Understanding Your Water Meter

For a Larger View of Meter See Other Side

Key to Home Water Conservation

Reading your own water meter will allow you to check your water bill, detect leaks and learn which of your water use appliances and fixtures use excessive water. With this information, you can best know where you are using water.

HOW TO READ YOUR METER

The meter is located in the ground, usually at the front of the property, inside a rectangular box with a metal, plastic or concrete lid. Lift up the heavy lid. A lift-up cap may cover the dial. Clean the dial with window cleaner, if it is difficult to read. Most meters in our area are of the type illustrated here. If you have the older type with multiple dials, call your utility to request a replacement.

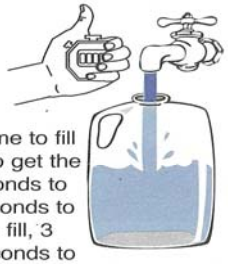
First look for a small red triangle at the center of the meter. If this triangle is moving (or if there is no triangle but the sweep hand is moving), water is being used in the house. Turn off all water-using appliances (faucets, ice maker, dishwasher, washing machine, etc.). If the red triangle at the center of the dial is still moving, you have a leak. Assuming for the moment no leak and that you just want to learn how much each appliance or fixture uses, read the meter as follows:

Your water meter reads like a car's odometer, but with a permanent zero in the gallon place. Single gallons are counted by the red sweep hand. A complete revolution of this hand is 10 gallons and causes the register to move.

In the illustration, the red sweep hand is on 3.5, so plug this figure into the gallons place to read 968723.5 gallons.

DETERMINING HOW MUCH WATER EACH APPLIANCE OR FIXTURE USES

Make sure all water use is temporarily stopped. Read the meter (as above 968723.5). Then flush the toilet and take another reading. If it reads 968727.0, your toilet uses 3.5 gallons per flush. You can check every fixture and appliance, such as your dishwasher or clothes washing machine, for amount of water used per "water-using event." Any kids in the house may enjoy being part of this research or doing the whole thing as a science project.



For faucets and showerheads, calculate flow rate as follows: Take a plastic gallon milk or water jug and cut the top off, so it fits over your shower head. Place this container over the the showerhead, turn the shower on as normal, and record the time to fill the jug. Divide the seconds it took into 60 to get the gallons per minute (gpm). If it takes 10 seconds to fill the jug, your flow rate is 6 gpm; if 15 seconds to fill, your flow rate is 4 gpm; if 20 seconds to fill, 3 gpm; if 24 seconds to fill, 2.5 gpm; if 30 seconds to fill, 2 gpm. Low-flow shower heads use only 2.5 gpm.

Using this technique, measure the flow rate of your sink faucets, garden hose or other devices.

Leaks Waste Water

Does the red triangle on your meter turn when all water-using appliances are off? If so, you have a leak. The most obvious leaks are dripping faucets and running toilets. Malfunctioning water softeners, automatically filling swimming pools, hot water heaters and faulty irrigation valves are other areas where you might have a leak. If no obvious locations have leaks, and the red triangle is still moving, you may have an underground leak, foundation leak, or leak behind a wall and should call a plumber.

FAUCETS Check faucets, including seldom-used faucets in storage rooms, and shower heads periodically for leaks. Faucet and shower head leaks are usually caused by worn washers or "Y" rings (for washerless faucets). Just turn off the water supply line to the faucet, replace the washer and turn on the line again. Most people can repair faucet leaks, with a do-it-yourself book as support, or you can hire a plumber.

Check outside faucets for leaking water, particularly during the spring watering season. In particular, a hose with an automatic shutoff nozzle can be mistakenly left on. A hose mistakenly left dribbling away in the grass or garden can waste thousands of gallons of water.

TOILETS Many toilet leaks are obvious because the toilet "runs," makes noise or you can see movement in the toilet bowl between flushes. Silent toilet leaks also occur. To test for a silent leak, drop a little food coloring into the tank, and without flushing, wait about 10 minutes. Food coloring willmove from the tank into the bowl if you have a leak.

The rubber flush valve or "flapper" decomposes over time. If black residue comes off when you touch the flapper or it looks warped or disfigured, it is time to replace it. Easy-to-install replacement kits are available at most home supply stores. To pick the right type of flapper, be sure you know how many gallons your old toilet uses or bring the old flapper with you.

CORRECT YOUR HOME WATER USE SURVEY

After you have used your meter and the flow-rate measurement method to survey the water use of all your fixtures and appliances, make corrections to the Home Water Use Survey and add up your total household water use again. The saying "you can't know where you're going unless you know where you've been" applies to conserving water in your home.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