## **Toilets becoming more water- friendly**

By DINESH RAMDE

## KOHLER, Wis.

For clients of Scott Kelly's architecture firm, seeing -- and going -- are believing.

His Philadelphia company urges its customers to install high-efficiency toilets, which use 20 percent less water than the previous generation of low-flow toilets. So the firm installed one such toilet in its own restroom, and customers who try it out are impressed.

"Literally after one use, they love it: the seat, the look, the fact that it saves water," said Kelly, of Re:Vision Architecture. "Sometimes it's like a hybrid car -- you have to drive one first to appreciate it."

With droughts parching the nation's Southeast and chronic water shortages drying out the West Coast, water utilities across the country say they're grateful for recent advances in the toilet industry, and a number of state governments are moving toward mandating the use of the water-saving commodes.

Among the manufacturers leading the way are TOTO USA, a Japanese company with U.S. headquarters in Morrow, Ga., and Kohler Co., based in southeast Wisconsin.

Toilets built 30 years ago guzzled 5 or more gallons of water per flush, but in the early 1980s manufacturers designed new models that needed only 3 1/2 gallons per flush. Congress emphasized further conservation in 1992 when it passed the Energy Policy Act, which mandated that regular toilets made starting in 1994 use 1.6 gallons.

Consumers weren't pleased with those early low-flow models. The first flush didn't always clear the bowl, and subsequent flushes negated any water savings.

But the newest generation of high-efficiency toilets -- developed in the last two to seven years -- does the job on the first try and uses only 1.3 gallons per flush, according to the U.S. Environmental Protection Agency.

"The technology is ready, it's been tested, and it's receiving rave reviews from customers," EPA spokesman Benjamin Grumbles said. "There's real enthusiasm for high-efficiency toilets. Water conservation is really the wave of the future."

The future is now in thirsty California. Last month Gov. Arnold Schwarzenegger signed a bill mandating that 50 percent of toilets offered for sale in 2010 meet the high-efficiency standards, ramping up to 100 percent by 2014.

Conservation groups hailed the law as an easy way for people to help the environment.

"With these new toilets, it's not changing anyone's lifestyle to conserve water," said Jim Metropulos, a legislative representative for Sierra Club California. "It's an easy and cheap way to help."

Other states, including Georgia, are considering similar measures.

The EPA isn't specifically pushing for federal legislation, but Grumbles said his agency is providing Congress information linking water efficiency and energy efficiency. Less water flushed means less energy used by treatment plants.

Kohler officials won't go into details on the sales for the private company, but engineer Rob Zimmerman said early sales of high-efficiency toilets were higher in areas that are typically dry, such as California, Arizona, Texas and Florida. Now residents across the country are starting to take notice.

"We don't see anything but upside on this," he said. "I think as people get more comfortable that these products perform as well, they'll put them in and not even think about the water savings."

One high-efficiency model that's gaining in popularity is the dual-flush toilet, in which users press one button to flush liquid waste with 0.8 or 0.9 gallon of water, or an adjacent button to flush solid waste with 1.6 gallons.

The flushes amount to an average of about 1.3 gallons, complying with the EPA's definition of a high-efficiency toilet.

While a water-friendly toilet can be several times more expensive than a standard one, which typically costs less than \$100, consumers can expect to recoup the cost within about two years after water savings and possible rebates from the local water company.

The industry trendsetter, according to one self-styled "toilet expert," is TOTO USA. On his independent Web site that ranks the major toilet manufacturers, 30-year plumber Terry Love gives TOTO USA high marks for its artistic designs and reliable technology.

"These things are like a hammer -- they work every time," said Love, of Bothell, Wash. "You put one of these in and it looks like you remodeled the whole bathroom."

One of TOTO USA's most popular water-saving products is its dual-flush Aquia, which sells for about \$400 and was introduced in 2005. That's the model that Kelly, the Philadelphia architect, installed at his firm.

TOTO USA spokeswoman Lenora Campos said the Aquia is growing in popularity, especially among people who want to conserve water.

"I think as a nation we're becoming more and more aware of the importance of water and how it's a finite resource," Campos said. "We think it falls from the sky so it's limitless, but it's becoming increasingly limited."

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