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## Managing Restroom Water and Paper Use

Experts report



**Waste management in the 21st century goes beyond recycling. Today, everything — from product use and packaging to protecting local sewer systems as well as the overall environment — is scrutinized, put under a microscope and operations are looked to be improved. Particularly in the restroom, facility managers are afforded the right nowadays to conserve and stretch dollars in two of the most traditionally wasteful areas — paper and water.**

### **FLUSHING MONEY DOWN THE TOILET**

Consider this: approximately 40,000 gallons of water is used by a traditional urinal per year; urinals can leak as much as 4,000 gallons of water per year; and compared to toilets, a urinal is used more than four times per day. Of course, beyond these "water stats," facility managers should also be aware of the energy costs that go into getting water in and out of a facility's restroom.

Recent studies have found that the energy used to transport water in the state of California approaches 19 percent of all the electrical use in the state and 23 percent for all gas use. And, since the average electrical maintenance cost necessary to keep a flushed urinal in operation is roughly \$120, facility managers and colleges should be open to other concepts that are less water/energy dependant. Waterless urinals have been on the market for several years, but have recently garnered increased attention due to their long-term cost savings.

Waterless urinals offer colleges significant savings, from the minute they are installed. Since these urinals do not have flush handles, sensory systems or require the plumbing, piping or incoming water lines, the cost to install and maintain them is immediately alleviated. Additionally, these types of urinals rarely require plumbing repairs.

### **WHAT WATERLESS OFFERS**

Since water's presence is not in the control of the user, the savings speak for themselves in that area. However, experts offer other cost savings that may not be so obvious. These include reduced vandalism, lower risk of cross contamination as well as helping to reduced cleaning and labor costs.

"Many cleaning professionals find waterless urinals easier to clean and maintain than conventional urinals," adds Klaus Reichardt from the Waterless Co. "Because there is no water, water and rust deposits do not develop, so scrubbing is rarely necessary.

And because the interior of the unit is basically dry, bacteria, germs and other contaminants rarely develop. This is more hygienic and also helps protect Indoor Air Quality because fewer germs become airborne."

Since bacteria does bond to the surface, these urinals will need to be cleaned; however with the lack of water, detailed cleaning and the use of harmful chemical product are negated. "With routine cleaning and the absence of water, waterfree urinals have been proven to harbor five times fewer bacteria than water flushed urinals," concurs Randy Goble, marketing communications director for Falcon Waterfree Technologies. "Waterfree urinals require very little cleaner in routine maintenance, eliminating excessive use of costly cleaners."

### **MORE SAVINGS AND RETROFITTING**

Experts also report savings in vandalism since these waterless systems do not feature the additional plumbing valves and flush handle that a traditional fixture requires. And, facility managers looking to upgrade buildings by achieving Leadership in Energy and Environmental Design (LEED) certification should give these urinals a serious look as well.

"More and more facilities are installing — and in some locations actually requiring — the installation of waterless urinals," notes

Reichardt. "Many facilities seeking LEED certification are installing waterless urinals because they can earn as many as five points (out of 32 needed) toward certification with the systems in place."

And, "mechanical maintenance is also significantly reduced," adds Goble. "Once janitorial personnel understand why and how waterfree urinals work, they will find they can use less cleaning chemicals and spend a little less time cleaning restrooms."

Although most waterfree urinals have simply replaced flush-style fixtures, retrofitting is also an option. According to Goble, in retrofits, the flush valve is removed, waterline capped, then the waterfree urinal is hung on the wall and attached to the existing waste line. Waste lines must meet standard codes for pitch, venting and must be unobstructed, which is actually no different than for flushing fixtures, says Goble.

## **ON TO PAPER**

Product packaging waste is a concern for most college facility managers. Since this waste is useless once it hits campus, it is the maintenance personnel's job to find a place for it. The manufacturers' answer: send it back. "From the college perspective, product packaging can be incorporated into a campus-wide recycling program," says Mark Stanland, director of marketing, Bay West®, at Wausau Paper. Packaging from towels and tissue, such as corrugated containers, cores, bands/wraps and facial tissue cartons can all be recycled. "This helps 'close the loop' and return these types of packaging materials to the manufacturing process to make other useful products, which minimizes packaging waste that is land-filled."

