

Appendix J: Water Conservation Tips

Saving water is easy and it starts with you! When you use water efficiently, you save money on your water, gas, and energy bills too.

Use these water conservation tips to:

- ◆ Educate your customers and ask them to share these ideas with their family, friends, and neighbors.
- ◆ Develop your own materials to personalize and reprint for your customers.

Indoor Use

General

- ◆ Never pour water down the drain when there may be another use for it. Use it to water your indoor plants or garden.
- ◆ Make sure your home is leak-free. When you are certain that no water is being used, take a reading of the water meter. Wait 30 minutes and then take a second reading. If the meter readings change, you have a leak!
- ◆ Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.
- ◆ When cleaning out fish tanks, give the nutrient-rich water to your plants.
- ◆ Teach your children to turn off faucets tightly after each use.
- ◆ Know where your master water shut-off valve is located. This could save water and prevent damage to your home.
- ◆ Encourage your school system and local government to develop and promote water conservation among children and adults.
- ◆ Set cooling systems and water softeners for a minimum number of refills to save water and chemicals, plus save more on utility bills.
- ◆ Insulate hot water pipes for more immediate hot water at the faucet and for energy savings.
- ◆ Support projects that use reclaimed wastewater for irrigation and industrial uses.
- ◆ Report broken pipes, open hydrants, and errant sprinklers to the property owner or your water provider.
- ◆ Wash your pets outdoors in an area of your lawn that needs water.
- ◆ 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.

Bathroom

- ◆ Take short showers instead of tub baths.
- ◆ In the shower, turn the water on to get wet; turn off to lather up; then turn the water back on to rinse. Repeat when washing your hair.
- ◆ Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- ◆ Shorten your shower by a minute or two and you'll save up to 150 gallons per month.

- ◆ If your shower fills a one-gallon bucket in less than 20 seconds, replace the showerhead with a water-efficient model.
- ◆ When running a bath, plug the tub before turning the water on, then adjust the temperature as the tub fills up.
- ◆ Bathe small children together.
- ◆ Place a bucket in the shower to catch excess water for watering plants.
- ◆ Never use your toilet as a wastebasket. Avoid flushing the toilet unnecessarily. Dispose of tissues, insects, and other similar waste in the trash rather than the toilet.
- ◆ Check for toilet leaks by adding food coloring to the tank. If you have a leak, the color will appear in the bowl within 30 minutes. Flush immediately to avoid stains. A leaky toilet can waste 200 gallons per day.
- ◆ Upgrade older toilets with water efficient models and ask your water provider if they offer rebates.
- ◆ If the toilet handle frequently sticks in the flush position letting water run constantly, replace or adjust it.
- ◆ If your toilet flapper doesn't close after flushing, replace it.
- ◆ If your toilet was installed before 1992, reduce the amount of water used for each flush by inserting a displacement device in the tank. Place a 1-gallon plastic jug of water into the tank to displace toilet flow or purchase a device available at most hardware and home centers designed for this purpose. Be sure installation does not interfere with the operating parts.
- ◆ Don't let the water run while brushing your teeth, shaving, or washing your face/hands.

Kitchen

- ◆ Keep drinking water in the refrigerator instead of letting the faucet run until the water is cool.
- ◆ Wash fruits and vegetables in a basin instead of running water from the tap. Use a vegetable brush. Re-use the water that vegetables are washed in for watering plants.
- ◆ Don't use running water to defrost meat or other frozen foods; thaw in the refrigerator overnight or use the defrost setting on your microwave.
- ◆ Kitchen sink disposals require lots of water to operate properly. Add food wastes to your compost pile instead of using the garbage disposal.
- ◆ Operate automatic dishwashers only when they are fully loaded. Use the "light wash" feature if available to use less water.
- ◆ Most dishwashers clean soiled dishes very well, so dishes don't have to be rinsed before washing. Just remove large particles of food and put the soiled dishes in the dishwasher.
- ◆ Run your dishwasher only when full.
- ◆ Soak pots and pans instead of letting the water run while you scrape them clean.
- ◆ Don't waste water waiting for it to get hot. Capture it for other uses such as plant watering or heat it on the stove or in a microwave. Or install an instant water heater at your sink.
- ◆ Some refrigerators, air conditioners, and icemakers are cooled with wasted flows of water. Consider upgrading with air-cooled appliances for significant water savings.

- ◆ When you give your pet fresh water, don't throw the old water down the drain. Use it to water your trees or shrubs.
- ◆ Designate one glass for your drinking water each day or refill a water bottle. This cuts down on the amount of glasses to wash.

Laundry

- ◆ Wash only full loads of laundry or use the appropriate water level or load size selection on the washing machine.
- ◆ Consider purchasing a high efficiency washing machine, which can save over 50 percent in laundry water and energy use.
- ◆ Run your clothes washer only when full.
- ◆ When doing laundry, match the water level to the size of the load.

