

From: Bill Gauley <bill@veritec.ca>

To: 'ebridy' <ebridy@aol.com>

Cc: mattv <mattv@nccgreen.com>

Subject: RE: Apartment Water Management Company, L.L.C. / Dual- Flush Toilet Reports

Date: Mon, Sep 26, 2011 3:41 pm

Attachments: Plumbing_Magazine_article.pdf (1187K)

Hi Ed – the one dual-flush retrofit kit study that was completed used the MJSI device. I was involved in the data analysis and I helped design the data collection process. Unfortunately, because of the way the buildings were plumbed it was not possible to collect the data in the best way – many of the readings were done manually. The study concluded that the dual-flush retrofit-kit saved 30% of the water demands. You can find the study listed at:

http://www.gomjsi.com/water_conservation/studies

Someone reading the results posted on the MJSI website would naturally assume that they would expect similar savings in their home. What is not mentioned in the MJSI results is that some of the participating homes in the study also received (in addition to the dual-flush kit) a MJSI HydroRight fill valve, and/or a new showerhead, and/or new faucet aerators. So, while the homes that received only the dual-flush kit did achieve savings of almost 30%, the homes receiving all of the efficiency devices saved substantially less. For obvious reasons I can't go into specific details about the program but I can tell you that while it is certainly possible to save some water by installing dual-flush replacement kits in SOME toilet models, there is no guarantee that you will achieve savings and there is some possibility that you will negatively affect the toilet's flushing performance or possibly even INCREASE the average flush volume of the fixture.

The MJSI website (and many other dual-flush promoting websites) claim that users will use the reduced flush option about 4 of every 5 flushes. As far as I know, there are no independent studies that verify this ratio. Some actual field studies have identified a ratio of 1:1, meaning that the actual savings (even from a brand new toilet designed to operate as a dual-flush option) would save far less water than advertised. See the attached article.

What's more, even the U.S. EPA WaterSense program only gives credit for a 2:1 ratio, meaning that a 1.6 gallon / 1.1 gallon dual-flush toilet would actually have an average flush volume of 1.27 gallons – or almost exactly the same as a single-flush HET at 1.28 gallons. While our testing in our lab has identified that you can achieve some level of savings in some toilet models, you certainly can't be assured of achieving average flush volumes as low as those of toilets that were factory designed to operate as dual-flush fixtures.

I personally do not like to rely on the end user to make the right choice for me to get my expected savings. My advice – put in the lowest flush volume single-flush toilet and maximize your savings and minimize your headache.

Let me know if you have any questions.

BTW – if you go to www.map-testing.com website and look under Reports you will see a report on the savings and customer satisfaction achieved in a project that installed the new 0.8 gpf stealth model.

Bill

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From: ebridy [<mailto:ebridy@aol.com>]

Sent: Monday, September 26, 2011 3:03 PM

To: bill@veritec.ca

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Subject: Apartment Water Management Company, L.L.C. / Dual- Flush Toilet Reports

Bill; Thank you so much for your help in our conversation of minutes ago. If you could send me any/all reports concerning Dual-Flush and other similar Conversion Devices I would be very grateful. Again, Thank you for your time. Ed Bridy (Cell) 954 200-2351.