



Before you can figure out how to SAVE it, you have to know how much you're using!

By: Kathy Turner Jones

WATER...no living thing can survive without it. There's nothing on earth we take more for granted. But the days of cheap and plentiful water are history, and now, perhaps for the first time, an increasing number of people are interested in ways to curb their consumption and save money on their water bills.

According to a report published in 2008, the average cost of water in the U.S. was \$2.81 per thousand gallons. (This number is for water only, does not include sewer services, and may be higher or lower than local rates.) Applying the U. S. Environmental Protection Agency's estimate that each of us uses 100 gallons per day, that means that a family of four spends only a little over \$1.10 per day on water -- and that's a whole lot less than a large soft drink at the drive in. Here's a number that might amaze you -- the average person unknowingly wastes up to 30 gallons of water every day!

For water and sewer bills, EPA statistics suggest that the average American household spends about \$500 each year. The average Texas family spends roughly the same...although there have been dramatic increases in costs in areas converting to surface water and those impacted by drought in recent years. Unfortunately, most people don't realize that something as unremarkable as a leaky faucet -- dripping at the rate of about a drop per second -- can waste a staggering 2,700 gallons a year! If more folks recognized how important it is to use water more efficiently -- and took just a few simple steps to avoid wasting this precious natural resources -- they could save hundreds of dollars a year on their water bills.

Let's start with the basics...

The Water Meter measures the amount of water used in your home, and this 'reading' is used to determine the amount you are billed by your water supplier. In most cases, homeowners do not find it necessary to check their water meters; in fact, some don't even have a clue where they are located. Should you receive a water bill that shows a significantly higher or unusual usage, however, you may want to read the meter for yourself to help verify the bill, to monitor your water use, or to check for a suspected leak.

Meters are located outside the house in a rectangular concrete box, flush with the ground, under a metal lid, usually near the front curb or driveway. (Watch for bugs and critters when opening the lid...this is Texas!) The meter's dial records the number of gallons that pass through it in much the same way a car's odometer records the miles driven. If there is water being used by the customer -- inside or outside the house -- the dial is moving.

There are several 'brands' of meters, but essentially they all do the same thing. When the water provider reads your meter, only the white dials with the black letters are read to measure the number of 'units' that have been used. One unit equals 1000 gallons.

The triangle is a leak detector. This red indicator will rotate if water is passing through the meter. If no one is using water, but the triangle is turning, you may have an undiscovered leak somewhere in the plumbing system. Think you might have a leak? Here's how to check...

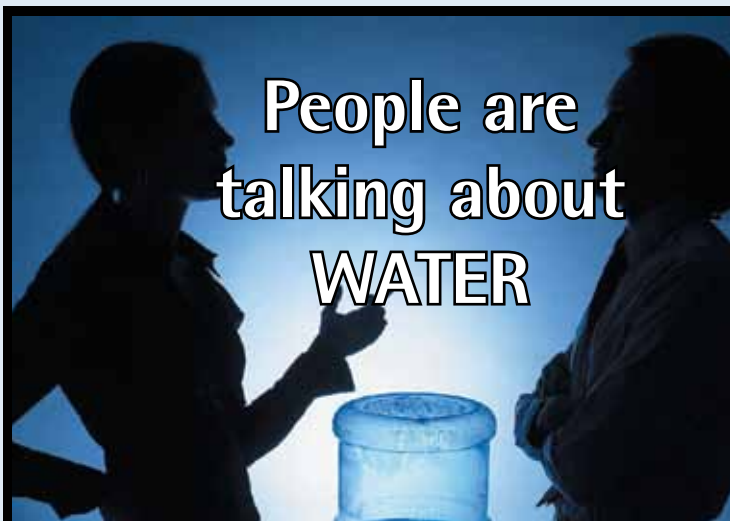
- Check the meter and write down the meter reading, note the position of the triangle, and record the time...down to the minute.
- Don't use any water...anywhere inside or outside. Make sure that all water-using devices such as ice makers are turned off, as well. If you can, do the test when the house will be unoccupied for a couple of hours.
- Read the meter again when you return, noting the same items...the triangle's position



and the time. (The elapsed time will allow you to calculate how much water leaked per minute... formula to do this in the box at right.) Watch the meter for a minute or more to see if you can detect any forward movement. If it's moving, you have a leak. Now the task is to find it...and fix it...quickly.

■ Go through the house and check all the faucets and toilets first. Listen for the tell-tale sound of water 'running' in bathrooms. Toilet leaks do not always "run" however...sometimes the silent leaks can waste a huge amount of water before they are located. Toilet leaks can range from small to large...and be constant or random. Even a small, silent leak can waste \$50 per year in water and sewer costs if left unrepaired.

Fortunately, most toilet leaks are relatively easy to repair. Unless the toilet is being flushed, there should be no water movement from the tank to the bowl. A leaking toilet loses water from the tank to the bowl without being flushed. A quick and easy test will help you discover the problem.



“Water conservation is an art and a science, one that is practiced by different people with different levels of commitment. In many water systems, just ten percent of all water customers account for 30-40 percent of water demands. Those top water users are a top priority for targeting future water savings...For a conservation program to be effective, three types of incentives must be at work: educational incentives to inform, motivate and inspire; financial incentives to send the right pricing signal about the value of local water; and regulatory and policy incentives to set reasonable limits on water waste that apply equally to all customers. The distinction also has to be made between a drought response -- which is temporary -- and a water conservation program -- which is a comprehensive, multi-year program designed to result in permanent or long-term water savings.” Amy Vickers, Author of the “Handbook of Water Use and Conservation.”

