

BRIEFING 13

FLUSHMATE®

A DIVISION OF SLOAN VALVE COMPANY

New generation of 1.0-gpf *FLUSHMATE®*-equipped toilets take water savings to the extreme



Russ Horner, one of the founders of Water Management, Inc. (WMI), was happy with the extreme savings of his latest project involving HET (High Efficient Toilets): a 44% reduction in water usage!

“This Aspen Hill apartment project is part of a larger property – 200+ units that we have had under contract since November of 1994,” he explains. “The new 1.0-gpf *FLUSHMATE®*-equipped toilets we installed reduced usage by 44% – **25% MORE than I expected!**”

Mr. Horner is someone who cannot afford surprises – unless they are this kind – because he and WMI make their living on how much water is saved at a property. Aspen Hill is a project that utilized WMI’s business model – installing products that perform well, reduce maintenance costs, and sustain long-term water savings. “We fix or replace all water fixtures that are wasting water for free, no strings attached, because we share in a percentage of the water savings as payment for our services. We have to know the anticipated savings. That’s what made this Aspen Hill project such a good surprise.”

WMI installed the *FLUSHMATE IV* 1.0-gpf system, the next generation of high-efficiency toilets from Sloan *FLUSHMATE*. Mr. Horner points out the following about this project to illustrate his point regarding water savings:

Building - Number of toilets	ADC* per Unit		% Savings
	Before	After	
Aspen Hill, Building 4 37 units/44 Toilets	220	123	44%
Meridian 50 Toilets	338	137	59%
Deauville 103 Toilets	384	86	77%
Park Southern 360 Toilets	350	135	61%

* ADC: Average Daily Consumption per Unit (in gallons)

Out of the four projects noted above, Aspen Hill’s results impressed Mr. Horner the most because the other projects had, “all sorts of things leaking and a good deal of the savings resulted from fixing leaks in old toilets, faucets and tubs. Savings were also realized by showerhead and aerator change-outs and by fixing some faulty mechanical equipment.” In other words, Aspen Hill’s savings were directly correlated to the installation of *FLUSHMATE IV* 1.0-gpf toilets.

Prior to installing *FLUSHMATE*-equipped toilets, WMI was sending technicians to Aspen Hill property every week for minor repairs. Each year, WMI conducted a sweep through the units, making necessary repairs to keep leaks from occurring. Essentially, this high-occupancy property of 200+ units was studied by WMI to determine the expected savings after the installation of low flow toilets.

“Our original analysis indicated that we should reduce usage to 165 ADC per unit, but with the *FLUSHMATE IV* 1.0-gpf toilets, we achieved even better savings. We’ve been in business for 25 years,” continues Mr. Horner, “that’s a long time. We’ve gotten pretty good at this, but even that kind of performance surprised us.”

“The biggest culprit of wasting water in the home is the toilet,” he points out, “which is why we are confident that pressure-assist *FLUSHMATE*-equipped toilets will get our customers the savings they want, and the savings we need to excel in business. Our projects have proven that we can achieve significantly more savings with *FLUSHMATE*-equipped toilets than with gravity or any other toilet technology.”

FLUSHMATE pressure-assist toilets rely on water supply pressure instead of gravity to clear the bowl. Utilizing a powerful flushing action cleans the bowl and eliminates double flushing and clogging – two of the three primary factors of wasting water when it comes to toilets.

“In fact, it is easy to sustain the savings when you use a *FLUSHMATE*-equipped toilet,” Mr. Horner points out. “You don’t have to go to a property every two years to change the flapper, worry about the ballcock, or that the float valve is leaking. With *FLUSHMATE*, we can avoid going back on service calls, and the water bill goes down, and it stays down.”

Mr. Horner says that WMI continually trains their personnel in leading water-conservation techniques so their clients like Aspen Hill can be assured of world-class service in the areas of water demand management and conservation. Pressure-assist toilets with *FLUSHMATE* inside are one of the conservation techniques they utilize.

“The key is to understand what your payback on the investment will really be,” Mr. Horner explains, “There was one Public Housing project where we conducted a little experiment. We put in 1.6-gpf gravity toilets, repaired the leaks, and installed low-flow showerheads and

then monitored the water usage. We took a section or two and pulled out the gravity toilets (which were not leaking) and replaced them with 1.6-gpf pressure-assist toilets. The results: **The consumption went down another 20%!**"

Mr. Horner says that these kinds of results are not possible with gravity toilets, which are easy to get out of calibration. "Since there is no such thing as a universal flapper, as soon as you change the flapper, you start wasting water," he says, citing a study performed by The Metropolitan Water District of Southern California, where their rebate program was not working very well. "Savings were compromised because flappers started leaking and ballcocks went bad and when NEW parts were installed the toilets used more water. Toilets were leaking instead of conserving. That completely nullified the objective of the rebate program."

