# Water Conservation Tips From: 

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Call Before You Dig
1-800-382-5544 or 811
(It's the law)
(Two business days before you dig)

## FINDING A LEAK

The most common leak sources are the toilet, the home water softener, irrigation systems, and the humidifier on a furnace. You will probably need a trained repair person to repair a water softener, irrigation system, or humidifier but you can be your own detective to catch a leaking toilet. Normally you will not hear a toilet leaking until the leak is quite severe but the cost can be substantial. A leak in a pipe the size of this dot

- could mean a loss of 360 gallons of water per day.

Most toilet leaks occur at the overflow pipe or at the plunger ball inside the tank. To determine if your overflow pipe is leaking, flush the toilet with the tank lid off. The water level should refill up to about one half inch below the overflow pipe. Adjust the float level control screw, if necessary, so the valve shuts off the water at that level. If the valve itself is leaking, it will probably need to be replaced.

Another test would be to drop a little food coloring or dark beverage into the holding tank. Do not flush but wait about half an hour to see if the colored water appears in the toilet bowl. If it does you probably have a seeping leak around the flapper valve or plunger ball and need to replace these worn parts. If the coloring disappears from the holding tank without flushing but does not appear in the toilet bowl then you may have a crack or break in the overflow pipe allowing the water to seep into the pipe.

There are, of course, other areas which could be a source of water loss but these are the most common. Please feel free to call on us to assist you where we are able.

## Conservation



From drinking and cooking to bathing and gardening - water sustains life. The average American uses approximately 168 gallons of water a day - only a gallon of which is used for drinking and cooking

Using water wisely makes the best use of this important resource and can reduce your household water bill and help protect the environment. Consider the following tips for conservation.

## Tips for Using Water Wisely Outside

- Water your lawn only when it needs it. An easy way to tell if your lawn needs water is to simply walk across the grass. If you leave footprints, it's time to water. Make the most of your watering by:
- Watering in the early morning. As much of $30 \%$ of water can be lost to evaporation by watering during midday.
- Plan for fewer deep-soaking waterings, rather than frequent sprinklings which can evaporate quickly
- Set your lawn mower one notch higher to limit evaporation.
- Check your sprinkler system. Check sprinkler heads and valves for leaks and adjust the timer according to seasonal water needs and weather conditions.
- Plant for your climate. Native and drought-tolerant plants may have lower water needs. Your local nursery or state extension office are good information resources, when planning a water-wise garden.
- Use mulch in the garden. Mulching around plants and shrubs saves moisture.
- Control the flow. When using a hose, control the flow with an automatic shutoff nozzle.
- Use a pool cover. You can cut evaporation loss by as much as 90 percent.
- Use a broom, instead of a hose, to clean sidewalks and driveways.
- Wash your car wisely, by using soap and water from a bucket, along with a sponge and hose with a shut-off valve.
- Stop leaks before they start by disconnecting hoses and making sure outdoor water is shut off during cold weather.


## Tips for Using Water Wisely Inside

- Check your toilet for leaks. A leaky toilet can waste as much as 100 gallons of water each day. Check for leaks by putting a few drops of food coloring in the tank, then watch for a few minutes. If the color appears in the bowl, you have a leak. Repair your toilet and you'll save water and money.
- Run full loads in your dishwasher and clothes washer. When that's not possible, adjust the water level or cycle to match the size of your load.
- When shopping, look for efficiency. According to the U.S. Environmental Protection Agency, high-efficiency plumbing fixtures and appliances can save about $30 \%$ of indoor water usage. When selecting appliances, energy and water efficiency frequently go together. Choosing appliances that offer different cycles allows you to match your cleaning needs to the right cycle.
- Keep a pitcher of cold tap water in the refrigerator. You'll save money compared to bottled water, and avoid running the tap until the water is cold.
- Install low flow faucet aerators and showerheads.
- Shorten showers to reduce water usage.
- Turn off water while brushing your teeth or shaving.

Using water wisely protects an important resource and can reduce your household water bill.

