SERVICE LINE
WEST DES MOINES WATER WORKS

SPRING 2011 VOLUME 16 ISSUE 2

Find and Fix Leaks Before They Drain Your Wallet

The steady drip, drip, drip of a leaky faucet may be enough to drive you up the wall, but the leaks you can't hear do the most damage. An undetected leak can dribble hundreds or even thousands of gallons of water down the drain. Worse than that, a hidden leak can drip away for years before you catch it. Fortunately, you can conduct a few fairly simple tests to make sure you don't fall victim to a costly leak.

Meet Your Meter

Your water meter holds the clues you need to quickly determine whether your house or business has any sizable leaks.

Most West Des Moines Water Works meters have a register similar to the one shown on the right. The small black triangle turns when water is flowing through the meter. If you look closely, this meter reading shows that 158,278.8 gallons have been delivered.

To check for leaks, make sure that all of your water-using appliances and fixtures are turned off, and then take a look at your meter. If the black triangle or the dials on your meter are still turning, you have a leak. To determine the size of the leak, take note of the reading on your water meter and check back an hour later to see how much water has been used. Make sure that no one and no appliances are using water during this test period.

Now that you have an idea about the size of the leak, your next step is finding the culprit.

Toilets

If a significant amount of water is leaking each hour, the toilet may be to blame. A leaky toilet can waste several thousand gallons of water in only a few days.

"Leaks occur when the toilet is out of adjustment or the parts are worn, so it's important to check periodically to make sure everything is in order," said **Jerry Stevens**, general manager of the West Des Moines Water Works. "Studies have found that as many as 20 percent of all toilets leak."

Leaks (continued on page 2)

How Much Water can an Undetected Leak Waste?

Even the smallest of leaks can send a significant amount of water down the drain in a relatively short period of time. Depending on the leak's size, at 60 psi, hundreds or even thousands of gallons could be wasted each day. The red circles in the "Size of Leak" column represent the actual size of the respective leaks charted below. *Source: American Water Works Association.*

Size of Leak	Amount of Water Lost (gallons)		Cost Per Day	
Diameter	Per Day	Per Year	Water ($4.30/1,000 gal.)	Sanitary Sewer ($4.45/1,000 gal.)
1/16" or 1.6 mm	822	300,030	$3.53	$3.66
1/18" or 3.2 mm	2,850	1,040,250	$12.25	$12.68
1/4" or 6.5 mm	11,400	4,161,000	$49.02	$50.73

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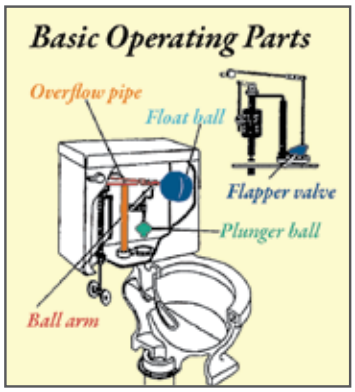
Undetected Leaks Account for 14% of Home Water Use

Leaks (continued from page 1)

Some toilet leaks can be detected by unusual noises such as hissing or gurgling from the toilet when it's not in use. For example, a continuous trickling sound usually signals water running over the top of the overflow pipe inside your tank.

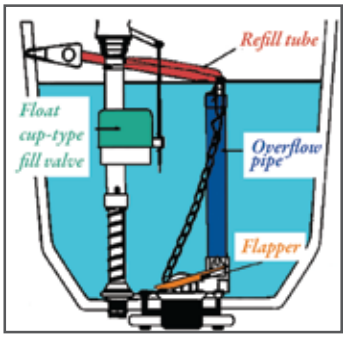


Smaller leaks, which can be significant, are often not immediately noticeable and require a little more detective work to uncover.

Either way, most leaks occur in the overflow pipe, so slide off the lid to conduct a visual inspection. Flush the toilet and observe the process, looking for obvious problems.

When the tank has refilled, check the water level. It should be about a half-inch below the top of the overflow pipe. If it's too high, gently bend the arm on the float ball downward a bit. Make sure the arm is not dragging on the overflow pipe and that it's free to float up and shut off the refill valve. If the float ball has filled with water, you may need to replace it.

On newer valve and float units, such as the one to the right, adjust the float by moving it downward on the vertical rod.



To test for silent leakage around the plunger ball or flapper valve at the bottom of the tank, sprinkle a few drops of food coloring into the tank. Let the toilet sit un-flushed for at least half an hour. If any food coloring shows up in the bowl, you have a leak on your hands.

Before replacing any parts, thoroughly clean the bottom of the tank, the plunger ball and the flapper valve, then try the color dye experiment again. If the tank is still leaking into the bowl, replacing the plunger ball or the flapper valve may be necessary.

Faucets

Faucet leaks are usually easier to detect and easier to fix than toilet leaks. Most often they result from worn-out washers or O-rings that will simply need to be replaced. A quick web search will uncover a sea of videos and articles ready to walk you through the repair.

Another common source of lost water comes from outside faucet leaks where hoses and similar equipment have been left attached to the spout. A slow drip from a faucet can waste up to 20 gallons of water each day.

Pipes

If neither the toilet nor the faucet is leaking, take a quick look at the pipes in your home, keeping an eye out for telltale watermarks on the walls and ceiling. If a pipe is leaking, you should repair or replace it immediately. Call a plumber if you are not comfortable making the repairs on your own.

If the water pipe leading to your house is leaking, the area above the pipe in your yard may continuously stay wet, or water may actually flow to the surface. Please contact the West Des Moines Water Works immediately if you suspect a water main or service pipe is leaking.

"One of the most common calls we receive concerns leaks because they can show up in a rather alarming way on your water bill," Stevens noted. "For the most part, they are easy to find and fix."

If you are experiencing increased water usage and don't know why, contact our Customer Service Department at 222-3460. A field representative can visit your home at no charge to assist in determining the cause of the problem and the appropriate course of action.

DID YOU KNOW?

About 2.5 billion people worldwide lack adequately sanitized water and 884 million are without access to safe water.

Source: UNICEF (2008)

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