



# **WATER CONSERVATION**

SOME TIPS FOR HOME USE

Illinois residents have, for the most part, been accustomed to a cheap, plentiful supply of water. People in other states have not been as fortunate. California and Idaho, for instance, have been experiencing a declining water supply for several years. The material in this pamphlet was taken from one published by the East Bay Municipal Utility District of Oakland, California for their customers.

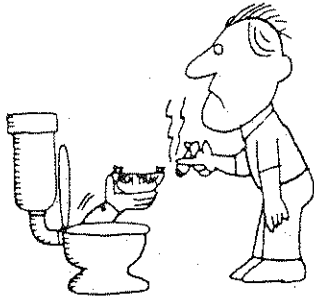
Some Illinois communities have been threatened with a shortage of water. People in these areas will find the tips developed for California residents very timely. These suggestions will also be useful to those who have ample water but who want to practice conservation and at the same time save energy and money.

## household water conservation

Household water conservation not only saves water, but helps control water pollution. The bathroom is the place in the house where you can make the most substantial reduction in your personal water use. Two-thirds of the water used inside the house is used in the bathroom, mostly for flushing toilets and for showers and baths. However, much of the water may go into the sewer needlessly, where it adds to the volume of sewage and puts an extra burden on the treatment plants.

### toilets

Each time a toilet is flushed, as much as seven gallons of water flows into the sewer. There are two ways to cut down on the water used in the



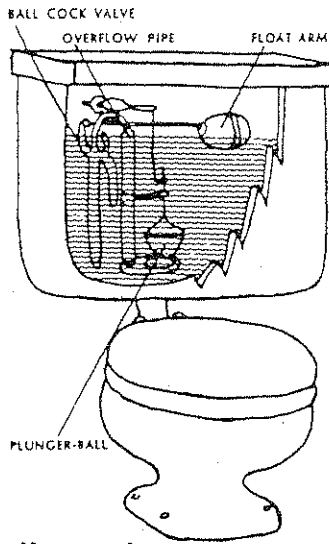
toilet—first, don't use it as often; and second, reduce the water per flush.

The toilet is not a trash can, and it should not be used to flush away tissue, gum wrappers, cigarette butts, spiders, diapers, or anything else that should go into the waste basket or garbage can. Each of us does this at some time, and it is a phenomenal waste of water. Please use the toilet only for its intended purpose.

Most toilets use more water than is necessary and can operate just as well using less. There are a variety of methods of reducing the flow, but most are variations of water displacement. That is the theory behind putting bricks in the toilet tank, but please do not use bricks. It is all too easy to crack your tank with the extra weight, and after a while the bricks may disintegrate and cause serious and expensive problems in your plumbing system.

An inexpensive, safe, and easy method of displacement is to use plastic bottles, such as soap and laundry softener bottles. Fill them with water, weight them, and place them in the tank. Using bottles gives you better control over the volume of water in the tank, and it doesn't cost you anything.

However, please be sure that you don't displace so much water in the toilet tank that you must flush it twice to get it to work each time. Double flushing wastes more water than you save. Also, take care that the plastic bottles don't interfere with the toilet mechanism. With the bottles, you can adjust the volume of water so the toilet flushes efficiently but does not use as much water to do it.



### toilet maintenance

Toilets are notorious for their hidden leaks, and they can waste thousands of gallons of water a day undetected. A toilet will leak when it is out of adjustment or when its parts are worn, so it is important to check it periodically.

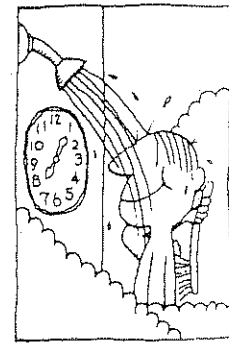
A toilet usually leaks at the overflow pipe or at the plunger-ball. If it is at the overflow, it is generally because the water level is too high, though sometimes the overflow pipe develops a leak below the water level. You should gently bend the float arm down so that the valve shuts off a half inch below the top of the overflow pipe or at the level indicated on the inside of the tank. Often the valve is worn and will run like a leaky faucet, and it will probably need replacement. Overflow leaks can be detected by a visual inspection, although they are not always obvious.