Mr. Horner explains, "Look at it this way: when a light fixture breaks, it stops using the electricity immediately – it does so in the closed or 'off' position, meaning it no longer lights up the room. If it does not get fixed, it does not hurt the bottom line because it is 'off.' Gravity toilets, on the other hand, are different. If it 'breaks,' then you are leaking water in your toilet until it is fixed. A broken component like a flapper or fill valve will reflect on your water bill and you pay for the flapper through your utilities until you physically fix or replace it. The toilet in this case is in the 'open' position all the time – even when it fails it is using the water."

According to Mr. Horner, WMI acts like "the owner" on their projects, and pays for the water-conservation fixtures upfront. "We only receive compensation if we save the owner money," he says. "So we HAVE to know what works and what does not – we leave nothing to chance. We have to be sure of the savings and that is why the *FLUSHMATE IV* 1.0-gpf toilets are a product that we use. We trust the results."

Gravity or Pressure

Unlike gravity toilets, which have numerous choices of components like flappers that result in variable volumes of water being used, a *FLUSHMATE* system is designed to flush a "fixed volume" of water, which is right in line with what Mr. Horner needs to assure savings.

"You can't mess with it," Mr. Horner says, "which is the third water-conservation factor, following the elimination of double flushing and clogging. With a pressure-assist toilet, every flush is the same volume. It uses the same amount of water each and every time. That assures us of our return on investment and it makes our client happy."

Mr. Horner points out that WMI pays for all of the equipment themselves in return for their share of the energy and water savings as compensation. "WMI does not install the least costly product either," he emphasizes. "We actually pay MORE in some cases, like pressure-assist toilets. This is done because over the long term, we are going to save a lot more water, and money with them."

Performance Contracting

"Shared Savings" is a subset of Performance Contracting, according to Mr. Horner. "Operating budgets are strapped these days. There simply is not enough money to do what is required. Our programs are ideal for such budget stress because we take on the burden of performance – and results. We only get paid for what we save."

Experience and proven results are the hallmarks of Water Management, Inc. "Our company likes to measure and verify the savings on every project," Mr. Horner says. "As a consequence, we have learned from experience which products perform best in a specific situation, and produce the best combination of performance, price, and long-term sustainable water savings. *FLUSHMATE*-equipped pressure-assist toilets are one of those products."

Aspen Hill Apartments – 37 Units – Water Consumption Data

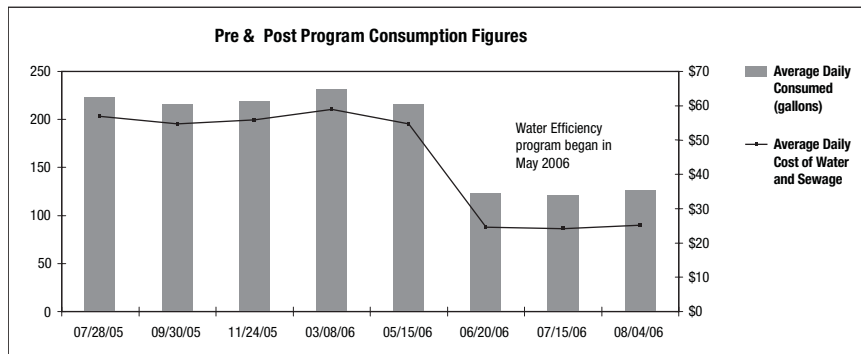
Date	Days	Cons (in Kgal)	ADC	Cost	Avg. Daily Cost
07/28/05	33	272	223	\$1,876	\$57
09/30/05	64	509	215	\$3,508	\$55
11/24/05	55	446	219	\$3,071	\$56
03/08/06	104	889	231	\$6,124	\$59
05/15/06	68	541	215	\$3,727	\$55

Toilet Changeout Occurs

06/20/06	36	164	123	\$885	\$25
07/15/06	25	112	121	\$604	\$24
08/04/06	20	93	126	\$503	\$25

The ADC, or Average Daily Consumption, in gallons per unit per day, is the unit of measurement for this analysis

Water Management, Inc. is well established in the field of water efficiency and conservation. The company has developed a successful track record since its founding in 1980. WMI has offices in Alexandria, VA (Headquarters), Nashville, TN, and San Diego, CA, and has conserved hundreds of millions of gallons of water for their clients. Mr. Horner can be reached at (703) 370-9070. www.watermgt.com



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