Long-term Indoor Water Conservation

- ◆ Retrofit all household faucets by installing aerators with flow restrictors.
- ◆ Consider installing an instant hot water heater on your sink.
- ◆ Insulate your water pipes to reduce heat loss and prevent them from breaking if you have a sudden and unexpected spell of freezing weather.
- ◆ If you are considering installing a new heat pump or air-conditioning system, the new air-to-air models are just as efficient as the water-to-air type and don't waste water.
- ◆ Install a water-softening system only when the minerals in the water would damage your pipes. Turn the softener off while on vacation.
- ◆ When shopping for appliances, look for the WaterSense and Energy Star labeled models. Not only will you save water and energy, but your bills will go down too.
- ◆ Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year!

Outdoor Use

General

- ◆ If you have a well at home, check your pump periodically. If the pump turns on and off while water is not being used, you have a leak.

Car Washing

- ◆ Use a shut-off nozzle on your hose that can be adjusted down to a fine spray, so that water flows only as needed. Check hose connectors to make sure plastic or rubber washers are in place to prevent leaks.
- ◆ Consider using a commercial car wash that recycles water.
- ◆ Wash your car on the lawn, and you'll water your lawn at the same time.

Lawn Care

- ◆ Thirty percent of water used by the average American household is devoted to outdoor water use, and more than half of that is used for watering lawns and gardens.
- ◆ More than 50 percent of residential irrigation water is lost due to evaporation, runoff, over watering, or improper system design/installation/maintenance.

- ◆ Don't over water your lawn. Lawns only need one inch of water per week. Buy a rain gauge so that you can determine better when to water.
- ◆ Water the lawn or garden early in the morning during the coolest part of the day. Consider installing an automatic timer. Don't forget to adjust your watering schedule, as days get longer or shorter.
- ◆ Check sprinkler systems and timing devices regularly to ensure they operate properly.
- ◆ Raise your lawn mower cutting height—longer grass blades help shade each other, reduce evaporation, and inhibit weed growth.
- ◆ Avoid over fertilizing your lawn. Applying fertilizer increases the need for water.
- ◆ Use a broom or blower instead of a hose to clean leaves and other debris from your driveway or sidewalk.
- ◆ Don't leave sprinklers or hoses unattended. Set a kitchen timer when watering your lawn or garden to remind you when to stop. A running hose can discharge up to 10 gallons a minute.
- ◆ Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.
- ◆ To water sloping lawns, apply water for 5 minutes and then repeat 2-3 times.
- ◆ If installing a lawn, select a turf mix or blend that matches your climate and site conditions.
- ◆ If water runs off your lawn easily, split your watering time into shorter periods to allow for better absorption.
- ◆ Don't water your lawn on windy days when most of the water blows away or evaporates.
- ◆ Remove thatch and aerate your lawn at least once a year so water can reach the roots rather than run off the surface.
- ◆ Use a minimum amount of organic or slow release fertilizer to promote a healthy and drought tolerant landscape.
- ◆ Use sprinklers for larger areas of grass. Water small patches by hand to avoid waste.
- ◆ Let your lawn go dormant during the summer. Dormant grass only needs to be watered every three weeks or less if it rains.
- ◆ Install soil moisture sensors on sprinkler systems.
- ◆ Learn how to shut off your automatic watering system in case it malfunctions, or you get an unexpected rain.
- ◆ Install a rain sensor on your irrigation controller so your system won't run when it's raining.

Pool

- ◆ If you have a swimming pool, consider purchasing a new water-saving pool filter. A single back flushing with a traditional filter uses 180 to 250 gallons of water.
- ◆ Lower pool water level to reduce amount of water splashed out.
- ◆ Use a pool cover to reduce evaporation when pool is not being used.
- ◆ Install covers on pools and spas and check for leaks around your pumps.
- ◆ Make sure your swimming pools, fountains, and ponds are equipped with recirculating pumps.
- ◆ Use a grease pencil to mark the water level of your pool at the skimmer. Check the mark 24 hours later to see if you have a leak.

- ◆ When backwashing your pool, consider using the water on your landscaping if it does not contain chlorine.
- ◆ If you have an automatic refilling device, check your pool periodically for leaks.

