



The Green Architect

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Is Water Too Cheap?

I recently received notice that my water bill would be increasing. It didn't bother me at all—in fact, I felt good about the reminder that later shouldn't be taken for granted. The average four-person American family uses 100 gallons of water a day. Even the most frugal American uses 70% more water than our UK counterparts. With daily bathing, dishwashing, laundry, and irrigation, our water usage—and bills—are really adding up.

The image of earth from space might make it seem that there's no limit to our water supply. In fact, though 75% of the earth's surface is water, only 1% is suitable for drinking. An executive with the local water utility company told a group at a USGBC-LA event last year that we should not worry about the large discrepancy between supply and demand due to the ease of desalinating salt water. What many don't consider is that this process requires other natural resources, like precious fossil fuels.

According to Richard Manning and Katrina Shum Miller of Green Building Services, Inc. in Portland, the majority of our water today is used to provide energy. So water, energy, and fossil fuels are all interlinked. While our demand for water increases, our nonpermeable surfaces do, too. We are removing more ground water than we are replacing. Our "bank account" of water is

dwindling, while the water that remains in becomes more highly concentrated with undesirable salts and chemicals.

A great example of the benefits of water conservation has been made by the Mirage in Las Vegas. By replacing all the shower heads and faucets in their 34-story hotel with lower flow devices, they now save 32.8 million gallons of water *a year*. Because they don't have to pump and heat those gallons of water through the building, less heat is added to the air. The cooling towers and chilled water systems don't work as hard. This saves them much more in electricity costs.

I think water deserves a greater amount of respect. In the past, I've mentioned a number of ways in which to save water. This month I'm going to repeat some and interject a few new ideas.

Outside:

○Reduce or eliminate your water-thirsty lawn. There are warm weather grasses that require 40% less water. Learn more at bewaterwise.com.

○Using California native and water-wise plants can save 1000–1800 gallons of water a month.

○Use a drip or sub-surface irrigation system whenever possible. Rotating heads are preferable over traditional spray heads for large areas of planting or grass.

○Consider adding an ET (evapotranspiration) scheduler to your existing irrigation system. This device can be added to most irrigation control systems to seasonally adjust the number of watering days. See aquaconserve.com

○If you wash your car at home make room in your landscape design to your car to park on the lawn.

○Provide permeable pavement wherever possible.

○Consider installing an underground holding tank for home waste water from sinks and showers for irrigating the yard.

○Reroute downspouts to splash blocks and planting beds rather than tying them into the storm drain system.

○Reconnect downspouts to RiverSafe's RainBarrels so that rainwater can be harvested for later use in the garden.

○Use a California State-approved ReWater® underground storage tank system to drip irrigate. This tank captures, filters, and reuses household water. For a typical 3.2-person home, the waste water from these