Plunger-ball leaks are not as easy to see. The easiest way is to drop a little food coloring into the tank and wait to see if it shows up in the bowl. If it does you probably have a leak at the plunger-ball, either because the ball needs replacing, or because the mechanism is out of alignment. Even if you don't see the color in the bowl, you might still have to replace the ball if you occasionally have to jiggle the toilet handle or hear a low hum. Bent or scummy connecting rods can hang up and cause leaks too.

### showers

Most showers use between four and seven gallons a minute, although some use as much as 10 gallons. A five-minute shower can use over 40 gallons of water, and longer showers can become an extravagant waste of water. A partially filled tub bath will use far less water than a long shower, though a short shower may use less than a full tub. (So much for the myth that tubs require more water for bathing.)

The best way to save water in showers is simply to take shorter showers and turn down the faucets. Next time you are in the shower, time yourself. Odds are good you really do not need to stand that long under the water, nor do you need it



running at full blast. There are also devices available which reduce the flow of water in shower heads.

Cutting down on the amount of water used in the shower will conserve energy as well as water. Energy is needed to heat water, and the more hot water you use, the more energy you use. Pumping water requires energy also.



And speaking of hot water, it can take a long time before water will run hot out of the tap. Many people collect in a pan the cold water that runs before it gets hot and use it for watering house plants and other uses.

### shaving, teeth brushing, hair washing

While you shave or brush your teeth, don't leave the water running. It is just as easy to turn the faucet on and off as you need water. Water running unused is like connecting the drain to your tap, and those few gallons a minute can add up to a lot of wasted water.

### kitchen

The big user of water in the kitchen is the automatic dishwasher. It will use around 25 gallons a run, whether there is a full load or just a tea cup in it. This doubles as an energy-saving tip also, along with shorter showers and full loads in washing machines, because these all use a lot of hot water and electricity to run them. Dishes don't need to be thoroughly rinsed before they are put into the dishwasher. Usually if they are scraped clean first, the dishwasher can handle the rest.

When washing dishes by hand, don't leave the water running. A sink full of wash water and one of rinse water will do the job just as well as leaving the tap on.

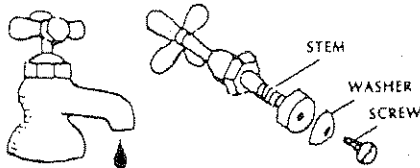
When you scrub vegetables and prepare foods, put a stopper in the sink instead of letting the faucet run.

Water won't get much colder if you let it run when you want a drink. Keep a jug of ice water in the refrigerator instead for that cold drink of water.

## laundry

A washing machine will use about 40 gallons of water a load, whether it is a week's worth of clothes or just a couple of washcloths. The same idea applies to both dishwashers and washing machines—save up for a full load and make your water work efficiently.

For hand laundering, put a stopper in the washtub for both washing and rinsing, and don't let the water run.



## leaks

Lots of water flows from little leaks. A deceptively small drip can waste 170 gallons a day, and more than 1000 gallons a day can pour through a leak only one-sixteenth inch in size. And when a hot water tap is dripping, you are wasting energy also.

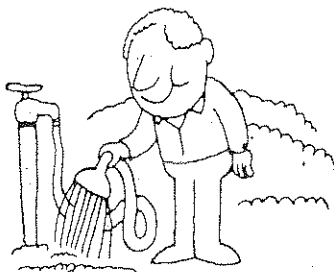
Most leaks, besides toilet leaks, are in faucets, and are most commonly the result of worn washers. It is a good idea to make a regular check of every tap in the house a couple of times a year to see if all the faucets are working properly. If water still drips after you have turned the faucet off firmly, take it apart as shown in the diagram and replace the old washer with a new one of the same size and style. It is important to get an exact replacement. The washer used should fit easily inside the "cup" and spread out to the edges when screwed down. If it still drips you might have a more difficult problem which would best be handled by a plumber.

## shutoff valves and emergencies

You never know when your water heater is going to blow out, or when a pipe will burst, or when a faucet will decide to become a fountain. When these kinds of disasters happen, you will need to know how to shut off the water.

Most sinks, wash basins and toilets in the house have shutoff valves below them which will cut the water off at that fixture. The hot water heater also has a shutoff valve which will cut off the hot water in the house. Unfortunately few homes have shutoffs for bathtubs and showers. It is a good idea to check your house to find all the shutoff valves and make sure they work.

