

## Waterless Urinals Fact and Fiction November 2008

This technical bulletin is designed to answer questions and provide guidance regarding the viability of various types of waterless and low flow urinals currently on the market.

In the summer of 2006, Naval Station Norfolk Public Works Officer (PWO) Cdr. Chuck Smith Ret. requested a study of waterless urinals to determine if these products should be mandated on future NavFac construction projects. Waterless urinals qualify for LEED points and can help meet US Green Building certification criteria. Three different manufacturers were invited to install their products at no cost to the Navy for an extended evaluation. These are the results of that two year study.

### Background

Waterless Urinals are marketed as a complete replacement for standard, one gallon flush urinals. Marketing materials predict how much water will be saved if you use a particular manufacturer's product. There are however; a few caveats that accompany waterless urinals that make them less-than-desirable for most applications and should be included for long range planning and life cycle cost analysis (LCCA).

Issues experienced at Naval Station Norfolk associated with waterless urinals are:

- Educating janitorial staff on what products to use for cleaning
- Odor or perceived odor related to decreased cleanliness
- Splashing of urine on men's trousers during use
- Reduced flow in waste water piping leading to deterioration of piping
- Cartridge changing costs
  - Material expenses and stocking
  - Labor expenses and when to replace
  - Who does the change out? FMS or janitorial?
  - Cartridge disposal. HazMat or not?

### Recommendations

Three different manufacturer's products were initially installed. [Falcon/Sloan](#) (Falcon manufactures for all Sloan waterless products) [Zurn](#) and [Waterless](#). (This is an actual brand name)



Of the waterless products, it is our opinion that the [Falcon/Sloan](#) unit is the one we would recommend when waterless products are appropriate.

All waterless units in the NAVSTA test building, Z-140, have been removed or are scheduled to be removed over the next year.



They are being replaced with Zurn Low Flow, 1/8 gallon flush models with a battery powered flush sensor. This is the unit we recommend for all new construction and retrofits. These low flow units provide 85% of the water savings associated with waterless units without the cartridge changing costs. The downside of the Zurn low flow product is that they are expensive. Current costs are over \$500.00 per unit. It is expected that the unit cost will decline as economies of scale begin with manufacturing and also as other companies enter the low flow market and provide competition.

Sloan has a similar 1/8 gallon flush product on the market. Although their model was not available when this test was started, it is expected to perform in a similar manner to the Zurn.

Both low flow models also qualify for USGB LEED points.

Very Respectfully,

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