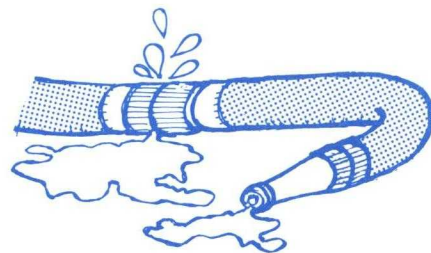


UTILITY WATER SAVING

In addition to urging their customers to save water and telling them how, water utilities can take several actions to cut water waste. One water utility has set up a continuous program of seeking and repairing leaks in its distribution lines, and in the first year water savings from repaired leaks totaled 6.8 million litres (1.8 million gallons) a day.

In some water-short areas building codes were amended to require installation of water-saving devices in new construction. State law permits municipal water districts to require such installations.



Studies indicate that installing water meters in previously unmetered areas can cut water use by 30 percent or more.

Traditionally, many water utilities have charged large water users lower rates for water than they have charged small water users, such as homeowners. The price of water can influence the amount used, and rate structures which favor larger users should be carefully examined to see if they promote waste by large water users. More and more communities are converting to a uniform rate, charging the same unit price regardless of the amount of water used. Some utilities increase the rate after a basic necessary amount is used. This is usually called a lifeline rate.

AGRICULTURAL WATER SAVING

Agriculture is not only California's leading industry, it is by far the greatest user of water--85 percent of the state's water use is for agriculture.

With California's two-season climate--wet winters and bone-dry summers--irrigation is essential for most crops. Here and around the world, researchers are implementing ways to reduce agricultural demands for water.

Plant varieties are being developed which need less water. Researchers are also finding that some existing plants actually need less water than is usually applied now to produce nearly the same yield. This directly saves water, since less is transpired or evaporated from the plant surfaces. More efficient ways to apply water, such as drip irrigation and sprinklers, help to reduce runoff and evaporation from the ground surface.

In some cases a different crop which uses less water, but produces the same or better dollar return to the farmer, may be suitable for the location and soil conditions. Consult your local farm advisor.

Irrigation management advice is available on how to tailor water application exactly to the crop, soil and climate, and water supply to make the most efficient use of water. Again, see your local farm advisor.

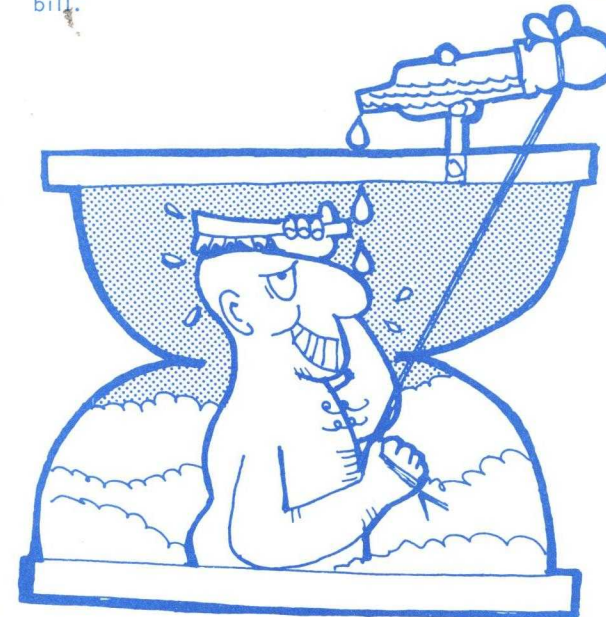
Farmers can also reduce water use by grading their fields to minimize runoff and improving their delivery systems to reduce losses. Irrigation districts can continue to make their distribution systems more efficient and encourage farmers to participate in water conservation programs.

WHAT IT SAVES

Much of California's urban water use is in the metropolitan areas along the coast. Here, water is generally used only once and, after treatment, is dumped into the sea. So -- since other people do not use this water for their supply -- every litre not used in the area is a litre saved. A ten percent reduction in water use through reasonable conservation practices could save as much as 615 cubic hectometres (500,000 acre-feet) of water a year.

Conversely, much of the agricultural water use is in the Central Valley, where excess water applied to a field returns to a usable water source and often is reused by downstream irrigators. The major saving possible here can be from reducing evaporation from the soil, crop, weeds and water surfaces; percolation into salty ground water; or return flows which finally reach the ocean. These savings may equal or exceed those from urban savings.

Energy saving from water conservation can be as impressive and significant as the water saving. Most water is pumped from its original source to the consumer, and further pumping energy is needed to pressurize water lines. The energy needed to supply a home with water may equal 20 percent of the average household's energy use for other purposes. And reducing hot water use and insulating water pipes will substantially reduce the average household energy bill.



About 40 percent of California's water needs are met by pumping from ground water basins and agriculture uses much of this. Any reduction in ground water pumpage means a proportionate energy saving.

Water saved through conservation may remain in the streams and lakes to preserve the environment, or be used to meet the needs of our expanding population. In the latter case, the saving may delay the need for more surface water development or save a ground water basin from further lowering of water levels.

This brochure only scratches the surface of water-saving possibilities. **Write to the California Department of Water Resources for more detailed information in specific areas, using the attached coupon.**

R-6-76



State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

Public Information Office
Department of Water Resources
Post Office Box 388
Sacramento, CA 95802

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WATER CONSERVATION

No one had to remind the old-time desert prospector to conserve water. Those canvas-covered canteens slung over a burro's back were the only life insurance one had.