In addition to all the other valves, most homes have a main shutoff which will turn off all the water coming into the house. It is usually located where the water pipe enters the house. Check the main valve to see that you have one and that it works. We advise you to have a plumber correct the situation if you do not have a shutoff or if it doesn't work.



## gardens and outdoor use

The basic principle to follow when watering the lawn and garden is not to give it more water than it needs. Some people irrigate their lawns with double the water the lawn actually needs to thrive.

Rather than following a fixed schedule to water the lawn, water it only when it shows the first signs of needing it. You don't need to water the lawn as often in cool weather and on cloudy days. Watch the weather and the lawn before you decide to water it.

Heat and wind will rob your lawn of the water before it can use it. Avoid watering on windy days and you will avoid having most of the water going somewhere besides the garden. Water in the cool of the day, both to avoid excess evaporation and the chance of harming the lawn. Weeds are water thieves also, so keep your garden free of them.

Let the water sink in slowly. Lots of water applied fast will only run off into the gutter where it does no good. If you let the water sink deep, you won't need to water as often and your lawn will develop deeper roots which will let it go longer without water. Mulch on the garden will hold water longer.

You don't need to water the garden until it is flooded. At that point all the water you add will run off, and the garden already has as much as it can use. A kitchen timer is handy to remind you to turn off the sprinklers, and there are sprinkler timers available on the market.

Make sure your sprinklers and hoses are adjusted to water just your lawn and garden. Irrigating sidewalks and gutters will not make them turn green, or grow either.



When you water shrubs and trees, find out how much water they actually require, and let the water flow slowly so that it will penetrate deep into the ground. "Drip" irrigation uses this principle and it might be the best way to water your garden.

Water Conservation in your garden is common sense. Water only when you need to, and use only as much as you need.

## other outdoor use

As much as 650 gallons of water or more will flow through a 5/8 inch garden hose in an hour. Remember that, whenever you use the hose outside your house. If you happen to forget and leave your hose running unattended, thousands of gallons can be lost in a very short time.

When washing the car, use a bucket for the soapy water, and don't leave the hose running while you wash. A shut-off nozzle on the hose will do the trick. Use the hose only for rinsing the car. A flowing hose in the driveway won't get your car any cleaner.

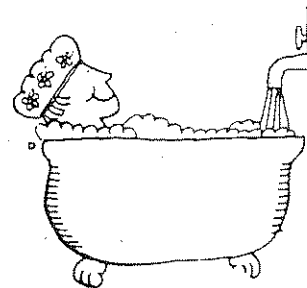
Using a hose instead of a broom is wasteful also. It isn't the best use of water to shoot it down the gutter, so use a rake and a broom to clean up the leaves and debris on your sidewalks, yard, and gutters.

And on those hot summer days when kids are just itching for a water fight, we would suggest water balloon battles rather than garden hose fights, and use the lawn as the field of valor.

## a good way of life

Water Conservation is a good way of life. We must remember where our water comes from, and where it goes. A toilet flush is up to seven gallons, water taps can flow up to five gallons a minute, showers at five to ten gallons a minute, and leaks can waste hundreds and thousands of gallons a day. When we are aware of water, it becomes easier to conserve it. It shouldn't be hard to conserve water; it doesn't have to change our lives drastically—mostly it is common sense.

We want you to think about your water, and when you think about it, please conserve it.



## water-saving fixtures and devices

There are many different kinds of water-saving devices on the market, although some may not be readily available. The following suggestions are an indication of what is available, but plumbing supply outlets and hardware stores have more detailed information.

Water-saving shallow trap toilets are being made, but they might be in short supply. Consider using one when you need to replace an old toilet.

Toilet tank insert devices will reduce the amount of water needed for flushing by holding back or displacing water. Other devices modify the flushing mechanism to permit variable flushes according to need by making it necessary to hold the flush lever longer for a full flush.

Reduced-flow shower heads are made by a number of manufacturers. There are also a variety of adapters around which can cut down the flow in existing fixtures.

Some washing machines are made which can reuse wash water for several loads. These also reduce the amount of detergent needed.

Sprinkler timers which shut off the water after a set time can prevent overwatering in the garden.