

# Fix It for Less





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Fixing leaks and installing a few inexpensive water-saving devices in your home could save up to 20,000 gallons of water each year. If you use utility or county water, your efforts could cut your monthly water and sewer bill in half.

Unless your house was built after 1995, you probably have pre-conservation era plumbing that guzzles water. Fixing leaks and replacing old plumbing fixtures with water-saving models are two easy ways to conserve water and save money at the same time.

Take a close look at your water bill (figure 1). Unless you have a septic tank, you'll see that you pay to pipe water into your home and then you pay to pipe it out. The more water you use, the more there is to dispose of — and the higher your water and sewer charges climb (figure 1).

*Most water-conserving devices will reduce your water and sewer bill enough to pay for themselves within six months.*

# Fix It for Less

By installing simple water-saving devices, a family can save water and money. For example, by reducing water consumption from 9,000 gallons to 8,000 gallons per month, a family can save an average of \$35.93 annually on its water bill (an estimated savings of \$2.99 per 1,000 gallons per month) or \$66.55 on its combined water and sewer bill (an estimated savings of \$5.55 per 1,000 gallons per month).



Account Number	Penalty Date
011	09/15/2011
<b>CURRENT BALANCE</b>	
00	WATER
	METER FEE
<b>AMOUNT DUE</b>	
AFTER 09/15/2011	
UTILITY BILL DRAFTED	
FORM IS AVAILABLE	
ON UNDER THE FIN DE	
*****	

figure 1

## Toilets

Leaks inside your toilet can waste up to 200 gallons of water a day. If left unrepaired for six months, as much as 36,000 gallons of water goes unused down the drain.

To check your toilet for leaks, remove the lid from the toilet tank, remove any colored cleaning agent, flush to clear water in the bowl, then drop one leak detecting dye tablet (or five drops of blue food coloring) into the tank and wait 10 to 15 minutes. If colored water appears in the toilet bowl without additional flushing, there is a leak. Flush as soon as the test is complete.

To fix the leak yourself, you need a large adjustable wrench and a screwdriver. Now, follow these simple steps:

1. Jiggle the toilet handle (figure 2). If that makes the water stop running, the chain or guide wire attached to the handle may be out of alignment.



figure 2

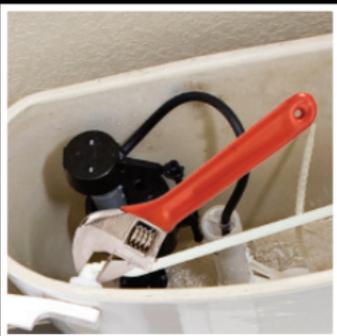


figure 3

2. Make sure the handle fits snugly against the tank. If it doesn't, use the adjustable wrench to tighten the nut attached to the handle on the inside of the tank (figure 3).
3. Check the flapper (the rubber device that opens and closes to allow water into the toilet in figure 4) for deterioration. Bleach and other chemicals in the toilet water can deteriorate the flapper (figure 5). When a flapper does not fit snugly, water leaks from the tank into the toilet, wasting water. With ultra low-flow toilets, it is important to replace the flapper with the correct model in order to retain the low-flow function. Check with your plumber or local plumbing supply store for the correct model.
4. Check the tank water level. The correct water level is about  $\frac{1}{4}$  to 2 inches below the top of the overflow tube in the middle of the tank.



figure 4



figure 5

The overflow tube drains directly into your sewer system. To lower the water level, use the screwdriver to adjust the screw on the end of the ballcock float arm (figure 6) or bend the float arm down until the correct water level is achieved (figure 7).

**If these simple procedures don't stop the leak, call your plumber.**

Since the mid-1990s, all new toilets have been redesigned to conserve water, using 1.6 gallons or less per flush. If your toilet is not a low-flow model, you should consider purchasing one.



figure 6



figure 7

## Faucets

Water losses caused by dripping faucets can range from several gallons to hundreds of gallons of water per day. If it is hot water, you're wasting water and the energy required to heat it. Leaky faucets are usually caused by a worn washer or O ring (figure 8).

### To fix leaky faucets, you need:

- Adjustable wrench or pliers
- Screwdriver
- Replacement washers and tap-fixer tool (purchased at hardware, home or plumbing stores)

### Now, follow these steps:

1. Shut off the water supply to the faucet you are repairing. Remove the cap on the top of the faucet handle. Turn exposed screw counterclockwise to remove screw.
2. Pull off handle.
3. Remove nut. Loosen valve stem by turning counterclockwise.



figure 8

4. Remove valve stem assembly.
5. Remove screw at base of the valve stem and remove worn washer. Replace with a new washer of the same size.
6. Use tap-fixer tool to reset valve, following kit instructions.
7. Replace faucet parts in reverse order of removal (figure 9). Then, turn on water supply to faucet and check to make sure it does not leak.

For some leaks, replacing the faucet with a new WaterSense® labeled product (figure 10) is the most cost-effective way to fix the problem. To install a new faucet, follow package directions or consult with a plumber.

