

Dear Jim: Our water bills are pretty high. We still have two old water-guzzling toilets which we like and they flush well. What can we do to them to save water instead of purchasing new efficient toilets? - Claudia H.

This shows a dual-flush kit installed in a clear toilet tank. Notice the instructions on the handle indicating which way to move the handle for more or less water. - Athena Controllable Flush These are the actual components of the dual-flush kit shown in c469-1. It can easily be installed in 10 or 15 minutes without special tools. - Photo credit - James Dulley The amount of water used per flush with this water-saving flapper valve can be adjusted by moving the float up or down on the chain. - Photo credit - Lavelle Industries

The water volume with this water-saving flapper valve is adjusted by rotating the cap to select different size holes. - Photo credit - James Dulley This flexible toilet dam seals off a portion of the tank from the drain so less water is used each flush. It can be repositioned to change the amount of water used. - Photo credit - James Dulley

This two-piece water dam is easy to install around the tank drain to uses less water per flush. - Photo credit - James Dulley This is an entirely new flush valve assembly with a water-saving flapper attached. - Photo credit - Lavelle Industries

Dear Claudia: Toilets are one of the major water consumers in most homes and they do contribute significantly to your high water bills. Installing new 1.6 gpf (gallon per flush) toilets is your most efficient option, but you can make some low-cost improvements to your old toilets. It helps to understand how a toilet works. The majority of the water from the tank flows down inside toilet base to create a suction which draws the wastes from the toilet bowl. Only a small amount goes into the bowl to clean the sides and fill the bottom. Add-on dual-flush kits are very effective. These provide two different water volumes per flush. It requires less water to clear the bowl for liquid wastes than for solid wastes. You push the flush handle down for a low-volume flush or up for higher volume. The kits are inexpensive and can be installed in a few minutes. They work by varying how high the flapper valve at the tank bottom is lifted. If it is lifted just a little, it flops back down and stops the water flow before the tank is totally emptied. For more water, the flapper is lifted higher. A rapid-closing flapper valve is another simple-to-install device. Remove the old flapper and slide the new one over the overflow tube in the tank. These flappers are designed such that the air inside one, which holds it opened when the toilet is flushed, comes out quicker so it closes sooner. Adjustable rapid-closing flappers are installed the same way, but they provide the option to vary the water volume per flush. Each toilet design is unique and some may require more water volume than others. One flapper design has various size holes in the end. A rotating cap over the holes allows only one hole to be uncovered at a time. Selecting a larger hole lets the flapper closes quicker. If this does not provide an adequate flush, rotate the cap to select a smaller hole. Another adjustable flapper design uses a float on the chain from the flapper to the flush handle. By raising or lowering the float, you can control at what tank water level the flapper closes and stops the flush. The old standby is the toilet dam, bag or a brick in the tank. These effectively reduce the water volume of the tank. There are many designs, but the plastic bag kits are the easiest to use and are adjustable. Adding an adjustable diverter can direct more water to the tank so it fills faster. The following companies offer water-saving toilet improvements: American Water & Energy, (800) 950-9058, www.americanwater.com; Athena Controllable Flush Co., (888) 426-7383, www.athenacfc.com; Lavelle Industries, (800) 528-3553, www.korky.com; Niagara Conservation, (800) 831-8383, www.niagaraconservation.com; and Rectorseal, (800) 231-3345, www.rectorseal.com. Dear Jim: I was wondering if it really saves much electricity to take clothes out of an electric dryer while they are still damp. I would think most of the energy is used while they are still really wet? - Amanda V. Dear Amanda: It does save much electricity to take the clothes out early and let them air dry on hangers. When on, the heating elements in a dryer use electricity at the same rate whether the clothes are wet or just damp. If you run the dryer for half as long, it uses about half as much electricity. Run it just long enough to get the wrinkles to relax. During the winter, letting clothes air dry introduces needed moisture to the room air. Send inquiries to James Dulley, Bend Weekly, 6906 Royalgreen Dr., Cincinnati, OH 45244 or visit www.dulley.com