Texas Cooperative EXTENSION
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Water and Me Series

Conserving Water

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This publication offers information on conserving water and protecting the quality of water in lakes, streams or rivers of Texas.

Conserving Water Saves Money

Texas water supplies are abundant in some areas but limited in others. In some parts of the state, **water conservation** by homeowners is necessary to have enough water for basic needs. But why conserve everywhere in Texas?

Conserving water can help save water for future generations. Demographic statistics predict Texas' population may double from 20 million to 40 million people by 2050. More demand will be placed on water supplies to provide water for human consumption, food and fiber production, manufacturing and recreation. This demand may cause water shortages in some parts of Texas. Learning to conserve water now can extend water resources for future use.

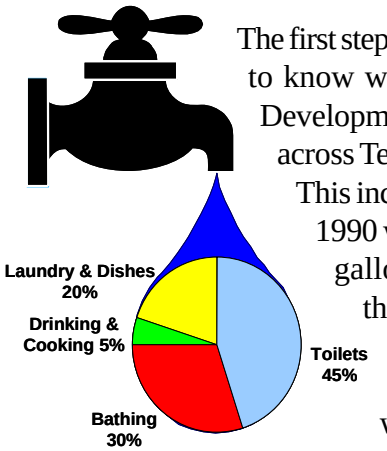
Water shortages are real, touching many U.S. communities each year including communities here in Texas. Because water conservation is a good defense against shortages, it should happen all the time, not just when shortages occur.

To begin conserving water, remember:

- Water is a highly valuable, limited resource.
- Water costs a great deal in energy and money to pump, move and purify.
- Water consumption can be reduced significantly in the average home.

Conservation is everyone's responsibility. Most of us can significantly reduce our household water consumption if we change some of our habits.

Water Use Around Your House

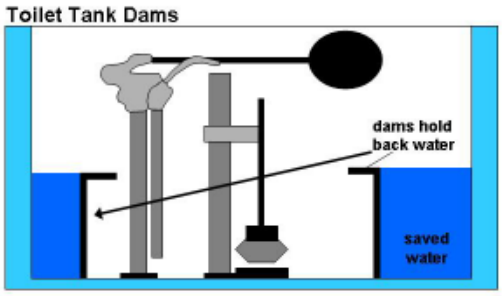


The first step in understanding how to conserve water in your home is to know where water is used. Accordingly the Texas Water Development Board (TWDB), daily per capita water useage across Texas was estimated at 181 gallons a day in 2000. This includes all water uses. Domestic water use for 1990 was estimated at approximately 50 to 120 gallons per person per day. Indoors, three-fourths of all water is used in the bathroom. Outdoors, lawn and garden watering and car washing account for most of the water used.

How to Conserve Water Daily

Because such a large percentage of water used is in the bathroom, water conservation efforts should begin here.

Toilet dams or quart plastic bottles for conventional flush toilets: These devices can reduce the amount of water flowing out of 5 to 7 gallon toilet tanks by up to 25 percent without affecting its flushing ability. Never use a brick to accomplish the same effect - particles from it could harm your plumbing. These older toilets manufactured prior to 1980 use 5 to 7 gallons of water per flush. Consider installing a new "low volume" toilet now on the market. Since 1992, all new toilets in Texas use a volume of 1.6 gallons or less. Some cities offer rebates for purchasing low volume toilets.



If you are building a new home or remodeling an old one, install "low-flush" toilets. These toilets use one to two gallons per flush instead of the three to five gallons used by older toilets. You should check with your local city water utilities regarding toilets and other water saving devices. Many cities offer financial incentives for installing water saving devices.

Low-flow, water-saving shower heads: This plumbing device reduces the amount of water flowing through your shower by up to 50 percent but increases the velocity so the shower feels about the same.This also saves hot water. You may even be able to avoid buying a larger water heater in the future. With the increasing cost of fuel, this can save money! Showerheads now sold in U.S. are required to release no more than 2.5 gallons of water per minute. Super low-flow heads deliver as little as 1.25 gallons per minute.

Faucet aerators: These devices restrict the amount of water going through your faucet by up to 50 percent but add bubbles so the flow of water appears the same. They can be installed on all faucets, not just the ones in your bathroom.

