



## Managing During Critical Shortages

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Periods of critical water shortage—or even water rationing—demand serious and resourceful water-use management. To reduce water consumption, you can change many practices and habits without posing a threat to your health, comfort, or productivity.

### Why conserve water?

Drought is the immediate reason for most Oregonians to conserve water. However, there are other reasons to conserve water. The United States Environmental Protection Agency (EPA) identified three major reasons to conserve water: to help prevent pollution, to save money, and to improve reliability of water sources.

### Do you know where your water goes?

The typical American family of four uses about 310 gallons of water per day for indoor purposes. Water use is broken down into the following categories:

- toilet flushing (40%)
- bathing (32%)
- laundry (14%)
- washing up (3%)
- drinking, food (11%)

How closely your family water follows these average figures depends upon whether or not you have already installed low volume toilets and low-flow shower heads, whether you let the water run while brushing your teeth, and so on.

### What has the greatest conservation effect?

Changing household practices can reduce water use without posing a threat to family health or comfort.

Start with the activities that use the most water (toilet flushing and bathing or showering) and install low-flow devices to permanently change your water use. Then begin to make other conserving changes in family water use. Some ideas are listed below. It probably is not realistic to make all of these changes; start with changes that have the biggest impact on your water use and that you can stick with.

### Home plumbing system

- Check your water supply system pressure. If it's over 50 pounds per square inch (psi), install a pressure-reducing valve or regulator adjusted to 40 to 45 psi.
- Repair leaky faucets at the first indication of leakage.
- Install aerators with built-in flow limiters on kitchen, laundry, and bathroom faucets.
- Insulate hot water pipes to reduce the water you must run to get hot water from the faucet (also conserves energy).
- Check for toilet leaks by putting food coloring in the tank and checking the bowl water 15 to 30 minutes later.
- Check frequency of home water-softener regeneration and backwashing. Once a week is usually enough for a family of four.

- If you use an outdoor swimming pool, clean the filter regularly to extend the time you use the water before you need to replace it.
- Cover the swimming pool when you're not using it to reduce evaporation and to prevent leaves, dust, etc. from dirtying the water and necessitating replacement.

### The toilet

The toilet is a major water user:

- Greatest savings can be achieved by pouring a bucket of "gray water," salvaged from the bathtub or sink, into the toilet bowl instead of using water from the toilet tank.
- Depending on size, toilet flushing uses from 5 to 7 gallons per flush. It is not necessary to flush after every use. Reduce odor by adding a little vinegar, liquid detergent, or chlorine bleach to the bowl.
- Reduce the flush volume of your toilet tank by placing a 1-quart or larger plastic container filled with water in the tank. Position it so it doesn't interfere with the flushing mechanism. Don't use bricks (they can crack the tank if you drop them, or they may disintegrate and cause plumbing problems). Bending the float arm to lower the water level in the tank is not recommended; it may create improper or inadequate bowl flushing.

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One portion of the dishwashing task that can be eliminated is the pre-rinse of dishes before loading the machine if you run the dishwasher through a full cycle (a short, water-conserving cycle does not remove food left on dishes). Also, as long as you plan to run the dishwasher relatively soon after loading, you don't have to wash the dishes first. With continued mechanical improvements in machines and technological improvements in detergents, less and less preparation is needed, saving you the extra work and using less water and power to get the job done.

### Waste disposal

If you own a waste food disposer, become conscious of the times you run it. Cold water is used in operating a disposer so that fat particles solidify and are chopped and flushed into the sewer system. It is estimated that under normal conditions, the average person uses 1.5 gallons of water per day to operate a disposer.

Remember that waste food disposers are made to operate with the water running. Operating the machine without running water will ruin it. If you are serious about not using water, then dispose of food wastes by other means. Careful planning can help eliminate some of the waste from the start.

One way to simplify cleanup is to peel vegetables, eggs, or other food onto newspaper, wrap the paper

around the food waste, and then dispose of the package in the garbage container. This saves you from scraping peelings out of the sink or off the counter after the preparation job is done. It will save water because you don't have to operate the disposer. This might be a good time to consider starting a compost pile if you have available outdoor space.

### Water storage

As an emergency measure, store drinking water for short periods of time. Clean plastic and glass jugs with tight-fitting lids or stoppers are good storage containers. Fruit jars, quart jars, and picnic vacuum jugs are also adequate.

All water stored for later use should be purified first as follows:

**Boiling.** Boil vigorously for 1 to 3 minutes to destroy bacteria that might be present. Before drinking, pour the boiled water from one clean container to another several times to improve the taste.

**Bleach method.** Any household bleach solution that contains hypochlorite, a chlorine compound, as its only active ingredient will purify water easily and inexpensively. Bleach solutions with 5.25% of sodium hypochlorite are available in grocery stores.

Add bleach solution to water in any clean container in which it can be thoroughly mixed by stirring or shaking. The following table shows the proper amount to add.

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### Water purification by bleach method

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Amount of  
solution to add to:

Amount of water	Clear water	Cloudy water
1 quart	2 drops	4 drops
1 gallon	8 drops	16 drops
5 gallons	1/2 tsp	1 tsp

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Add bleach solution to water and stir, then let the mixture stand for 30 minutes. After this, the water should still have a distinct taste or smell of chlorine. If this taste or smell is not present, add another dose of solution to the water and let the water stand another 15 minutes. Taste or smell of chlorine in the treated water is a sign of safety.

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