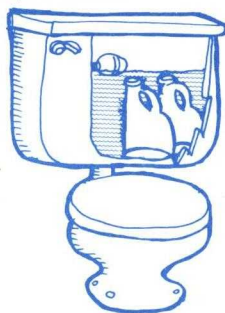
Today, even though Californians must spend millions to provide and maintain reliable water supplies, many of us waste more water every day than the old sourdough saw in a month.

We can take a few simple, common-sense steps to save large amounts of water -- and in the process, reduce sewage flows and the amount of wastes discharged to the environment. Lowering sewage flows will save energy and money since less sewage will have to be processed. So saving water **saves money** by cutting our water, energy, and waste treatment bills.

And water conservation has other benefits. If Californians take sensible steps to save water, we can reduce the need for additional water development--and help preserve our environment.

HOUSEHOLD WATER SAVING

Toilets use more water than any other fixture in the home. Most models use about 19 to 23 litres (5 to 6 gallons) per flush.



A state law passed in 1976 requires that **low-flush toilets** be installed in new houses, apartments, motels and hotels built after 1977. These toilets will use no more than 13¼ litres (3½ gallons) per flush. These water-saving toilets will also be required when additions are made to houses, apartments, motels and hotels when the installation will not require substantial change in the existing plumbing system.

Low-flush toilets are already produced by most manufacturers. Persons installing new plumbing or replacing old toilets can save water by installing these models.

To save water with an **old-style toilet**, you can weight a plastic bottle so it will not float, fill it with water, and set it inside the storage tank. This displaces some of the water in the tank, reducing the amount of water used in flushing. Plastic bottles cost little and, unlike bricks, will not deteriorate in water, nor break the tank if accidentally dropped. Rubber "water dams" which fit inside the tank also save water and still preserve flushing action.

Toilets frequently leak large amounts of water. Test the toilet by putting a few drops of food coloring in the tank. If the dye appears in the bowl in a few minutes, the valve in the tank is leaking and should be replaced or adjusted.

Don't use the toilet as a trash can for papers, cigarette butts and the like. Remember how much water is used in flushing.



Check all plumbing and appliances for leaks. Even small leaks can waste a startling amount of water, up to 1,500 litres (400 gallons) a day.

Conventional **showers** use up to 38 litres (10 gallons) a minute. Since most persons enjoy a 5-minute shower, this adds up. Inexpensive **flow-control inserts** can cut the rate to 11 litres (3 gallons) a minute, which is ample. In fact, most persons can't tell the difference. Taking shorter showers also will reduce waste. For tub baths, plug the tub before turning on the water.

Flow controllers can also cut the flow at inside faucets to save water. Inexpensive **aerators**, available at most hardware stores, can be in-

stalled on faucets to reduce splashing and cut water consumption. Hot and cold water **single-control faucets** are also a good investment. They allow you to preset the temperature you want instead of juggling two controls.

Automatic **clothes washers** have been designed which use less than 75 litres (20 gallons) a load, compared to some models using 100 to 200 litres (27 to 53 gallons). Whatever type you have, wash only full loads to save water and energy. There are "suds saver" models which allow the same soapy water to be used for more than one load, saving water, soap, energy, and reducing sewage treatment plant loading.



Some new automatic **dishwashers** use only 28 litres (7½ gallons) a load, while older models use as much as 61 litres (16 gallons). Always wash full loads. Some people save energy by shutting off the dishwasher before the "dry" cycle and letting the dishes air dry.

Look for water-saving appliances and plumbing fixtures. When buying new appliances, or installing water-saving devices, always discuss your needs with the appliance dealer or plumbing shop to make sure the equipment will do its job properly. Give some thought to ways you can reduce waste water going out as sewage.

Insulate hot water pipes to cut energy losses and provide nearly instant hot water at the tap.

Washing the car? Use a bucket of soapy water to wash, then use the hose only to rinse off instead of letting the hose run continuously.

Don't hose down sidewalks and driveways. Use a broom, not water, to sweep off debris, dirt, and leaves.

LAWN AND GARDEN WATER SAVING

Half the water used in California residential areas goes for **home landscaping**. The Department of Water Resources estimates that 334 cubic hectometres (270,000 acre-feet) of water was wasted in 1972 by over-watering vegetation. That is more than 333 billion litres, or 87 billion gallons!

Don't overwater. Water your lawns and plants, not the sidewalk, street or driveway.

Water carefully, to reduce runoff and keep the water within the root zone. If the soil is clay, it may help to water briefly, stop to let it sink in, then water again. Don't just water out of habit. Check the wetness of the soil with the aid of a trowel or spade. Some plants need only occasional deep irrigation. Check with a gardener.



Don't cut the grass too short during summer--taller grass provides shade for the roots and reduces water loss.

A mulch layer will reduce evaporation losses. Water early in morning or late in the evening, not in midday when evaporation is high. For the same reason, don't water on windy days.

Where possible, use plants native to California or other Mediterranean-type climates. Once established, they will need little or no watering.

Make sure hose connections are tight to avoid dribbling away water where it isn't needed.

For gardens, small irrigation ditches along the rows will use less water than overhead sprinkling. Dig out water-loving weeds.

Water Crisis

☐ Faucets
☐ Home landscaping

☐ Showers
☐ Dishwashers

☐ Toilets
☐ Clothes washers
☐ Water rates

Please send me information about water-saving devices as checked.

Information Office
Department of Water Resources
P. O. Box 388
Sacramento, CA 95802

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City

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CUT ON DOTTED LINE