

Nichols Hills

A MONTHLY MAGAZINE OCTOBER 2009 VOLUME 13, NUMBER 10

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Water Sense Makes Sense

By Mary Ellen Ternes

I have to apologize to my little black dog, Mack. He'd jog beside me all day long if he could keep running in the excess lawn sprinkler water that creates ephemeral (bordering on intermittent) streams along our streets. Sorry, Mack (I've got a biscuit for you), but considering the energy required to produce clean potable water, wasting any water at all really doesn't make sense. Let us count the ways.

First, ground water or surface water has to be pumped to a drinking water treatment plant. At over eight pounds per gallon, water's heavy. Pumping water through miles of pipe that may be old and partially blocked by mineral deposits requires a lot of power, especially at the hundreds of millions of gallons we demand each day.

Second, we take this untreated water and treat it to meet the U.S. EPA's numerous drinking water standards for microorganisms, disinfectants, disinfectant byproducts, inorganic chemicals (including metals), organic chemicals and radionuclides. Then we test it in certified laboratories and report the results, demonstrating that it complies with the EPA's standards (something bottled water producers don't have to do, being regulated by the Food and Drug Administration rather than the EPA). As an example, Oklahoma City treats an average of 90 million gallons per day with a peak consumption day of 189 million gallons. That's moving and treating and delivering 375,000 tons of water on an average day in Oklahoma City.

Third, we pump all this now lovely potable water to our homes, miles from the water treatment plant, up and down hills, probably through more old occluded pipes, requiring even more power.

We turn on our taps and miraculously find this refreshing, cool, clean water that has come such a long way, that's been treated and demonstrated to meet 87 individual EPA drinking water standards, ready at our faucets for our consumption in any manner we wish. Do we issue a cry of amazement? Are we driven to our knees by the cleverness of our public utility? Do we marvel at the sheer convenience of it all? (Is the "no" that deafening?)

Maybe we don't pay enough for it. At about 25 cents per gallon, tap water is certainly cheap enough to waste (bottled water can run you about \$6.50 per gallon). To Mack's delight, we're happy to waste this cheap tap water by massively overwatering our lawns, particularly during thunderstorms, creating artificial springs at each address that run into the storm drains that go right to the river, along with all the expensive lawn chemicals we just applied.



Mary Ellen Ternes

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Living Well *Your Involvement, Your Environment*

If we wanted to save money, particularly in cities that have adopted increasing rate structures for more intense water use, we could decide to be just a bit more deliberate in applying water to our lawns. We could adjust our lawn sprinkler heads and watch during a watering cycle to see whether we're applying too much or watering the concrete. We could also avoid using sprinkler heads that create that very fine mist during the hottest time of the day. That fine mist evaporates as much as 50 percent of the water we thought we were applying so that it never actually reaches our grass. Drip irrigation is considerably more efficient and may even be healthier for our plants by avoiding conditions which encourage mold and rot and encouraging development of a deeper root base.

Over-watering our lawns is just one of the many obvious ways we waste water. We could avoid wasting more water by fixing leaky pipes and faucets and switching to high-efficiency toilets, washing machines and showerheads. We could turn off the water while we're brushing our teeth and only run the dishwasher and washing machine when they are completely full.

Water conservation ultimately makes good sense and can save us all a lot of money that we could spend on other things, like other energy-efficiency projects. Mack's not going to like it, though. I'm pretty sure he puts up with my jogging just so he can play in the water. ■

Mary Ellen Ternes, Esq. is a former chemical engineer from both the EPA and industry. She is currently a shareholder with McAfee & Taft and co-chair with Richard A. Riggs, Esq. of its Renewable and Sustainable Energy Group, and is serving a three-year term as City of Nichols Hills Environment, Health and Sustainability Commissioner.

WaterSense

The EPA has been working on ideas for water conservation through its WaterSense program and has identified all kinds of water-efficient consumer goods, services and WaterSense partners.

The American Clean Energy and Security Act of 2009 (H.R. 2454), to be taken up again by the U.S. Senate this fall, includes a section on WaterSense (Section 215), providing statutory authority for the EPA to expand its program to reduce water use and thereby reduce the strain on water, wastewater and storm-water infrastructure and conserve energy used to pump, heat, transport and treat water. For more information, see www.epa.gov/watersense.

Test your water sense at www.epa.gov/watersense/quiz.

Calculate your savings at www.epa.gov/watersense/calculator.

Closer to home:

www.okc.gov/water/service/Forms/HouseHoldWaterUsage.aspx

www.okc.gov/water/service/Forms/WaterQualityReport.aspx

And for a recent report on comparing regulation of bottled water to tap water:

www.gao.gov/new.items/d09861t.pdf

