

No Water No Worries

By Robert Kravitz

Waterless urinals—which also are called no-water, no-flush or no-flow urinals—have endured a few hard knocks in the media in recent years. While these systems have worked well in a variety of facilities for decades, two 2010 incidents caused many facility managers to reconsider this technology.

In an effort to promote sustainability, Chicago's city hall installed no-flush urinal systems in some of its men's restrooms in 2006. By 2009, users began to notice a "stench" in the building, especially on the second floor, where the urinals were installed. By 2010, it was determined that the no-flush urinals were to blame for the odor, and the fixtures were removed.

Further investigation, however, found that the plumbing in the building consisted of copper pipe. According to the U.S. Army Corps of Engineers, drain-pipe for waterless urinals "cannot be made of copper pipe, which corrodes."

Similarly, the California Environmental Protection Agency (Cal/EPA) installed no-flow urinals in its Sacramento headquarters in 2006. By 2010, building users were complaining about odors, and the building's management found the urinal systems costly to maintain. In 2010, the fixtures were removed.

Again, the headlines referenced the odor and cost problems associated with the no-flow urinals. What received less attention was a news release later sent out by Cal/EPA, which stated:

"Cal/EPA strongly advocates the use of waterless urinal technology in all buildings, new

and old, whenever feasible and supported by the building's plumbing systems. This innovative green technology reduces unnecessary water consumption and increases sustainability. Unfortunately, the [Cal/EPA] building's core plumbing systems are not compatible with waterless urinal technology."

managers and water professionals may have about no-water urinal systems. The following information addresses some of the prevalent misconceptions about this technology.

Belief: Waterless urinals cause odor problems. As discussed earlier, odor problems often are caused by the pipe connected to no-water urinals rather than the fixtures themselves. In other

cases, the problem is the result of improper maintenance. If custodial workers are not trained on how to properly clean and maintain waterless urinals, odor issues can result.

Belief: One waterless urinal can save 45,000 gal of water per year. While this is possible in some facilities, most experts now believe these systems usually save about 30,000 to 40,000 gal of water annually per fixture.

Belief: Installing no-water urinals is a violation of plumbing codes. In 2001, the Uniform Plumbing Code International and International Plumbing Code (which serve as the basis for most city and state codes in the U.S.) accepted no-water urinals as a viable alternative to traditional models. While some communities may still ban their installation, these areas are now few and far between. Kentucky, Minnesota and Illinois are the only states that have not yet included these changes

in their codes.

Belief: No-water urinals have special installation requirements. In most cases, waterless urinals look like and have similar dimensions to conventional urinals. Because of this, they can cover the same footprint as the old urinals they replace. Furthermore, a no-water urinal

Separating fact from fiction about waterless urinals



Proper maintenance is essential to ensuring that waterless urinals remain odor-free. Here, a staff member demonstrates how to remove a urinal trap.

As to costs, Cal/EPA had selected a no-flow urinal model that requires the use of cylinders/traps that must be replaced every few months. Other models are available that may be less costly.

Just the Facts

These are just a couple of the misunderstandings the public, facility

typically uses the same standard-sized 2-in. drainage connection as a conventional urinal.

Belief: No-flow urinals corrode pipe. With almost a quarter-century of installations, history has shown this is false. The few instances in which there were pipe corrosion problems were

the result of pre-existing pipe conditions. Drain lines are made to receive not only waste, but caustic chemicals. Urine itself is basically pH neutral, so it should not harm pipe.

Belief: Waterless urinals often are targets of vandalism. In schools, bars and restaurants—where

restroom vandalism can be a serious issue—the flush controls of conventional urinals are frequently vandalized or stolen. Because no-flush urinals do not have this hardware, they are less at risk.

Belief: Men do not like using waterless urinals. Interestingly,

when waterless urinals first appeared in the U.S., many manufacturers created signs to post directly over the fixtures, explaining that users should essentially “use it and then walk away.” Men often looked high and low for the flush mechanism. Today, waterless urinals are common enough that this is no longer an issue, and fewer complaints are received about them.

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Each waterless urinal, like this one, installed in a green school can save a facility up to 40,000 gal of water per year.

Belief: Waterless urinal technology is not as healthy as conventional urinals that flush urine away. When a user flushes a conventional, water-using urinal, it can spray contaminants onto nearby surfaces, fixtures, floors, walls and partitions, potentially creating a source of cross-contamination. While no-water urinals do not eliminate this problem entirely (because there is still the potential for some splatter when the urinal is used), they tend to be less messy than conventional systems.

Should You Convert?

Are waterless systems for every facility? The answer is yes and no. As with any technology, building managers should do their homework before selecting no-water urinals. Research the technology and the systems available, visit locations where they are installed and ask for feedback from other building managers before deciding if this is the right technology for your facility. *wqp*

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