

FOR URBAN AND RURAL OREGONIANS

# Saving



# Water, Energy & Fish

*During Dry Times  
(or anytime) in Oregon*



THE OREGON PLAN  
*for salmon & watersheds*



Natural Resources Conservation Service



OREGON  
DEPARTMENT OF  
ENERGY

**A**s Oregonians know, it doesn't always rain enough here, and snowpack levels don't always provide the amount of water we normally use over the summer for work and play. In dry times we all need to examine our water and energy use and make some changes.

**Saving energy saves water.** About half of our electricity comes from hydroelectric dams. **Saving water and energy also means saving salmon,** because fish need water year-round and to make their journey from streams to the ocean and back again. Together, we can get through dry times if we all pitch in – for our communities, for salmon and watersheds, and for our pocketbooks.



**Check off the actions below that you will take.**

**For starters, can you find 5 you will commit to now?**

## In the Home

**1** Repair dripping faucets and leaking toilets, replace washers in hose connectors, and clean gutters and downspouts with a broom or brush, not a hose. A faucet dripping one drop per second wastes 2,700 gallons of water a year!

**2** Wash only full loads in clothes washers and dishwashers and avoid using extra cycles. When washing clothes, wash in cold water using a cold water detergent, and consider the next tip below...

**3** Buy energy-efficient appliances. Oregon offers a tax credit for qualifying models, including clothes washers that use 60% less energy and up to 40% less water and detergent than standard models, and dishwashers that use 20 to 25% less energy and save up to 800 gallons of water per year. For more information, visit [www.oregon.gov/energy](http://www.oregon.gov/energy) or call 1-800-221-8035.



**4** Flush toilets only when needed. If your toilets were made before 1995, install a water displacement device in the tank and save about a gallon per flush. Some cities offer the devices free to their water customers. Not all devices work on all toilets. Replacing older toilets saves more – 10,000 gallons a year for the average household. Any model you buy

## 5 Make a family plan for saving electricity.

■ Raise the thermostat on your air conditioner — each degree cuts your cooling bill 2%.

■ Turn down the thermostat during the heating season — each degree saves you up to 3% on your bill.

■ Set back your heating system to 55° overnight and when you're away from home.

■ Set your water heater temperature to 120° to 130°.

■ Insulate electric water heaters if they are in an unheated area.

■ Turn off lights when they're not needed.

■ Replace standard light bulbs with compact fluorescent bulbs. They use 25% of the energy and last



10 times as long. Use energy-efficient bulbs outdoors too (make sure they are rated

for outdoor use if fixtures are exposed), or use motion sensors that turn on lights only when needed.

■ See if you can get by without that second refrigerator.

today uses only about 1.5 gallons per flush instead of 3.5 to 7 gallons, and some models have 2 flush levels.

6 Call the utility that provides your heat for a free home energy audit. You'll learn which measures make the most sense for your home. You can get cash rebates and low-interest loans for weatherization and other conservation measures. If you heat with oil or wood, call the State Home Oil Weatherization Program at 1-800-452-8660.

7 Seal heating and cooling ducts, test and service heat pumps for peak efficiency, install highly efficient air conditioning systems or make electricity from the sun — and get a state tax credit. Call the Oregon Department of Energy for more information: 1-800-221-8035.

8 Install high-performance shower heads that give a powerful spray using far less water. They cost more, but can pay for themselves quickly in water, sewer and energy savings. Reduce your shower time to five minutes or less.



A five minute shower uses only 12 to 15 gallons with a high performance shower head, but over 40 gallons with a standard model. Each person in your house can save over 10,000 gallons per year.

9 Waiting for hot water? Put a bucket or jug under the faucet or shower-head and save the cooler water for other uses like watering plants. Or install an *on-demand* hot water recirculation system (avoid continuous or timed systems which save water, but use more energy).

**10** Turn the faucet off when brushing your teeth, shaving or when you hand-wash dishes. A faucet running wide open puts about 3 to 5 gallons a minute down the drain! Use garbage disposals sparingly.

**11** Keep a container of cool water for drinking in the refrigerator instead of running the faucet. And keep the refrigerator door open only as long as needed.

**12** Install aerators in bathroom and kitchen faucets. Aerators are easy to install, and they can save up to 5 percent on your indoor water use, enough to reduce your water heating bills.



## Around the Home

**13** Sweep sidewalks and driveways instead of hosing, and put the sweepings in the garbage. You'll save water and prevent pollutants and debris from entering streams from storm drains.

## LAWN TIPS

**14** Most lawns are watered about twice as much as needed. Lawns grow best when watered no more than one inch per week. Most lawns can't absorb more than 1/2 inch in an hour. Over-watering washes away nitrogen (turning your lawn brown) and washes fertilizers and weed killers into storm drains (which end up in streams). To find out how long you need to run your sprinklers, set out one or more empty tuna cans where you water and note the average time they take to fill one inch. That's how long to run sprinklers over a week. Split this watering time into two periods. For more terrific info, go to [www.healthylawns.org](http://www.healthylawns.org).

**15** Timing is everything! Water between 9 p.m. and 10 a.m. (Between 4 a.m. and 10 a.m. is even better to avoid growth of fungus.) Avoiding the hot, windy part of the day reduces evaporation losses and saves up to 30% on water use. If dew is heavy, you can put off watering another day. And, if that's not enough, try the tip below...

**16** Let your lawn go brown in the summer. That's what grasses do naturally. When the rains return, your lawn will be as green as ever! Or reduce your lawn area and plant native plants adapted to your local climate.

**17** Mulch! Use a mulching mower that leaves the cuttings in the grass. You won't need other fertilizers. Cut your lawn 3-4" high to protect the roots from drying sunlight.

