

Search

Search powered by: BCI Burke



*Special monthly promotions
available exclusively to
PRB (Parks & Rec Business)
subscribers and Insiders.*

▸ [Current Issue](#) ▸ [Most Commented](#) ▸ [Contact Advertisers](#) ▸ [Subscribe](#)

The Water-Energy Connection

Posted on August 1, 2011

Article Author: Klaus Reichardt

Like

Robert Kravitz likes this.

On November 18, 2010, a directive from New York City mayor Michael Bloomberg to the city's department of parks and recreation stated that each parks-and-recreation center in the city must take significant steps to cut costs—everything from “negotiating with unions to institute furloughs to save cash” and eliminating part-time seasonal jobs to reducing the work year from 12 to nine months.

1
tweet

retweet



Water-saving plumbing fixtures can cut energy costs.

For many departments, this meant they could be essentially closed for part of the year.

And New York City is certainly not alone. Many people say the ramifications of the 2008 economic collapse have not fully played out. It started with Wall Street and poor investment strategies, spread to the housing market and home foreclosures, and in 2011, according to many, is set to significantly impact state and local governments.

Some states, such as California and Illinois, are already essentially bankrupt. Yet to be determined is the number following right behind.

What does this mean for parks-and-recreation centers? Virtually all will need to find more ways to reduce operating costs. The worst that can happen is for staffers to be let go—adding to the unemployment problem—and for facilities to close.

In many parts of the country—as parks-and-rec administrators well know—facilities have become safe, second homes for youngsters. Closing these locations could have unfortunate and preventable repercussions.

Thus, parks-and-recreation locations must look for new ways to save cash. Further, they should look at these savings as cumulative and interconnected so a small savings at one facility has a ripple effect and offers a larger savings for the entire department.

The Wake-Up Call

Most Americans did not give much thought to the cost of electricity until the early 1970s when the country experienced its first oil crisis. Although its immediate impact on American society meant long lines to fill the tanks, it actually had several longer-lasting ramifications that were less noticeable at the time.

For instance, for many, this was a wake-up call that:

- Energy from petroleum-based products is a finite source;
- Every time someone turns on a light or a television, it uses energy;
- Using energy wisely and more responsibly can reduce costs.

We are only now beginning to realize there is also a direct correlation between energy savings and water efficiency. Saving water by, for example, installing low-flow or no-flow restroom fixtures not only reduces what is spent on water, but saves energy as well. This is where the cost savings to parks-and-recreation administrators can be realized.

The Water/Energy Connection

As a result of what has been learned since the 1970s, most people know that heating water requires electricity and costs money. For instance, running a hot-water faucet in a bathtub for only five minutes is equivalent to lighting a 60-watt light bulb for 14 hours.

However, what is often overlooked or misunderstood is how the potable (usable) water got there in the first place.

Water has to be treated and then pumped to and from homes and commercial buildings across the country. Each year, just treating water, delivering it to, and then removing it from homes and commercial locations, requires the same amount of electricity as it takes to power 5 million U.S. homes for an entire year.

In fact, in California, it is estimated that 19 percent of the state's electrical use and 23 percent of its natural-gas use is for moving water to and from facilities.

But significant cost savings can be achieved if water-conservation strategies are employed:

- In 2010, Vanderbilt University reported it had retrofitted 492 fixtures with low-flow faucets, low-flow toilets and no-water urinals. By doing so, facility managers estimate they are now saving an estimated 9-million gallons of water annually, which translates to a cost savings of \$64,000 per year.*
- In Massachusetts, a state study determined that replacing conventional urinals using about 40,000 gallons of water each year with no-water urinal systems in a facility where 1,000 male workers are employed, could amount to a savings of 1.6-million gallons of water annually and \$21,000 each year in water and electrical costs based on 2008 charges.

And don't forget that reducing water use not only saves energy and cuts costs—it also helps protect the environment. When facilities conserve water, they are also reducing greenhouse-gas emissions associated with energy generation.



Save money by cutting water usage.

How to Save Money By Saving Water

So where do we begin to reduce the amount of water used by parks-and-recreation facilities? The easiest and one of the most effective steps is to simply fix leaks in restrooms and foodservice areas, as well as in plumbing used for outdoor irrigation.

A slow-dripping, leaky faucet may waste 5,475 gallons per year. A water audit conducted by the California Department of Water Resources found that about 10 percent of the water delivered to a facility is lost to leaks. In addition, neglected leaks become worse over time. The small leak turns into a larger leak the following year, which wastes water and money as well as damages infrastructure and property.

Aside from landscape irrigation, most of the water used in facilities is in restrooms. Installing low-flow faucets, low-flow/no-flow toilets and urinals can result in dramatic savings. Look for fixtures that have the Environmental Protection Agency-approved WaterSense label. These toilets, for example, use 1.3-gallons per flush. This compares to 1.6 gallons per flush on a standard toilet.

Of course, retrofitting a facility with water-reducing fixtures does cost money—something most departments are trying so desperately to save. Fortunately, federal programs and state utilities throughout the country are offering rebates to facilities installing water-conserving fixtures. In many cases, these rebates can defray a large portion of the costs. Further, the return on investment for installing these fixtures can be gained relatively quickly. Depending on use and other variables, with a waterless-urinal system, for instance, the savings can justify the costs in about two years.

The Great Recession has caused many hardships, and it is too early to determine the final toll. However, we are learning from it. Conserving water now not only helps protect this crucial natural resource but produces cost and environmental savings that will pay dividends for years to come.

*Andrea George et al., “Water Conservation Makes Cents at Vanderbilt University,” June 21, 2010, Tennessee: Vanderbilt University.

*A frequent speaker and author on water-conservation issues, **Klaus Reichardt** is founder and CEO of Waterless Co. Inc., in Vista, Calif. He is a member of the U.S. Green Building Council since 1999 and the University of California-Santa Barbara EcoEntrepreneur Advisory Board. He may be reached at Klaus@waterless.com*

-----Sidebar-----

Saving Water Outdoors

To curb outdoor water use, facilities must pay greater attention to the local climate. One comprehensive landscaping method to adopt is xeriscaping, which is based on local climates, and employs drought-resistant and water-efficient gardening techniques.

Instead of using turf and grass in a state such as Arizona or California, drought-resistant plants are planted in groups according to water needs in order to utilize irrigation methods efficiently.

In addition, plant placement is based on the optimal amount of sun exposure. Facilities that use this type of

landscaping can expect to save a considerable amount of money on maintenance, water use and electricity.



This entry was posted in [August 2011](#), [Departments](#), [Everything H2O](#), [Issues](#), [PRB Top Stories](#), [Parks and Rec Business](#). Bookmark the [permalink](#).