Leaking toilets cause more water waste than any other fixture in the home. Even a silent toilet leak (that's one you normally can't hear) will waste from 30 to 500 gallons of water per day! The ones you can hear will waste much, much more. Such wastage can normally be attributed to a faulty water level adjustment or to a leaky flapper.

Leaky flappers and the "dye test"
Most people will say their toilet does not leak. There is one sure way to find out. Put some food dye in the tank and then leave for 15 minutes. When you return, look into your bowl to see if there is now dye color in the water spot. If there is color, or if you already can hear and or see water running in your bowl, it's time for a new flapper!


Figure 1: Deformed flapper valves are often the result of toilet tank cleaning products. (Photo courtesy of John Koeller \& Company)

After installing the new flapper, run the dye test again to assure you have no leak. If the leak persists (and every now and then it will), you are probably going to have to replace the entire flush valve.

## "It only runs in the middle of the night"

Many toilets really do run only at night; that's because people use much less water during these hours and in many municipal water systems, the water pressure rises considerably during this time. It is not uncommon for system water pressure to rise by 15 to 20 pounds per square inch (psi), and by as much as 30 psi in some situations. This rise in pressure could cause "water creep" inside your gravity-fed tank by $1 / 2$ inch or more. That is why the manufacturers of toilets normally suggest that the water level to be set at approximately one inch below the top of the overflow tube.

## Water level in the tank

If you only notice your toilet running in the middle of the night, there is a good chance that the water level in your tank is set too high. Click here to learn how to adjust the water level in your toilet tank.

Use your water meter to check for leaks

For information on how to use your water meter to detect toilet (and other) leaks, click here
unsure if your faucet is leaking you might try using your water meter to detect the leak.


Leaks should be fixed immediately since they can quickly develop into a serious break. Temporary repairs are only temporary, and wrapping the pipe usually fails. If you find a fixture that is leaking, turn off the shutoff valve for that device. Then locate the leak. Try to tighten any fittings that leak. A quarter or half turn with a wrench might do the trick. Be careful not to over-tighten fittings. Another possible cause is that the pipes are undersized and the water velocity is too high.

## Estimated faucet leakage rates

## Drips

60 drops per minute $=192$ gallons per month
90 drops per minute $=310$ gallons per month
120 drops per minute $=429$ gallons per month

## Stream

3" stream = 1,095 gallons per month
6 " stream $=2,190$ gallons per month
9 " stream $=3,290$ gallons per month

First it is important to understand how to read your water meter.
To check for leaks follow these steps:

## Method 1

Turn off all water taps inside and outside your home. Record the meter reading and return in two to three hours to check for movement. If the meter reading has changed, you may have a leak.

## Method 2

Many meters have a small red (or blue) triangle on the meter face, designed to detect even small leaks. If this red triangle is moving when you have all water off inside and outside your home, you may have a leak.

Common sources of leaks are a toilet that is running, a constant drip in a sink or outdoor faucet, a loose or dripping washer connection, a home water treatment unit, an evaporative cooler unit, or a

SAVE WATER, MONEY, ENERGY NOW!
TOP 5 ACTIONS
With so many ways to save water, here are the highlights for 5 key actions to help you capture the water savings around your home. Click on the "Learn more" to find out additional information for each action. Remember, every drop counts!

1. Stop Those Leaks!

Check your indoor water using appliances and devices for leaks.
Many silent leaks allow water and your money to go down the drain. Studies have shown homes can waste more than $10 \%$ due leaking, which costs both you and the environment.
Another large water waster can be leaks in your irrigation system. Fix irrigation system leaks quickly and check for water in the gutters or mud puddles. Inspect your sprinklers and drip sprayers regularly for leaks during the daytime since the optimal time to water is in the nighttime hours when you cannot observe leaks. If you have an older irrigation system, over $50 \%$ and even more than $75 \%$ of the water can be lost to leaks.
2. Replace your old Toilet, the largest water user inside your home. If your home was built before 1992 and the toilet has never been replaced, then it is very likely that you do not have a water efficient 1.6 gallon per flush toilet. You can check the date stamp inside the toilet by lifting the lid and looking at the back of the toilet at the manufacturer's imprint of the make, model and date of manufacture.
3. Replace your Clothes Washer, the second largest water user in your home.