Landscape Irrigation

- ◆ Detect and repair all leaks in irrigation system.
- ◆ Water trees and shrubs, which have deep root systems, longer and less frequently than shallow-rooted plants that require smaller amounts of water more often. Check with local extension service for advice on watering needs in your area.
- ◆ Use soaker hoses or trickle irrigation systems for trees and shrubs.
- ◆ Use mulch around shrubs, flowers, vegetables, and garden plants to reduce evaporation from the soil surface and cut down on weed growth.
- ◆ Mulching lawn mowers help protect water loss and do not require disposal of grass clippings.
- ◆ Spreading a layer of organic mulch around plants retains moisture and saves water, time, and money.
- ◆ Use mulch to retain moisture in the soil. Mulch also helps control weeds that compete with landscape plants for water.
- ◆ Plant with finished compost to add water-holding and nutrient-rich organic matter to the soil.
- ◆ When outdoor use of water is restricted during a drought, use the water from the air conditioning condenser, dehumidifier, bath, or sink on plants or the garden. Don't use water that contains bleach, automatic-dishwashing detergent, or fabric softener.
- ◆ Choose shrubs and groundcovers, instead of turf, for hard-to-water areas such as steep slopes and isolated strips.
- ◆ Plant in the fall when conditions are cooler, and rainfall is more plentiful.
- ◆ Water your plants deeply but less frequently to encourage deep root growth and drought tolerance.
- ◆ Remember to check your sprinkler system valves periodically for leaks and keep the sprinkler heads in good shape.
- ◆ Water your lawn and garden in the morning or evening when temperatures are cooler to minimize evaporation.
- ◆ Water only when necessary. More plants die from over-watering than from under-watering.
- ◆ Adjust your watering schedule each month to match seasonal weather conditions and landscape requirements.
- ◆ Apply water only as fast as the soil can absorb it.

Long-term Outdoor Conservation

- ◆ Consider replacing all or even a portion of your lawn with plants and trees that require less water.
- ◆ Replace your lawn with a flower or vegetable garden. Not only will you have fresh flowers and vegetables, but you'll save money at the grocery store and you won't have to mow your lawn anymore.

- ◆ Plant smart. Plant native and/or drought-tolerant grasses, ground covers, shrubs, and trees. Once established, they don't need water as frequently and usually will survive a dry period without watering.
- ◆ Install irrigation devices that are the most water-efficient for each use. Micro and drip irrigation and soaker hoses are examples of efficient devices.
- ◆ Use native plants or practice xeriscape garden techniques in garden and lawn areas. Native plants generally require less water than exotic species.
- ◆ We're more likely to notice leaks indoors, but don't forget to check outdoor faucets, sprinklers and hoses for leaks.
- ◆ Consult your local nursery for information on plant selection and placement for optimum outdoor water savings.
- ◆ Group plants with the same watering needs together to avoid over watering some while under watering others.
- ◆ Use a layer of organic material on the surface of your planting beds to minimize weed growth that competes for water.
- ◆ Direct water from rain gutters and HVAC systems towards water-loving plants in the landscape for automatic water savings.

Other Outdoor Uses

- ◆ Avoid installing ornamental water features, such as fountains, unless they use recycled water.
- ◆ Equip your swimming pools, fountains, and ponds with recirculating pumps.
- ◆ Trickling or cascading fountains lose less water to evaporation than those spraying water into the air.
- ◆ When the kids want to cool off, use the sprinkler in an area where your lawn needs it the most.
- ◆ Winterize outdoor spigots when temperatures dip below freezing to prevent pipes from leaking or bursting.
- ◆ Disallow irrigation of non-functional (purely decorative) grass outside of residential areas.

Industrial/Commercial or Institutional

Each industrial/commercial or institutional (ICI) facility is unique and may have water-using processes not indicated here. Look for innovative solutions to reduce water use. Here are some water saving tips for the ICI customer class.

- ◆ Adjust pump cooling and flushing water to the minimum required.
- ◆ As equipment wears out, replace with water-saving models.
- ◆ Install air-cooled ice machines. Machines that use single pass cooling water for their condensers can use ten times as much water as air-cooled units.
- ◆ Thaw frozen foods in the refrigerator rather than under running water.
- ◆ Replace pre-rinse shut-off spray nozzles—spray nozzles can use as much as five gallons of water each minute, while efficient low-volume nozzles use 1.6 gallons per minute. These units are designed to remove food as effectively as or even better than their high flow counterparts.

- ◆ Serve water in bars and restaurants only upon request.
- ◆ Wash only full loads in the dishwashers.

Eliminate Single Pass Cooling

Single pass cooling uses water once and then discharges it to the sewer. Single pass cooling can use up to 40 times more water than a closed loop-cooling tower. Consider:

- ◆ Installing a cooling tower.
- ◆ Replacing single pass water-cooled equipment with air-cooled units.
- ◆ Reusing single pass water in other processes as long as water quality is acceptable.

Sterilizers and Autoclaves

Sterilizers and Autoclaves can account for as much as 10 percent of hospital water use. This high amount of water usage is due to the large number of machines, their continuous availability, and the often inefficient design of older equipment.

- ◆ Retrofit units with solenoid operated valves. These valves can shut the unit off when not in service.
- ◆ Replace old inefficient units with new efficient models. Newer units are designed to recirculate water and shut the machine off when not in use.