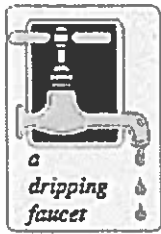
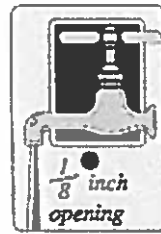


## Water Leaks and Water Conservation

The following chart shows the amount of water that can be lost (and billed to your account) for various size leaks.



A dripping leak consumes:  
15 gal. per day  
450 gal. per month



A 1/8 inch leak consumes:  
3,806 gal. per day  
114,200 gal. per month



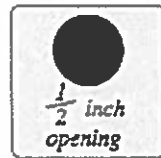
A 1/32 inch leak consumes:  
264 gal. per day  
7,920 gal. per month



A 1/4 inch leak consumes:  
15,226 gal. per day  
456,800 gal. per month



A 1/16 inch leak consumes:  
943 gal. per day  
28,300 gal. per month



A 1/2 inch leak consumes:  
69,900 gal. per day  
1,827,000 gal. per month

Studies show that dripping faucets and leaking toilets account for as much as 14% of all indoor water use, equivalent to 10 gallons (38 liters) per person of water lost per day.

### Check for Leaks in:

1. **FAUCETS** - Check all faucets for drips. Replace worn and leaking washers, gaskets, pipes or defective fixtures. Check for leaks on outside faucets, and make sure the valve closes properly.
2. **Read Your Water Meter** - Use your water meter to check for leaks in your home. Your water meter is located *inside* your home (usually in the basement near the hot water heater or main turn-off valve) Start by turning off all faucets and water-using appliances and make sure no one uses water during the testing period. Take a reading on your water meter, wait for about 30 minutes, and then take a second reading. If the dial has moved, you have a leak.
3. **TOILETS** - An average of 20% of toilets leak.

### TO CHECK FOR A "FLAPPER LEAK" IN YOUR TOILET TANK:

The flapper is a large rubber plug in the bottom of the toilet tank. The toilet tank is located in the back of the toilet where the unused water for the toilet bowl is stored. If you see or hear any water movement in the toilet bowl when it has NOT been used recently, you may have a flapper leak.

1. Carefully remove the lid from the tank and place it securely out of the way.
2. Place a small amount of dark food coloring in the tank. Wait at least 20 - 30 minutes. If coloring comes through the tank into the bowl, WITHOUT FLUSHING, you have a leak. Repeat test every six months.
3. Touch the flapper. If the coloring from your flapper gets on your fingertips, your flapper is deteriorating and needs to be replaced.

#### **CORRECTING "OVERFLOW" TOILET LEAKS:**

Examine the water level. If water is leaking into the top of the overflow pipe, the ballcock valve needs adjusting or replacing. If you are not sure if the water is spilling into the overflow pipe, place a small amount of finely ground pepper or baby powder along the walls of the toilet tank. If the powder moves toward the center, you have an overflow leak.

- Adjust the float arm until the water level is 2" below the top of the overflow pipe.
- Position the metal float arm slightly for desired water level.
- On a plastic float arm, turn the adjusting screw located on the top of the arm.
- If your toilet has a fluidmaster type ballcock valve, adjust the sliding clip.

#### **CORRECTING "SIPHON" TOILET LEAKS:**

Adjust the refill tube above the water line, 1/4" over the overflow pipe. Clip the tube to the overflow pipe to stabilize it so it does not insert deeply into the overflow pipe. The refill tube should never be "stuck down" into the overflow pipe.

#### **4. OUTSIDE HOSE BIBBS AND FAUCETS:**

Hose bibbs and outside faucets are often left running -- particularly in the spring and summer when residents are away from their homes enjoying well-deserved vacations. It's important to take steps to prevent someone from using your water without your permission. When leaving your home for an extended period, turn-off your outside faucet from the inside valve to protect against water loss.

## TIPS ON CONSERVING WATER

1. Don't use the toilet as an ashtray or wastebasket  
Every time you flush a cigarette butt, facial tissue or other small bit of trash, five to seven gallons of water is wasted.
2. Put plastic bottles or float booster in your toilet tank  
To cut down on water waste, put an inch or two of sand or pebbles inside each of two plastic bottles to weigh them down. Fill the bottles with water, screw the lids on, and put them in your toilet tank, safely away from the operating mechanisms. Or, buy an inexpensive tank bank or float booster. This may save ten or more gallons of water per day. Be sure at least 3 gallons of water remain in the tank so it will flush properly.  
For new installations, consider buying "low flush" toilets, which use 1 to 2 gallons per flush instead of the usual 3 to 5 gallons.  
  