Energy Star ${ }^{\text {TM }}$ rated washers that also have a Water Factor at or lower than 9.5, use 35-50\% less water and $50 \%$ less energy per load. This saves you money on both your water and energy bills. 4. Plant the Right Plants with Proper Landscape Design \& Irrigation

Whether you are putting in a new landscape or slowly changing the current landscaping at your home, select plants that are appropriate for your local climate conditions. Having yard with $100 \%$ lawn turf area in a dry desert climate uses significant amounts of water.
5. Water Only What Your Plants Need most water is wasted in your garden by watering when you plants do not need the water or by not maintaining the irrigation system. Be attentive if you are manual watering by setting your oven timer or some other reminder to move the water promptly. Make sure your irrigation controller has a rain shutoff device and that it's appropriately scheduled. Most water is wasted in months prior to or just after the rainy season when intermittent rains occur. You can also consider installing a weather adjusting ET irrigation controller that automatically saves water by not watering when the plants don't need the water, check with your local water provider to inquire if ET controllers work in your area. Learn more about using the features that you have in your garage for efficient watering like your hose and irrigation controller timer.

## 100 Water-Saving Tips

\#1. There are a number of ways to save water, and they all start with you.
\#2. When washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.
\#3. Evaporative coolers require a seasonal maintenance checkup. For more efficient cooling, check your evaporative cooler annually.
\#4. Check your sprinkler system frequently and adjust sprinklers so only your lawn is watered and not the house, sidewalk, or
street.
\#5. Run your washing machine and dishwasher only when they are full and you could save 1000 gallons a month.
\#6. Avoid planting turf in areas that are hard to water such as steep inclines and isolated strips along sidewalks and driveways.
\#7. Install covers on pools and spas and check for leaks around your pumps.
\#8. Use the garbage disposal sparingly. Compost instead and save gallons every time.
\#9. Plant during the spring or fall when the watering requirements are lower.
\#10. Keep a pitcher of water in the refrigerator instead of running the tap for cold drinks, so that every drop goes down you not the drain.
\#11. Check your water meter and bill to track your water usage.
\#12. Minimize evaporation by watering during the early morning hours, when temperatures are cooler and winds are lighter.
\#13. Wash your produce in the sink or a pan that is partially filled with water instead of running water from the tap.
\#14. Use a layer of organic mulch around plants to reduce evaporation and save hundreds of gallons of water a year.
\#15. Use a broom instead of a hose to clean your driveway or sidewalk and save 80 gallons of water every time.
\#16. If your shower can fill a one-gallon bucket in less than 20 seconds, then replace it with a water-efficient showerhead.
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\#17. Collect the water you use for rinsing produce and reuse it to water houseplants.
\#18. Divide your watering cycle into shorter periods to reduce runoff and allow for better
absorption every time you water.
\#19. We're more likely to notice leaky faucets indoors, but don't forget to check outdoor faucets, pipes, and hoses for leaks.
\#20. Periodically check your pool for leaks if you have an automatic refilling device.
\#21. Only water your lawn when needed. You can tell this by simply walking across your lawn. If you leave footprints, it's time to water.
\#22. When you shop for a new appliance, consider one offering cycle and load size adjustments. They are more water and energy-efficient than older appliances.
\#23. Time your shower to keep it under 5 minutes. You'll save up to 1000 gallons a month.
\#24. Install low-volume toilets.
\#25. Adjust your lawn mower to a higher setting. Longer grass shades root systems and holds soil moisture better than a closely clipped lawn.
\#26. When you clean your fish tank, use the water you've drained on your plants. The water is rich in nitrogen and phosphorus, providing you with a free and effective fertilizer.
\#27. Use the sprinkler for larger areas of grass. Water small patches by hand to avoid waste.
\#28. Put food coloring in your toilet tank. If it seeps into the toilet bowl, you have a leak. It's easy to fix, and you can save more than 600 gallons a month.