“Improving water efficiency is one of the most effective ways that communities can manage their [water] supplies. With less water moving through the system, utility operating costs will decrease. They will avoid costs for treatment chemicals, residuals disposal, and energy associated with water collection, treatment, and disposal. In addition, water efficien-

1. Remove the tank lid...no worries, the water in the tank is clean.

2. Add some food coloring or a dye tablet to turn the tank water a different color. Put the lid back.

3. After a full 30 minutes, look in the bowl. If you see colored water, there's a leak. In most cases, you'll want to replace the toilet 'flapper' and/or the filling mechanism -- both are relatively easy to do. The parts are available at hardware and home improvement centers for under \$10 each. Be sure to note the make and model of the toilet...and purchase the correct replacement parts...especially if it is a low-flow toilet.

If you have any questions, the trained personnel at the store are usually happy to help. And, if you happen to be a hard core do-it-yourselfer, visit www.toiletology.com for some instructions.

If the water is clear, that toilet isn't the culprit...keep looking. Check all the faucets and showerheads...they're not hard to fix, either.

■ After reading the meter when you return, subtract the end reading from the beginning reading. This is the number of gallons that passed through the meter during the test period.

■ Next, divide the amount of water by the number of minutes elapsed during the test. For example, if 17 gallons leaked out during a 180 minute period, you have a leak of 0.094 gallons per minute.

■ Multiply the gallons per minute by 1,440 to calculate gallons per day. Multiply gallons per minute by 43,920 to calculate gallons per month. **In this example, just 0.094 gallons per minute equates to over 4,128 gallons each month, that's money down the drain!** ♦

cy can help utilities better manage capacity expansion because necessary expansions can be delayed or reduced in size. EPA is working to foster a national ethic of water efficiency, so that water is valued as a limited resource that should be used wisely." Benjamin H. Grumbles, Former Assistant Administrator for Water, U. S. Environmental Protection Agency.

◆ "Water conservation is not simply an emergency measure but rather a necessary way of life for all Texans," explains a workbook produced by the Edwards Aquifer Authority. "If water is as important as money -- it is, after all, the essence of life -- why don't we save water all year long?"

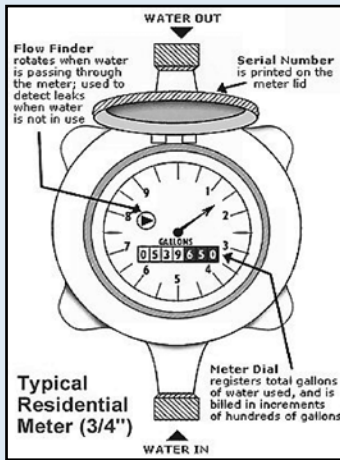
◆ "Here's a snapshot of the problem facing Montgomery County: Virtually all of our current water supply is provided by groundwater. In 2009, the permitted demand in the county was 87,000 acre feet per year, exceeding the sustainable recharge rate by 50%. By 2040 the total water demand is expected to be 154,000 acre feet. What this means is that in 2040, we will be exceeding the sustainable recharge rate of the aquifer by almost 90,000 acre-feet per year!"

— Kathy Turner Jones, General Manager, Lone Star Groundwater Conservation District.

◆ Conserving water is not hard to do, according to the San Antonio Water System (SAWS). In fact, anyone can follow the SAWS irrigation advice: Year-round, landscape watering is not allowed after 10 a.m. and before 8 p.m. every day, except with a hand-held hose or five-gallon bucket; charity car washes are permitted only at certified commercial car wash facilities; and water waste is prohibited at all times.

"In twenty years, the SAWS customer base has doubled, but the [groundwater] pumping has remained the same. Since 1980, the system has achieved a 38.6 percent reduction in per capita consumption through an aggressive water recycling program, indoor and outdoor conservation, and sustained community involvement. These savings have allowed SAWS to defer purchasing alternative [water] supplies which would have cost up to \$2.7 billion, and avoided another \$1.1 billion in additional [water] treatment capacity costs."

— Karen Guz, SAWS' Water Conservation Director.



The advertisement features a yellow spotlight effect on a black background. At the top, two spotlights shine down. The text reads: 'the Chamber SOUTH MONTGOMERY COUNTY WOODLANDS CHAMBER OF COMMERCE presents the woodlands IDOL sponsored by HODGES COLLISION CENTER CAR REPAIR BY PEOPLE WHO CARE and OUTBACK WESTERN WEAR'. Below this, it says: 'Join us for the 4th Annual The Woodlands Idol competition in search of the area's best talent!'. A black box contains the following schedule: 'PRELIMINARY COMPETITIONS: FRIDAY, NOVEMBER 5 7 PM BUFFALO WILD WINGS; FRIDAY, DECEMBER 3 7 PM PAPA'S ICE HOUSE; FRIDAY, JANUARY 7 7 PM DOSEY DOE; SEMI-FINALS: FRIDAY, JANUARY 21 7 PM PAPA'S ICE HOUSE'. Below the box, it says: '\$2 Cover Charge for all Preliminary Rounds & Semi-Finals' with a 'Taste of the Town' logo. The text continues: 'The top 9 winners and a people's choice from each Preliminary round will advance to the Semi-Finals. The top 9 winners and a people's choice from the Semi-Finals will advance to the FINALS at Taste of the Town! \$10 Entry Fee for Competition For more details, please visit www.tasteofthetown.org'. At the bottom, it says: 'TASTE of the town January 27, 2011 The Woodlands Waterway Marriott Hotel & Convention Center www.tasteofthetown.org'. A chef's hat icon is next to the 'TASTE of the town' logo. Finally, it lists 'Cash Prizes at the Finals! 1st Place - \$1000 2nd Place - \$500 3rd Place - \$250'. At the very bottom, a spotlight shines on a black circular stage.