Replacing an 18 liter per flush toilet with an ultra-low volume (ULV) 6 liter flush model represents a 70% savings in water flushed and will cut indoor water use by about 30%.
3. Install water-saving shower heads and low-flow faucet aerators  
Inexpensive water-saving low-flow shower heads or restrictors are easy for the homeowner to install. Also, long, hot showers can use five to ten gallons every unneeded minute. Limit your showers to the time it takes to soap up, wash down and rinse off. "Low-flow" means it uses less than 2.5 gallons per minute.
4. Insulate your water pipes.  
It's easy and inexpensive to insulate your water pipes with pre-slit foam pipe insulation. You'll get hot water faster plus avoid wasting water while it heats up.
5. Take shorter showers.  
One way to cut down on water use is to turn off the shower after soaping up, then turn it back on to rinse. A four-minute shower uses approximately 20 to 40 gallons of water.
6. Turn off the water after you wet your toothbrush  
There is no need to keep the water running while brushing your teeth. Just wet your brush and fill a glass for mouth rinsing.
7. Rinse your razor in the sink  
Fill the sink with a few inches of warm water. This will rinse your razor just as well as running water, with far less waste of water.
8. Use your dishwasher and clothes washer for only full loads  
Automatic dishwashers and clothes washers should be fully loaded for optimum water conservation. Most makers of dishwashing soap recommend not pre-rinsing dishes which is a big water savings.  
With clothes washers, avoid the permanent press cycle, which uses an added 20 liters (5 gallons) for the extra rinse. For partial loads, adjust water levels to match the size of the load. Replace old clothes washers. New Energy Star rated washers use 35 - 50% less water and 50% less energy per load. If you're in the market for a new clothes washer, consider buying a water-saving frontload washer.
9. Minimize use of kitchen sink garbage disposal units  
In-sink 'garburators' require lots of water to operate properly, and also add considerably to the volume of solids in a septic tank which can lead to maintenance problems. Start a compost pile as an alternate method of disposing food waste.
10. When washing dishes by hand, don't leave the water running for rinsing  
If your have a double-basin, fill one with soapy water and one with rinse water. If you have a single-basin

sink, gather washed dishes in a dish rack and rinse them with a spray device or a panful of hot water. Dual-swivel aerators are available to make this easier. If using a dishwasher, there is usually no need to pre-rinse the dishes.

11. Don't let the faucet run while you clean vegetables  
Just rinse them in a stoppered sink or a pan of clean water. Use a dual-setting aerator.
12. Keep a bottle of drinking water in the fridge.  
Running tap water to cool it off for drinking water is wasteful. Store drinking water in the fridge in a safe drinking bottle.

## In the yard and garden...

1. Plant drought-resistant lawns, shrubs and plants  
If you are planting a new lawn, or overseeding an existing lawn, use drought-resistant grasses such as the new "Eco-Lawn".  
Many beautiful shrubs and plants thrive with far less watering than other species. Replace herbaceous perennial borders with native plants. Native plants will use less water and be more resistant to local plant diseases. Consider applying the principles of xeriscape for a low-maintenance, drought resistant yard. Plant slopes with plants that will retain water and help reduce runoff. Group plants according to their watering needs.
2. Put a layer of mulch around trees and plants  
Mulch will slow evaporation of moisture while discouraging weed growth. Adding 2 - 4 inches of organic material such as compost or bark mulch will increase the ability of the soil to retain moisture. Press the mulch down around the dripline of each plant to form a slight depression which will prevent or minimize water runoff.
3. Don't water the gutter  
Position your sprinklers so water lands on the lawn or garden, not on paved areas. Also, avoid watering on windy days.
4. Water your lawn only when it needs it  
A good way to see if your lawn needs watering is to step on the grass. If it springs back up when you move, it doesn't need water. If it stays flat, the lawn is ready for watering. Letting the grass grow taller (to 3") will also promote water retention in the soil.  
Most lawns only need about 1" of water each week. During dry spells, you can stop watering altogether and the lawn will go brown and dormant. Once cooler weather arrives, the morning dew and rainfall will bring the lawn back to its usual vigor. This may result in a brown summer lawn, but it saves a lot of water.
5. Deep-soak your lawn  
When watering the lawn, do it long enough for the moisture to soak down to the roots where it will do the most good. A light sprinkling can evaporate quickly and tends to encourage shallow root systems. Put an empty tuna can on your lawn - when it's full, you've watered about the right amount. Visit our natural lawn care page for more information.
6. Water during the early parts of the day; avoid watering when it's windy  
Early morning is generally better than dusk since it helps prevent the growth of fungus. Early watering, and late watering, also reduce water loss to evaporation. Watering early in the day is also the best defense against slugs and other garden pests. Try not to water when it's windy - wind can blow sprinklers off target and speed evaporation.
7. Add organic matter and use efficient watering systems for shrubs, flower beds and lawns  
Adding organic material to your soil will help increase its absorption and water retention. Areas which are

already planted can be 'top dressed' with compost or organic matter.

You can greatly reduce the amount of water used for shrubs, beds and lawns by:

- the strategic placement of soaker hoses
- installing a rain barrel water catchment system
- installing a simple drip-irrigation system

Avoid over-watering plants and shrubs, as this can actually diminish plant health and cause yellowing of the leaves.

When hand watering, use a variable spray nozzle for targeted watering.

8. Don't run the hose while washing your car

Clean the car using a pail of soapy water. Use the hose only for rinsing - this simple practice can save as much as 150 gallons when washing a car. Use a spray nozzle when rinsing for more efficient use of water. Better yet, use a waterless car washing system; there are several brands, such as EcoTouch, which are now on the market.

9. Use a broom, not a hose, to clean driveways and sidewalks

10. Check for leaks in pipes, hoses, faucets and couplings

Leaks outside the house may not seem as bad since they're not as visible. But they can be just as wasteful as leaks indoors. Check frequently to keep them drip-free. Use hose washers at spigots and hose connections to eliminate leaks.

Water conservation comes naturally when everyone in the family is aware of its importance, and parents take the time to teach children some of the simple water-saving methods around the home which can make a big difference.