\#29. Plug the bathtub before turning the water on, then adjust the temperature as the tub fills up.
\#30. Use porous materials for walkways and patios to keep water in your yard and prevent wasteful runoff.
\#31. Direct downspouts and other runoff towards shrubs and trees, or collect and use for your
garden.
\#32. Designate one glass for your drinking water each day. This will cut down on the number of times you run your dishwasher.
\#33. Water your summer lawns once every three days and your winter lawn once every five days.
\#34. Install a rain shut-off device on your automatic sprinklers to eliminate unnecessary watering.
\#35. Don't use running water to thaw food.
\#36. Choose a water-efficient drip irrigation system for trees, shrubs and flowers. Watering at the roots is very effective, be careful not to over water.
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\#37. Grab a wrench and fix that leaky faucet. It's simple, inexpensive, and can save 140 gallons a week.
\#38. Reduce the amount of grass in your yard by planting shrubs, and ground cover with rock and granite mulching.
\#39. When doing laundry, match the water level to the size of the load.
\#40. Teach your children to turn the faucets off tightly after each use.
\#41. Remember to check your sprinkler system valves periodically for leaks and keep the heads in good shape.
\#42. Before you lather up, install a low-flow showerhead. They're inexpensive, easy to install, and can save your family more than 500 gallons a week.
\#43. Soak your pots and pans instead of letting the water run while you scrape them clean.
\#44. Don't water your lawn on windy days. After all, sidewalks and driveways don't need water.
\#45. Water your plants deeply but less frequently
to create healthier and stronger landscapes.
\#46. Make sure you know where your master water shut-off valve is located. This could save gallons of water and damage to your home if a pipe were to burst.
\#47. When watering grass on steep slopes, use a soaker hose to prevent wasteful runoff.
\#48. Group plants with the same watering needs together to get the most out of your watering time.
\#49. Remember to weed your lawn and garden regularly. Weeds compete with other plants for nutrients, light, and water.
\#50. While fertilizers promote plant growth, they also increase water consumption. Apply the minimum amount of fertilizer needed.
\#51. Avoid installing ornamental water features and fountains that spray water into the air. Trickling or cascading fountains lose less water to evaporation.
\#52. Use a commercial car wash that recycles water.
\#53. Don't buy recreational water toys that require a constant flow of water.
\#54. Turn off the water while you brush your teeth and save 4 gallons a minute. That's 200 gallons a week for a family of four.
\#55. Buy a rain gauge to track how much rain or irrigation your yard receives. Check with your local water agency to see how much rain is needed to skip an irrigation cycle.
\#56. Encourage your school system and local government to help develop and promote a water conservation ethic among children and adults.
\#57. Teach your family how to shut off your automatic watering systems. Turn sprinklers off if the system is malfunctioning or when a storm is approaching.
\#58. Set a kitchen timer when watering your
lawn or garden with a hose.
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\#59. Make sure your toilet flapper doesn't stick open after flushing.
\#60. Make sure there are aerators on all of your faucets.
\#61. Next time you add or replace a flower or shrub, choose a low water use plant for year-round landscape color and save up to 550 gallons each year.
\#62. Install an instant water heater on your kitchen sink so you don't have to let the water run while it heats up. This will also reduce heating costs for your household.
\#63. Use a grease pencil to mark the water level of your pool at the skimmer. Check the mark 24 hours later. Your pool should lose no more than $1 / 4$ inch each day.
\#64. Cut back on rinsing if your dishwasher is new. Newer models clean more thoroughly than older ones.
\#65. Use a screwdriver as a soil probe to test soil moisture. If it goes in easily, don't water. Proper lawn watering can save thousands of gallons of water annually.
\#66. Avoid overseeding your lawn with winter grass. Once established, ryegrass needs water every three to five days, whereas dormant Bermuda grass needs water only once a month.
\#67. Do one thing each day that will save water. Even if savings are small, every drop counts.
\#68. When the kids want to cool off, use the sprinkler in an area where your lawn needs it the most.
