy — demand has fallen due to industry and population migration. If your business is selling water, as many municipalities do, and your demand is down but fixed costs increase — you make up the difference by increasing rates. In 2010 the cost of water rose on average 9.4 percent across the country.

In the southwestern United States, government water projects brought cheap water and energy that drove population and industry growth in the region. When demand began to exceed supply, water conservation efforts — through restrictions and bans — were instituted to conserve water. Those water conservation efforts worked. By reducing their water use, cities have avoided investing in expensive alternatives like salinity plants, water diversion proposals and buying on the market.

What is somewhat surprising is how inexpensive water is in the southwestern United States.

## What is Water Worth?

BY KARL DANNEBERGER



A FAMILY OF  
FOUR USING 100  
GALLONS OF WATER  
PER PERSON PER  
DAY WILL PAY  
\$32.93 PER MONTH  
IN LAS VEGAS AND  
\$34.29 PER MONTH  
IN PHOENIX.

A family of four using 100 gallons of water per person per day will pay \$ 32.93 per month in Las Vegas and \$34.29 per month in Phoenix. That same family will pay \$65.47 in Boston and \$72.95 in Atlanta. The government funded water projects, which have been so critical for economic growth, have subsidized lower water prices.

Based on the above figures and depending on the area of the country, according to my calculations a gallon of water is around 0.2 of a penny per gallon. Meanwhile, If you drink bottled water, the cheapest bottle will cost you about \$1 a gallon.

Golf course superintendents who buy their irrigation water will no doubt disagree with me about whether water is cheap or not. Even switching to effluent water is now approaching the cost of potable water in some areas of the Southwest. I guess water is water.

Yet compared to other commodities the cost of water does not even show up on the radar screen. With water becoming scarcer and the quality issues rising, along with the issues of improving infrastructure, how can the current prices be sustainable without subsidies, restrictions and bans?

I do not have any grand ideas or solutions. I can only remind you what we do best — research the best solutions, educate others, and stay engaged in the discussions that will determine water policy.

If we don't do those things, our lifeblood will disappear.

---

REFERENCE <sup>(1)</sup> The Price of Water: A Comparison of Water Rates, Usage in 30 U.S. Cities. April, 2010. <http://www.circleofblue.org>

---

*Karl Danneberger, Ph.D., Golfdom's science editor and a professor at The Ohio State University can be reached at [Danneberger.1@osu.edu](mailto:Danneberger.1@osu.edu).*