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Home & Environment

# Saving Water Saves Energy
# Tips for Conserving Water at Home

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## In this Publication



## Water-Energy Connection

Obtaining water from streams, rivers, aquifers, and other water bodies, and transporting it to water treatment facilities requires large amounts of energy. Once at water treatment facilities, energy is needed to pump and process water, and to distribute water to consumers. Further energy is used by consumers to treat water with softeners and filters, circulate and pressurize water with pumps and irrigation systems, and heat and cool water. Then the spent water or wastewater consumes more energy as it is pumped to treatment plants, where it is aerated and filtered. By conserving water, we decrease our demand for energy-intensive systems that obtain, treat, and distribute water. Simply put, by conserving water we save energy.

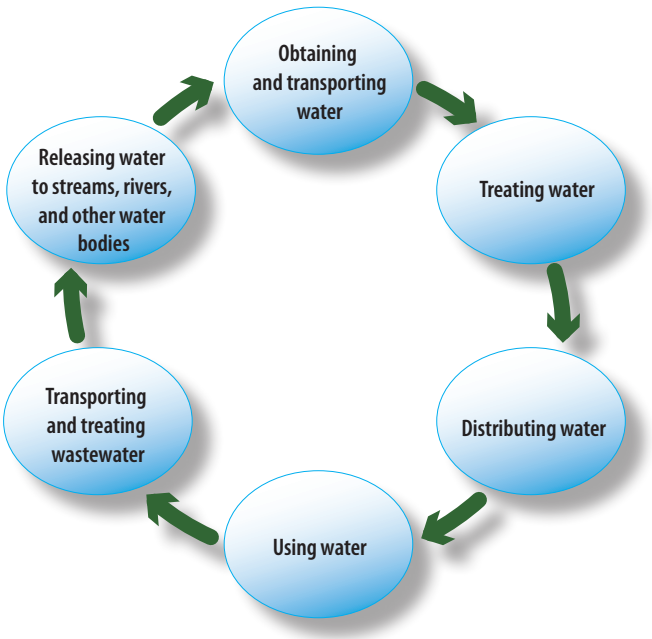


Figure 1. Energy used during the transport, treatment, distribution, and use of water and wastewater.

Aerating vs. non-aerating showerheads: An aerating low-flow showerhead mixes air into the water stream maintaining a steady pressure and providing an even, full shower spray. However, the temperature of the water may cool down slightly toward the floor of the shower since air is mixed with the water. A non-aerating low-flow showerhead does not mix air into the water stream; rather the water flow pulses, providing a strong, massaging type spray that maintains temperature.

On average, Kentuckians use 100 to 150 gallons of water per day per person. Approximately 70 percent of our water use is indoors, most of it used in the bathroom.

## Simple Tips to Save Water Indoors

### Bathroom

- Do not allow water to run when brushing your teeth, washing your hands or face, or shaving.
- When shaving, fill the basin with water and dip your razor in the basin as needed.
- Check your toilet and faucet(s) for leaks. Replace old (prior to 1993) toilets with new WaterSense-labeled toilets.
- Flush the toilet only when necessary. Do not use the toilet as a wastebasket. Throw tissues, insects, and other trash in the garbage, not the toilet.
- When taking a bath, plug the drain before turning on the faucet. As the tub fills, adjust the temperature.
- Use less than 5 inches of water when taking a bath.
- Install low-flow showerheads and aerators to restrict the flow of water.
- While waiting for water to get warm when taking a shower, catch water in a pitcher or bucket, and use to water plants.
- Limit showers to 3 to 4 minutes.

On average, water heating accounts for 12 percent of home utility bills and is the third largest home energy expense. For more information on water heating, including insulating water heater storage tanks and hot water pipes, visit the U.S. Department of Energy's Energy Savers' website at http://www.energysavers.gov/your_home/water_heating/.

### Kitchen

- Dispose of fruit and vegetable scraps in a compost pile instead of a kitchen garbage disposal. Garbage disposals use a lot of water and can create septic problems.
- Thaw meat and other frozen foods in the refrigerator or use the defrost setting on your microwave instead of using running water.
- Scrape, rather than rinse, dishes before putting into the dishwasher.
- Set your dishwasher to the water saving or short cycle (check manufacturer's instructions). Only run the dishwasher with a full load.
- Keep a pitcher of water in the refrigerator for drinking instead of running the faucet for the water to get cold.
- Cook food in as little water as possible to save water and prevent nutrient loss.
- While waiting for the water to get warm, catch the water in the sink or a pitcher and use for cleaning vegetables, washing or rinsing dishes, watering plants, or cleaning.
- Repair leaky faucets.
- Don't wash or rinse dishes under a running faucet. Instead use a pan or sink of water.