\#69. Make sure your swimming pools, fountains, and ponds are equipped with recirculating pumps.
\#70. Bathe your young children together.
\#71. Landscape with Xeriscape trees, plants and
groundcovers. Call your local conservation office for more information about these water thrifty plants.
\#72. Winterize outdoor spigots when temps dip to 20 degrees $F$ to prevent pipes from bursting or freezing.
\#73. Insulate hot water pipes so you don't have to run as much water to get hot water to the faucet.
\#74. Wash your car on the grass. This will water your lawn at the same time.
\#75. Drop that tissue in the trash instead of flushing it and save gallons every time.
\#76. If you have an evaporative cooler, direct the water drain to a flowerbed, tree, or your lawn.
\#77. Make suggestions to your employer to save water (and dollars) at work.
\#78. Support projects that use reclaimed wastewater for irrigation and other uses.
\#79. Use a hose nozzle and turn off the water while you wash your car and save more than 100 gallons.
\#80. Encourage your friends and neighbors to be part of a water-conscious community.
\#81. If your toilet was installed prior to 1980, place a toilet dam or bottle filled with water in your toilet tank to cut down on the amount of water used for each flush. Be sure these devices do not interfere with operating parts.
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\#82. Install water softening systems only when necessary. Save water and salt by running the minimum number of regenerations necessary to maintain water softness.
\#83. Wash clothes only when you have a full load and save up to 600 gallons each month.
\#84. Leave lower branches on trees and shrubs and allow leaf litter to accumulate on top of the soil. This keeps the soil cooler and
reduces evaporation.
\#85. Pick-up the phone and report significant water losses from broken pipes, open hydrants and errant sprinklers to the property owner or your water management district.
\#86. Bermuda grasses are dormant (brown) in the winter and will only require water once every three to four weeks or less if it rains.
\#87. Start a compost pile. Using compost when you plant adds water-holding organic matter to the soil.
\#88. Use sprinklers that throw big drops of water close to the ground. Smaller drops of water and mist often evaporate before they hit the ground.
\#89. Listen for dripping faucets and toilets that flush themselves. Fixing a leak can save 500 gallons each month.
\#90. More plants die from over-watering than from under-watering. Be sure only to water plants when necessary.
\#91. Cook food in as little water as possible. This will also retain more of the nutrients.
\#92. Adjust your watering schedule to the season. Water your summer lawn every third day and your winter lawn every fifth day.
\#93. Turn the water off while you shampoo and condition your hair and you can save more than 50 gallons a week.
\#94. Bathe your pets outdoors in an area in need of water.
\#95. Choose new water-saving appliances, like washing machines that save up to 20 gallons per load.
\#96. Water only as rapidly as the soil can absorb the water.
\#97. Aerate your lawn. Punch holes in your lawn about six inches apart so water will reach
the roots rather than run off the surface.
\#98. Select the proper size pans for cooking. Large pans require more cooking water than may be necessary.
\#99. Place an empty tuna can on your lawn to catch and measure the water output of your sprinklers. For lawn watering advice, contact your local conservation office.
\#100. Turn off the water while you shave and you can save more than 100 gallons a week.
\#101. When you give your pet fresh water, don't throw the old water down the drain. Use it to water your trees or shrubs.
\#102. If you accidentally drop ice cubes when filling your glass from the freezer, don't throw them in the sink. Drop them in a house plant instead.
\#103. To save water and time, consider washing your face or brushing your teeth while in the shower.
\#104. While staying in a hotel or even at home, consider reusing your towels.
\#105. When backwashing your pool, consider using the water on your landscaping.
\#106. For hanging baskets, planters and pots, place ice cubes under the moss or dirt to give your plants a cool drink of water and help eliminate water overflow.
\#107. Throw trimmings and peelings from fruits and vegetables into your yard compost to prevent from using the garbage disposal.
\#108. When you have ice left in your cup from a take-out restaurant, don't throw it in the trash, dump it on a plant