Facility managers can control the products they buy. Paper manufacturers offer various styles of toilet tissue, paper towels and dispensers to help maximize dollars and control waste. For example, one jumbo roll towel, with a 12-inch diameter, would be equivalent to 16 rolls of regular tissue. Therefore, users can enjoy 15 less stub rolls as well as 15 less cores. This can amount to significant savings and have a reduced impact on the environment ... all by simply changing the size of the toilet tissue a college purchases.

The bottom line is finding a system that users will actually utilize that won't be too costly for the college. "The best managers at educational facilities are recognizing the fact that they really need a good towel system that runs economically based on cost per hand dry," says Markham Ray, director of marketing at Scott Paper Limited. According to Ray, this doesn't mean that facilities should settle for the cheapest product. "It means it's the product that can do the best job and also reduces consumption."

## **MAKE IT GREEN**

Improvements to paper products, such as increasing the size of toilet tissue, the tissue's core makeup, coreless, features to alleviate stub rolls and controlling dispensed product, have all been prevalent in today's restrooms. However, as with many other product categories in the Jan/San marketplace, "green" has broken through to the paper market. Manufacturers, such as Scott Paper Limited and Wausau Paper, are subjecting their goods to third-party certification organizations.

"We have recently been certified with the Environmental Choice Program™," says Ray. According to Ray, in order for products to pass and achieve certification, stringent plant audits and product testing must be performed. In addition to a product's recycled content, energy to produce the product and its effect on waste effluent — the evaluation of the water's quality after it is put back into the environment — is also considered.

According to Stanland, in 2003, Wausau Paper offered the industry's first complete line of towel and tissue products to be certified by Green Seal®. "Our Green Seal® line is not only 100 percent recycled and meets EPA guidelines for post-consumer wastepaper, but [it also] meets Green Seal standards for papermaking processes and packaging. [It] is far more than just recycled product, but rather, speaks to the entire process of how the paper is manufactured, shipped and used," says Stanland.

With safer paper products and controlled water usage in the restroom, facilities are forging ahead with "green" in mind. And, as Stanland points out, going green is more important now than ever before since federal, state and local governments are promoting "green" initiatives along with the emergence of coalitions, such as the U.S. Green Building Council. And, this is a win-win since savings are obtainable as well.

## **IMPROVEMENTS TO MANUFACTURING**

We recently spoke with Joe DeZarn, director of marketing communications at Rubbermaid Commercial Products, to find out how the manufacturing process is being influenced by consumer-driven green initiatives as well as what colleges can expect in the future.

**Q: How has the "green" movement affected the process of producing product?**

**A:** We use the term "sustainability" to organize our efforts around what people mean by "green." It is more descriptive and helps remind us that in addition to the ethical aspects of these initiatives, there are economic aspects and these two aspects are frequently mutually supportive. In manufacturing, we invested in equipment to manage our power consumption. That is a sustainability initiative for ecological responsibility reasons as well as financial reasons. On the other hand, there are sustainability initiatives that are more costly, but enable us to provide our customers with more ecologically-responsible finished products. An example of this is our refusal to use colorants that contain heavy metals. Our choice means we incur higher colorant costs, but it is a better practice in the long run.

**Q: Have you noticed any significant trends in the education market, particularly at the college-level, in terms of waste management?**

**A:** Certainly there is growing awareness of opportunities to handle facilities maintenance tasks with greater sensitivity to environmental impacts. It is an empowering realization that the opportunities to do better are endless and that everybody can make a meaningful impact. And we see increasing state-level procurement directives specifying the green alternatives. It is very clear that facility managers should be educating themselves on the matter and looking to their distributor and manufacturer reps for meaningful information.

**Q: What can facility managers expect to see in future years with building design and cleaning services continuing to go green?**

**A:** Facility managers can expect to have their efforts taken less for granted. As sustainability gains "share of mind," facility maintenance will transition from the absence of a negative — "our buildings aren't dirty" — to something that institutions brag about, such as high quality indoor environments, improved worker health and satisfaction, responsible waste stream management, etc. Because every facility shares the challenges, any facility's success and innovations will be welcome news. They can also expect to see products targeted at helping them work in a more sustainable manner.

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