Here are some other relatively simple things you can do to further reduce water use:

Repair leaks in your faucets and toilets. A leaky faucet can waste 20 gallons of water or more per day. Repairing a faucet is usually as simple as changing an inexpensive washer. Leaky toilets, even though they are usually silent, can waste hundreds of gallons of water per day. To find out if your toilet leaks, put a little food coloring in the tank. If, without flushing, color appears in the bowl, you have a leak that should be repaired. Leaky toilets sometimes can be repaired by adjusting the float arm or plunger ball.

Use your dishwasher and clothes washer only when you have a full load. If you are purchasing a new clothes washer, choose one with variable load or suds-saver options. Many dishwashers are now available with water-saving options. If you already have these options, use them whenever possible. If you are buying new appliances, look for the Energy Star logo in the appliance. Energy Star appliances can reduce water use by as much as 30%.

To conserve water outdoors, try these tips.

Attach a pistol-type sprayer to the end of your garden hose. This device enables you to adjust the rate of flow and keep water from running during periods when you put down the hose without turning it off (while washing your car, for example).

Water your lawn only when necessary. It takes 660 gallons of water to supply 1,000 square feet of lawn with one inch of water. This is nearly the same amount of water that you use indoors in an entire week! Water your lawn only when it begins to show signs of wilting - when the grass does not spring back when you step on it. One to one and a half inches of water per week is enough water for most lawns. Remember to factor in any rain you received into your lawn's weekly water needs. Never water your lawn so much or for so long that water begins to runoff into the street or sidewalk. If you have an automatic sprinkler system, check each zone to determine how much water each puts out in one hour. Then manage each zone based upon desired output. Consider installing a thin switch to turn the sprinkler system off automatically when it rains.

Other Water Saving Tips to Consider

Indoors, you should consider these tips:

Take short showers instead of baths. A four-minute shower can use as little as eight gallons of water. A bath takes 50 to 60 gallons.

Avoid flushing your toilet unnecessarily. Don't use it as a means of disposing of waste tissue paper or insects. Use a wastebasket instead.

Turn off the faucet while you shave or brush your teeth. You will save two to six gallons each time you shave or brush your teeth.

Avoid running water in the shower while you shampoo or soap up. Many new water-saving showerheads come with a button to shut off the flow without changing the mix of hot and cold water. Check into tax breaks or incentive payments from your local city or county government offices given to individuals who install low flow faucets and shower heads.

Outdoors, try these tips.

Use mulch around trees and shrubs and in garden beds. This greatly reduces the amount of water lost through evaporation and reduces the need for watering.

Consider using a drip irrigation system in your garden. It supplies water only to the root zones of plants and reduces weeding because it doesn't water areas between crop rows and hills.

Use only plant varieties that are well adapted to your locality and soil conditions. Less suitable varieties may need more fertilizer or water to live. Contact your local Texas Cooperative Extension office for appropriate lawn and ornamental plants suitable for your area.

Use the rain water collected from your roof downspouts for watering your garden and flower beds. Some homes and businesses rely entirely on harvested rainwater for meeting all their landscape and domestic water needs. See Texas Cooperative Extension publication B-6153 entitled "Rainwater Harvesting (to order this publication visit http://tcebookstore.org. Additional information can be found at http://www.twdb.state.tx.us/.

Sweep walkways and driveways. Sweep walkways and driveways to remove debris rather than washing material away with a water hose.

A Final Note...

For help in locating water-saving devices or other advice about water conservation, contact your local county office of Texas Cooperative Extension.

Texas Water Resources Institute
make every drop count

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References

"Maintaining Your Septic System," a set of Cornell Cooperative Extension fact sheets authored by D. Solomon and E. Dersch, Michigan State University Cooperative Extension Service, and J. Saumier of Cornell Cooperative Extension. Cornell Cooperative Extension project team members include A. Meyer, Dutchess County; M. Keith, Putnam County; J. Saumier, Rockland County; and M. Shortlidge, Westchester County. USDA special project number 92-EWQI-1-9231.

"Water for Texas - 2002", Volumes I-III. Texas Water Development Board document number GP-7-1. January 2002. Austin, Texas.

United States Geological Survey (USGS) web publication "Estimated Use of Water in the United States in 1990 Domestic Water Use". http://water.usgs.gov/watuse/wudo.html.

The University of Maine Cooperative Extension. UMCE Bulletin Number 7083. Conserving Water at Home.

University of Georgia Cooperative Extension. Conserving Water at Home. Circular 819-1. April 1991.

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