### Laundry

- Wash full loads of clothes. However, if you must wash smaller loads, adjust the water-level control to the appropriate setting. Some ENERGY STAR models adjust water needs automatically.
- Use cold water whenever possible to wash clothes.
- Read the manufacturer's instructions for your washer. Some cycles, such as the permanent press cycle, may use more water.
- Wear clothes more than once when possible.

**ENERGY STAR is a program sponsored by the U.S. Environmental Protection Agency and U.S. Department of Energy. The program promotes products that are energy efficient. When you see the ENERGY STAR logo on a product, you know that it is an energy efficient product. The ENERGY STAR logo can be found on a wide variety of products including appliances, computers and electronics, heating and cooling equipment, lighting and fans, and even plumbing equipment. For more information about ENERGY STAR visit their website at http://www.energystar.gov/.**

- Check your washer's hoses for cracks and leaks regularly. Replace rubber hoses with reinforced stainless steel or at least reinforced rubber hoses to reduce the risk of leaks and water damage.
- When replacing your old washer, look for a new, higher efficiency ENERGY STAR clothes washer. Visit www.energystar.gov for information on stores in your area.
- Use good laundering techniques. Pre-treat stains, sort clothes, and follow product (stain removers, detergent, bleach, fabric softener, etc.) recommendations to avoid rewashing or re-rinsing.

## Equipment and Appliances

- Read the manufacturer's instructions for your appliances. Washing machines and dishwashers often have cycles that use less water.
- When replacing an old appliance or product, look for a new, higher efficiency ENERGY STAR or WaterSense product. Visit www.energystar.gov or http://www.epa.gov/watersense for information on stores in your area.
- Install low-flow toilets, showerheads, and faucets. Visit http://www.epa.gov/watersense for information on low-flow products.
- Insulate your water heater tank and hot water pipes.
- Lower the temperature on your water heater. A savings of 3 to 5 percent in energy costs can be seen for each 10°F reduction in water temperature.
- If you plan to be traveling for three or more days, adjust the thermostat on your water heater to the lowest setting or turn off the water heater (check manufacturer's instructions prior to turning off).

Letting your faucet run for 5 minutes uses about as much energy as letting a 60-watt lightbulb run for 14 hours. —WaterSense


**The WaterSense program is sponsored by the U.S. Environmental Protection Agency to promote products that are water-efficient and high-performing, such as toilets, showerheads, faucets, and faucet accessories. The WaterSense label indicates a water-efficient product that is independently certified to perform as well as or better than standard models. WaterSense-labeled products can be found at home improvement stores. For more information, visit the WaterSense website at www.epa.gove/watersense/.**

If you can stick a screwdriver into your lawn easily, your grass does not need to be watered.

## Simple Ways to Save Water Outdoors

### Landscape and Garden

- To avoid water loss to evaporation, water your plants early in the morning.
- Weed your garden regularly to eliminate competition for water.
- Mulch plants, shrubs, and trees to retain moisture. Leaves and lawn clippings can be used as an alternative to purchasing mulch.
- In your garden, group vegetables that need more water together. This will allow for more efficient watering.
- Landscape with native plants.
- Replace high water-use plants with native or drought-tolerant plants.
- When purchasing an irrigation system, investigate which system is best for you and your lawn and garden needs. Micro-irrigation systems for gardens, trees, and shrubs irrigate slowly and decrease evaporation, runoff, and overspray. Only irrigate the areas of the lawn that need watering.
- Take into account soil type, sun or shade exposure, and the type of sprinkler when planning to irrigate.
- Inspect irrigation equipment once a month for leaks, broken or clogged heads, or other problems.
- Reduce overwatering by decreasing each irrigation cycle by 2 minutes and eliminating one entire irrigation cycle per week. Adjust sprinklers to eliminate overspray on sidewalks, driveways, and other impervious surfaces.
- Invest in a rain shutoff switch which turns off your irrigation system in wet weather.
- Raise the mowing height of your lawn mower. This promotes root growth, decreases heat stress, and helps your lawn stay more hydrated.

### Other Outdoor Uses

- When giving your pet(s) fresh water, use the old water for plants.
- For outdoor play, use a small pool instead of a hose or sprinkler.
- Check hoses and spigots for leaks regularly.
- Clean sidewalks, patios, and driveways with a broom instead of a hose.
- Install a rain barrel to collect rainwater to use on your lawn or garden.
- Instead of hand washing vehicles, use a commercial carwash that recycles water.
- Repair leaks around pool or spa pumps. Install a pool or spa cover to reduce evaporation.
- When using a water hose, use a hose nozzle to turn off the water when you are not using it.

**About the author**

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