



Water conservation facts and tips

To educate students and staff about conserving water, schools can use these facts in PA announcements, assemblies, e-mails, websites, school newsletters, and other school publications.

Water consumption

- The average North American uses 80 to 100 gallons of water per day. – U.S. Geological Survey, <http://water.usgs.gov/edu/qa-home-percapita.html>
- At least 40 states are projecting water shortages between now and 2024. – U.S. Government Accountability Office, <http://www.gao.gov/assets/670/663343.pdf>
- Although 70 percent of the earth is made of water, only 3 percent of the water is drinkable while 97 percent is salty or otherwise undrinkable. Two thirds of the earth's drinkable water is frozen in the form of glaciers and polar ice. The water left for human use is roughly one percent of the earth's total freshwater. – U.S. Geological Survey, <http://ga.water.usgs.gov/edu/earthwherewater.html>
- In the United States, 45 percent of water supplies go to industry, 42 percent to agriculture and 13 percent to domestic purposes, including personal, household and municipal needs. – UN-Water, <http://www.unwater.org/kwip>
- Approximately 1 in 9 people worldwide, or 783 million people, do not have access to clean water. Almost 2.5 billion do not have access to adequate sanitation. – UN Water, <http://www.unwater.org/water-cooperation-2013/water-cooperation/facts-and-figures/en/>

Bottled water

The King County Green Team guide on reducing bottled water use includes facts about bottled water and water use:

<http://your.kingcounty.gov/solidwaste/secondaryschool/documents/Plastic-Bottle-Campaign.pdf>

In the kitchen and laundry room

- In the kitchen, 10 to 20 gallons of water per day can be conserved by running the dishwasher only when it is full. If dishes are washed by hand, water can be conserved by filling the sink or a dishpan with water rather than running the water continuously. – Purdue University, <http://www.extension.purdue.edu/extmedia/HENV/HENV-9-W.pdf>
- An automatic dishwasher uses 4 to 6 gallons of water, whereas hand washing dishes can use up to 20 gallons of water. – National Geographic, <http://environment.nationalgeographic.com/environment/freshwater/water-conservation-tips/>
- The average top-loading clothes washing machine uses about 40 gallons of water per load, whereas newer, high-efficiency front-loading washing machine models use just over 20 gallons of water per load. – National Geographic, <http://environment.nationalgeographic.com/environment/freshwater/water-conservation-tips/>
- Run the clothes washer only with full loads. Water also can be saved by in the laundry room by adjusting water levels in the washing machine to match the size of the load.

In the bathroom (sink, toilet, bath, shower)

- Water used in toilets, showers, and bathroom sinks combined represent two-thirds of all indoor water use. – U.S. EPA, <http://water.epa.gov/polwaste/nps/chap3.cfm>
- A family of four can save up to 13,000 gallons of water per year by switching to more efficient toilets, which account for nearly 30 percent of residential indoor water consumption. Efficiency upgrades can save more than \$2,000 over the lifetime of the toilet. – US EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- Low-flow showerheads and faucet aerators are inexpensive devices that slow the flow of water without diminishing the quality of service provided by higher-flow models. These water saving devices can reduce water use by as much as 60 percent. – US EPA, <http://water.epa.gov/polwaste/nps/chap3.cfm>
- Letting your hot water faucet run for five minutes uses about as much energy as letting a 60-watt light bulb run for 14 hours. – U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- Take shorter showers. (Get a timer and time yourself.) A full bath tub requires about 70 gallons of water, while taking a five-minute shower uses only 10 to 25 gallons. – U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- Leaking toilets and dripping faucets amount to 14 percent of indoor water use. – King County Water Conservation Program, <http://www.kingcounty.gov/environment/wtd/Education/ThingsYouCanDo/UseLessWater/LowFlow.aspx>

- A leaky toilet can waste over 200 gallons of water a day. To check for leaks, place a few drops of food coloring in the tank of the toilet and wait 15 minutes (don't flush). If the color seeps into the bowl, the toilet flapper is likely worn and leaking. Place the old flapper in a plastic bag and take it to the hardware store to purchase a replacement. – U.S. EPA, <http://www.epa.gov/watersense/pubs/res.html>
- If your toilet is from 1992 or earlier, you probably have an inefficient model that uses between 3.5 to 7 gallons per flush. Newer, high-efficiency toilets use less than 1.3 gallons per flush. Since low-flush toilets use less water, they also reduce the volume of wastewater produced. – U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- If just 1 percent of American homes replaced an older toilet with a new WaterSense labeled toilet, the country would save more than 38 million kilowatt-hours of electricity-enough electricity to power more than 43,000 households for one month. – US EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- Use toilet displacement devices. Plastic containers (such as plastic milk jugs) can be filled with water or pebbles and placed in a toilet tank to reduce the amount of water used per flush. By placing one to three such containers in the tank (making sure that they do not interfere with the flushing mechanisms or the flow of water), more than one gallon of water can be saved per flush. – Virginia Department Emergency Management, <http://www.vaemergency.gov/readyvirginia/stayinformed/droughts>
- Homeowners can install pressure-reducing valves to decrease water consumption in homes that are served by municipal water systems. For homes served by wells, reducing the system pressure can save both water and energy. A reduction in water pressure also can save water by reducing the likelihood of leaking water pipes, leaking water heaters, and dripping faucets. It can also help reduce dishwasher and washing machine noise and breakdowns in a plumbing system. – US EPA, <http://water.epa.gov/polwaste/nps/chap3.cfm>

