



A newsletter devoted (primarily) to new water-efficient products and technologies.

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Myths about water using products....

Over the past 15 years I have heard a number of rumors, claims, and outright proclamations by persons associated with plumbing or water conservation in one way or another. Some were true, some were not. Some were current, others were "old hat" and should have been dismissed long ago. It is very likely that water efficiency professionals will encounter these myths from time to time. I want to take just a few minutes here to set the record straight on a few of them.

Myth: "Sensor-activated lavatory faucets save water over manual faucets."

Reality: Absolutely a myth! (Which may provoke some of you to respond!) The fact is, however, that I have yet to see an independent scientific study that validates the claims of water efficiency with sensor faucets. On the other hand, there are two such studies that demonstrate that manual faucets are more efficient than sensor-activated faucets! One of these shows a 58 percent increase in water use when a manual faucet was replaced with a sensor faucet. Both of these studies are downloadable from the Council's website at http://www.cuwcc.org/faucets_showerheads.lasso. A third study in California, recently completed by East Bay MUD but not yet published, will shed even more light on this topic. This third study report will be posted on our website when it becomes available. Finally, a fourth study of these types of faucet installations is underway in Florida; study results will also be posted when that work is completed.

Interestingly, about three years ago, a manufacturer of sensor-activated faucets made a presentation to over 100 members of the Council at a plenary session in Southern California. In the course of his technical talk, he made the claim that sensor faucets "save 70 percent over manual faucets." When questioned as to how he developed that number, he sheepishly admitted that he was only parroting what another competing manufacturer was stating! He had no information whatsoever to substantiate his claim and, needless to say, the gathered members were dismayed that this manufacturer was asserting such savings claims to architects, engineers, green builders, and others.

Myth: "The maximum flow rate for faucets in non-residential applications is the EPA rate of 2.2 gallons per minute."

Reality: Unfortunately, this is one myth that has taken hold and gotten serious traction among design engineers, specifiers, plumbing contractors, and building owners. BUT, it is entirely false! The result has been and continues to be the illegal installation of non-compliant faucets in nearly every new commercial project.

The Energy Policy Act of 1992 and subsequent rulings by the U.S. Department of Energy (DOE) set the maximum lavatory faucet flow rate at 2.2-gallons per minute when measured at 60 pounds per square inch of flowing water pressure. However, the governing standard and test procedure (as established by the DOE) for faucets was and continues to be the ANSI national standard, ASME A112.18.1. In the early 1990s, this standard was changed to reflect a lower maximum flow rate of 0.5-gallons per minute for all "public" applications. All of the major plumbing codes have adopted ASME A112.18.1 by reference. "Public" applications are defined in those implementing codes as all applications that are NOT defined as "private". The codes (Uniform Plumbing Code, International Plumbing Code, and the National Standard Plumbing Code) each define "private" as inclusive only of fixtures in residences, hotel/motel guest rooms, and private rooms in hospitals. All other applications are deemed as within the "public" category and subject to a 0.5-gallons per

minute maximum for lavatory faucets. This includes such applications as single-tenant and multi-tenant office buildings, schools, gymnasiums, manufacturing facilities, public buildings (including those where the general public is denied access), bars, restaurants, retail stores, and any other type of building that does not fall within the "private" definition.

So, because some individuals have chosen to ignore the prevailing national standard and implementing codes, it is very possible that the next time you visit your favorite store or office, you are likely to encounter a water-wasting, non-compliant faucet in the building's restrooms, even if that building is promoting itself as "green" and carries a LEED rating.

Myth: *"Tankless water heaters are water-efficient and use less water than a storage tank water heater in the typical home".*

Reality: Here is an example of overly-exuberant advertising, marketing, and sales folks clearly exaggerating the benefits of their product and claiming savings that do not exist. Not only is there increased water waste with the operation of these systems, but evidence shows that people are taking longer showers when a tankless heater is providing hot water. Those showers are negating potential water savings that might be achieved from other water-efficient practices and products in the home. Now, some would of course say that longer showers are an obvious *wellness benefit* for the homeowner who desires a "spa-like" experience or needs the shower to unwind after a long day. Definitely a pleasure to some! But, be honest....don't claim any water savings benefits where none is proven to exist!

Now, don't get me wrong. With respect to new designs and technology development, we all should have great respect for the manufacturers of plumbing systems, appliances, and related products. They are earnestly seeking out ways to reduce unnecessary water use through technology, engineering, and design creativity. But, occasionally, their claims seem too good to be true.

So....the moral of these stories is: Don't believe all that you hear or read. Whatever the product or assertion, be a skeptic, check it out, ask questions, and look for a scientific basis behind the efficiency claims and statements!

Next time: more "myths" dispelled!

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