**18** Choose the right plants. Use plants that are low-water users, primarily plants native to the area. Replace turf with ground covers such as juniper or heather. Group any high-water use plants together so they can be efficiently watered.

**19** In planted beds, cultivate the soil regularly so water can penetrate and encourage a good root system. Use mulch around plants to retain moisture, and consider using a soaker hose or drip irrigation system instead of a sprinkler.

**20** Check hoses for leaks, and use a hand-held sprayer to water shrubs so you can control where the water goes.

**21** Wash your car at a car wash that recycles the water. If you wash your car at home, use a shut-off nozzle on the hose. Wash the car on the lawn to prevent soap from going directly to storm drains. Bacteria in the soil will cleanse the water before it gets to a stream.

**22** Avoid oscillating sprinklers that tend to over-water the ends when they reverse direction. Soakers and stationary sprinklers work better.

**23** Rain barrels are a way to catch rainwater from your roof to use in the yard. Find out about rain barrel safety requirements and precautions to avoid breeding mosquitoes – plus other strategies – at [www.portlandonline.com/oni/index.cfm?c=29373](http://www.portlandonline.com/oni/index.cfm?c=29373) or call 503-823-3050.

## On the Farm or Ranch

**24** Graze properly for a drought-tolerant pasture. Grass needs three inches of leaf or more to support roots below. When grazing removes too much leaf, roots may die, and the pasture will be less drought-tolerant. Use rotational grazing.



**25** For hay growers, harvesting one cutting instead of two saves water in a drought year. For pastures, water is important in the spring. If grass develops good root systems during this critical period, it will be more drought-resistant.

**26** To minimize evaporation losses, irrigate early in the morning or at night, if possible, when winds are calmer and temperatures are lower. Properly maintain your irrigation system by replacing all leaking gaskets and worn nozzles.

**27** Exclude livestock during irrigation and until soil surfaces dry. Wet soils are compacted by livestock, reducing water infiltration and crushing root growth.

**28** Control weeds that compete with crops and grasses for moisture.

**29** Reduce nitrogen applications during drought by 25 to 50%. Normal amounts of phosphate, potash and sulfur are still needed.

**30** Apply water according to crop needs. Annual crops use a net application of 1 to 2 inches per week in the summer. Critical irrigation times are during flowering, seed fill and fruit set. Account for soil moisture and rainfall, as well as crop need, in your watering plan.

**31** Consider adjusting livestock numbers to balance with forage supplies. Consider selling calves and lambs early.

**32** Grow small grain for use as hay or pasture. Grain requires less water than conventional forage crops.

**33** Check springs, stock tanks, float valves and pipelines to ensure they are operating properly. Repair all leaks.

**34** Operate tillage tools at shallower depths in dryland conditions.

**35** Delay spring tillage until absolutely necessary to help conserve soil moisture.

**36** Leave crop residues on the soil surface for improved soil moisture from mulching effects, increased water absorption and reduced surface runoff.

**37** Energy-efficient irrigation pumps save both energy and water. State tax credits and loans may be available. Contact Oregon Department of Energy at 1-800-221-8035





**38** Not using your computer or computer games? Turn them off to save energy. And don't forget to shut off the monitor.

## For more information on reducing water and energy use, contact the following:

- **Natural Resources Conservation Service (NCRS):** [www.or.nrcs.usda.gov/water.html](http://www.or.nrcs.usda.gov/water.html)  
Weekly monitoring reports on snowpack and drought conditions. Also visit [www.wcc.nrcs.usda.gov/nrcsirrig/](http://www.wcc.nrcs.usda.gov/nrcsirrig/) for additional irrigation recommendations.
- **Oregon Department of Energy:** [www.oregon.gov/energy](http://www.oregon.gov/energy)  
or (503) 378-4040 or 1-800-221-8035 (in Oregon)  
Energy conservation tips and information on tax credits and other programs for residences, business, industry, schools and governments.
- **Oregon State University Extension Service:**  
<http://extension.oregonstate.edu/emergency/drought.php>  
Publications and information to help Oregonians cope with water shortages at home, in the garden and on the farm. Also includes links to info about livestock management, farm production, monitoring and mitigation during drought.
- **Oregon Water Resources Department:** [www.wrd.state.or.us/OWRD/WR\\_drought.shtml](http://www.wrd.state.or.us/OWRD/WR_drought.shtml)  
Updates on drought conditions, Governor's declarations of state drought emergency in various counties, and other government programs addressing drought. Includes steps to save water for residential, municipal, agricultural and commercial/industrial water users.
- **Bonneville Power Administration:** [www.bpa.gov](http://www.bpa.gov)  
Learn how to make voluntary energy efficiency efforts through "Save A Watt."
- **City of Portland Bureau of Water Works:**  
[www.portlandonline.com/water/index.cfm?c=30675](http://www.portlandonline.com/water/index.cfm?c=30675)  
Information on water conservation and how to do a water audit of your toilet, sink and shower to determine water usage and where to install water-conserving devices (and save money).
- **Energy Trust of Oregon:** [www.energytrust.org/](http://www.energytrust.org/) or 1-866-ENTRUST (368-7878)  
Incentives to conserve energy in homes and businesses for Oregon customers of Pacific Power, Portland General Electric, and NW Natural.
- **Portland General Electric:**  
[www.portlandgeneral.com/EE?aux\\_html/Tips/tipover.asp](http://www.portlandgeneral.com/EE?aux_html/Tips/tipover.asp)  
Room-by-room strategies to save energy plus renewable power choices for PGE customers.
- **Pacific Power:** [www.pacificpower.net/Article/Article46670.html](http://www.pacificpower.net/Article/Article46670.html)  
Take an online home energy audit and check out Blue Sky renewable energy options.



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