Water consumption and appliances

- If all U.S. households installed water-efficient appliances, the country would save more than three trillion gallons of water and more than \$18 billion dollars per year. – U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>
- If one out of every 100 homes in the United States was retrofitted with water-efficient fixtures, we could save about 100 million kilowatt-hours of electricity per year and avoid 80,000 tons of greenhouse gas emissions. The greenhouse gas savings would be equivalent to removing nearly 15,000 automobiles from the road for one year. – U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm>

Gardening and outdoor water use

- Water early in the morning and late in the evening to avoid evaporation. – King County Wastewater Treatment Division, <http://www.kingcounty.gov/environment/wtd/Education/ThingsYouCanDo/UseLessWater/Irrigation.aspx>
- Two to three inches of mulch in a garden bed acts like insulation. It helps retain moisture and cool temperatures in the summer and helps protect plant roots from frost in the winter. – King County Wastewater Treatment Division <http://www.kingcounty.gov/environment/wtd/Education/ThingsYouCanDo/UseLessWater/Compost.aspx>
- The typical single-family suburban household uses at least 30 percent of their total water for outdoor irrigation. Some experts estimate that more than 50 percent of landscape water use goes to waste due to evaporation or runoff caused by overwatering. Consider installing a drip irrigation system to water your lawn and garden. These systems use between 20 to 50 percent less water than conventional in-ground sprinkler systems. They also are much more efficient than conventional sprinklers because no water is lost to wind, runoff and evaporation. –U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm#landscaping>
- Trees and shrubs usually don't need to be watered once they are fully established (two to four years) – King County Department of Natural Resources <http://your.kingcounty.gov/solidwaste/naturalyardcare/watering.asp>
- Plant native or indigenous plants that require less watering than non-native plants. – King County Department of Natural Resources <http://green.kingcounty.gov/GoNative/index.aspx>
- Maximize the use of natural vegetation and establish smaller lawns. –U.S. EPA, http://www.epa.gov/region1/eco/drinkwater/water_conservation_schools.html
- Only water the lawn when necessary. Avoid watering on windy days. Water the lawn and flower beds in the morning or late in the evening to maximize the amount of water which reaches the plant roots. Otherwise, most of the water will evaporate. –U.S. EPA, http://www.epa.gov/region1/eco/drinkwater/water_conservation_residents.html
- Water only when necessary. If you walk on your lawn and leave a footprint, the grass is not receiving enough water. However, avoid watering your lawn in the summer. Mature lawns that go brown in the summer are in a natural period of dormancy and they will green up when wetter cooler weather returns. – US EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm#landscaping>
- Allowing the grass to grow slightly taller will reduce water loss by providing more ground shade for the roots and by promoting water retention in the soil. Growing plants that are suited to the area ("indigenous" plants) can save more than 50 percent of the water normally used to care for outdoor plants. –U.S. EPA, <http://water.epa.gov/polwaste/nps/chap3.cfm>

- To reduce water use in the garden, use plants that need little water, group plants with similar water needs, and water in the early morning or evening. –U.S. EPA, <http://water.epa.gov/polwaste/nps/chap3.cfm>
- Collect rainwater for landscaping needs. Use cisterns or rain barrels to capture rainwater from downspouts to use for newly planted vegetation. Use a lid, mesh fabric or add several drops of baby oil to prevent mosquitoes from breeding. – <http://www.epa.gov/greenhomes/ConserveWater.htm#landscaping>
- Reduce lawn to reduce use of water, chemicals and the time required to mow, rake and water. Replacing lawn area with native plants also attracts native wildlife. A natural landscape retains more water than a lawn and can recharge groundwater and streams during droughts. – King County Department of Natural Resources, <http://www.kingcounty.gov/environment/stewardship/nw-yard-and-garden/shrunk-lawn.aspx>
- Apply mulch around shrubs and flower beds to reduce evaporation, increase water retention, and promote plant growth and control weeds. –U.S. EPA, http://www.epa.gov/region1/eco/drinkwater/water_conservation_schools.html
- Check for leaks in pipes, hoses, faucets, and couplings. Leaks outside the house may not seem as bad because they're not as wasteful as leaks inside. Even the smallest drip from a worn washer can waste 20 or more gallons per day. –Earth Easy, http://eartheasy.com/live_water_saving.htm
- Washing a sidewalk or driveway with a hose uses about 50 gallons of water every five minutes. Sweep sidewalks and driveways instead of hosing them down. –Cascade Water Alliance, http://cascadewater.org/tips_outdoor.php
- To minimize evaporation, cover pools and hot tubs when not in use. –Cascade Water Alliance, http://cascadewater.org/tips_outdoor.php
- Wash your car at a commercial car wash to save water and to keep pollutants out of local lakes and streams. Or, wash your car with a bucket and sponge rather than a hose. – Maryland Department of the Environment, http://www.mde.state.md.us/programs/Water/WaterConservation/Pages/Programs/WaterPrograms/water_conservation/household_tips/carwashing.aspx

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