**If you can't fix the leak, replace the valve stem or buy a new faucet.**



figure 9



figure 10

Once all leaks are fixed, check the amount of water flowing from each faucet. You can do this by following these simple steps:

1. Open the faucet all the way and allow water to flow into a container for 10 seconds.
2. Measure the collected water (figure 11). (FYI: 16 cups = 1 gallon)
3. Multiply the amount of water by 6 to determine the per-minute flow.

If your existing aerator flows more than 2 gallons per minute, you should replace it with a low-flow aerator (figure 12). This one simple step can save up to 5 gallons per day.

In your kitchen, a 2.5-gallons-per-minute aerator will ensure the flow of water is enough to wash and rinse dishes.

Your bathroom faucet is used primarily for rinsing. Therefore, a 1-gallon-per-minute aerator will provide enough water for shaving, hand washing and other personal



figure 11

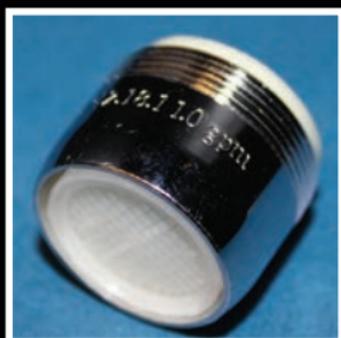


figure 12

# In the Bathroom



hygiene tasks. A 1.5- to 2.5-gallons-per-minute aerator can be used for the laundry tub.

You may want to use a low-flow aerator with an on/off flip handle that allows you to increase or reduce the flow as needed.

## Showerheads

If your showerhead is leaking or if the flow rate is more than 3 gallons per minute, you should replace it with a low-flow version (2 gallons per minute or less). To fix leaky showerheads yourself, you need an adjustable wrench or pliers and joint sealer or tape.

**Now, follow these steps:**

1. Shut off the water supply to the shower.
2. Use the adjustable wrench to remove the old showerhead.
3. Clean the threads to remove old joint sealer.
4. Apply joint sealer or tape, using package instructions (figure 13).
5. Use the adjustable wrench to install the new showerhead (figure 14).
6. Turn water supply back on and test the showerhead.

**Use a cloth between the showerhead and the jaws of the wrench to avoid scratching.**



figure 13



figure 14

## Icemaker

To check your refrigerator icemaker, pull your refrigerator out from the wall and look at the tubing connected from the fridge to your water line (figure 15). If the hose coming from the refrigerator is rubber or plastic, consider replacing it with a reinforced, or braided, hose. A reinforced hose will last longer than a standard hose and will help prevent leaks. You can purchase a reinforced hose at most home improvement or hardware stores.

While you are in the kitchen, also check your dishwasher to see if its hose is reinforced or braided. Unless you are able to move the dishwasher yourself, you may want to seek professional help.

Don't forget to check the faucets while you are in the kitchen. See Faucets section starting on page 7.



figure 15

# Washing Machine

Look at the water supply connection behind your washer to see if you have a reinforced, or braided, hose (figure 16). If not, consider replacing it. Reinforced hoses last longer and are less likely to leak than plastic or rubber hoses.

You can pick up reinforced hoses at most home improvement or hardware stores. If you are not comfortable replacing the hose yourself, contact a professional.

Here are some additional tips for saving water in the laundry room:

- Wash only full loads, or check and adjust the washing machine's water level when washing smaller loads (figure 17).
- Wash clothes in cold water.
- Pre-treat stains to avoid having to wash a second time.



figure 16

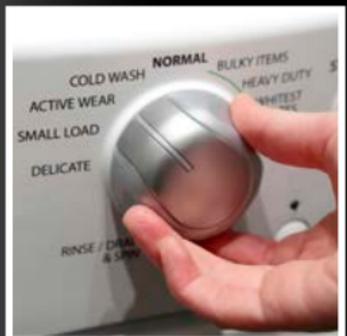


figure 17

# In the Laundry Room



- Use shorter wash cycles for lightly soiled loads.
- Make sure your hot water heater pipes are insulated (figure 18).
- When you need to replace your washer, choose an ENERGY STAR® model. They come in top-loading and front-loading models.



figure 18

Now that you have all the visible leaks repaired, check for those that you don't know about. Here's how:

1. Locate your water meter (figure 19) and make note of the meter reading.
2. Turn off all the water-using fixtures in your home and don't use any water for 30 minutes.
3. Go back and check the reading on the meter. If it has changed, you have leaking pipes and may need a plumber or your water utility to help you find and repair them.



figure 19



Visit the following websites for more information on water-conserving devices:

**Florida Water Star<sup>SM</sup>** — *FloridaWaterStar.com*

**WaterSense** — *epa.gov/WaterSense*

**ENERGY STAR<sup>®</sup>** — *energystar.gov*

For more information on conserving water indoors and outdoors visit:  
***WaterMatters.org/Conservation***

**Southwest Florida**  
*Water Management District*

WATERMATTERS.ORG • 1-800-423-1476



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