Saving Water to Save Energy

Both water and energy policymakers should give water conservation higher priority. Surprisingly, policy actions that affect end uses of water may have much larger energy implications than policy actions that affect the mix of physical water sources.

-- Natural Resources Defense Council and Pacific Institute "Energy Down the Drain;" August 2004.

Water conservation and efficiency is a vital tool in addressing these challenges, and simultaneously can help diminish California's extraordinary energy thirst. A study by the California Energy Commission estimates that about 19% of all energy consumed in California is attributable to water use, including collection, extraction, conveyance, treatment, distribution, and use of water, as well as wastewater collection and treatment. There are opportunities to reduce water use at each of these stages of the water use cycle.

Meeting the diverse and growing demand for water in California is a complex and contentious challenge in many ways. Not only is Califonia's population expected to grow over 30% by 2030, but much of the growth will occur in the southern and inland areas which are hottest and driest. Compounding the challenge is the impact of climate change on the water

- Sierra mountains snowpack will decrease, reducing the runoff water captured in reservoirs;
- higher temperatures cause greater losses through evaportation;
- hotter weather means greater water demand for people, pets and plants.

Recently affected by drought conditions, southern California's apportionment of the Colorado River was reduced to a maximum of 4.4 million acre feet (maf) per year, a substantial decrease from annual use of up to 5.2 maf.

A diverse group of public and private organizations from both the water and energy industries is making a concerted effort to reduce energy consumed in California through increased water conservation and efficiency.

The California Public Utilities Commission (CPUC) has initiated proceedings to direct the state's leading investor-owned (IOUs) utilities to develop cost-effective pilot programs for reducing energy consumption related to water use.

At the CPUC's request, the energy IOUs filed proposals totalling $10 million dollars for one-year pilot programs in partnership with water utilities throughout the state. These programs are set to begin July 1, 2007. The CPUC expects that these pilot programs will provide invaluable knowledge about whether or not cost-effective energy savings can be attained from water conservation and efficiency statewide. If cost-effective in the pilot stage, water energy conservation can then be expanded into a full program.

19% of all energy consumed in California is attributable to water use, including collection, extraction, conveyance, treatment, distribution, and use of water, as well as wastewater management.

Not only will California's current residents benefit from the energy and water savings, but so will succeeding generations, as well as the environment, for decades to come.

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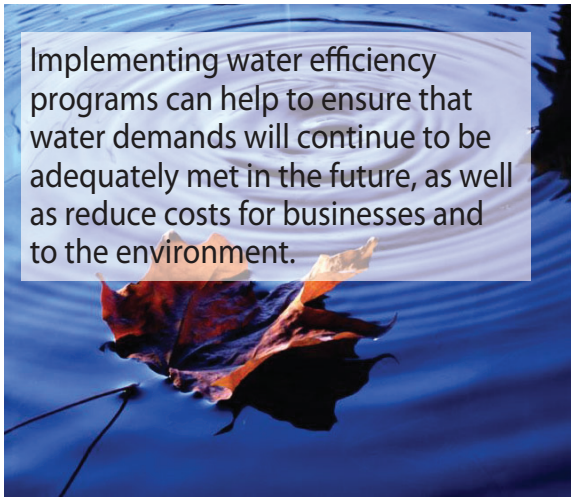


Water efficiency programs focus on:

- Conserving water
- Switching to less energy-intensive water sources
- Increasing the energy efficiency of current water delivery

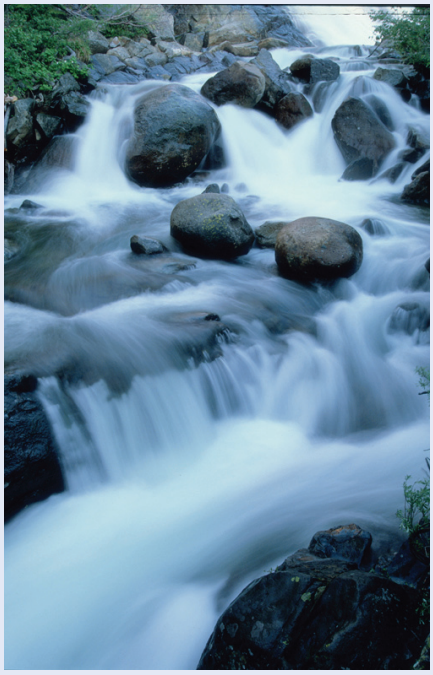
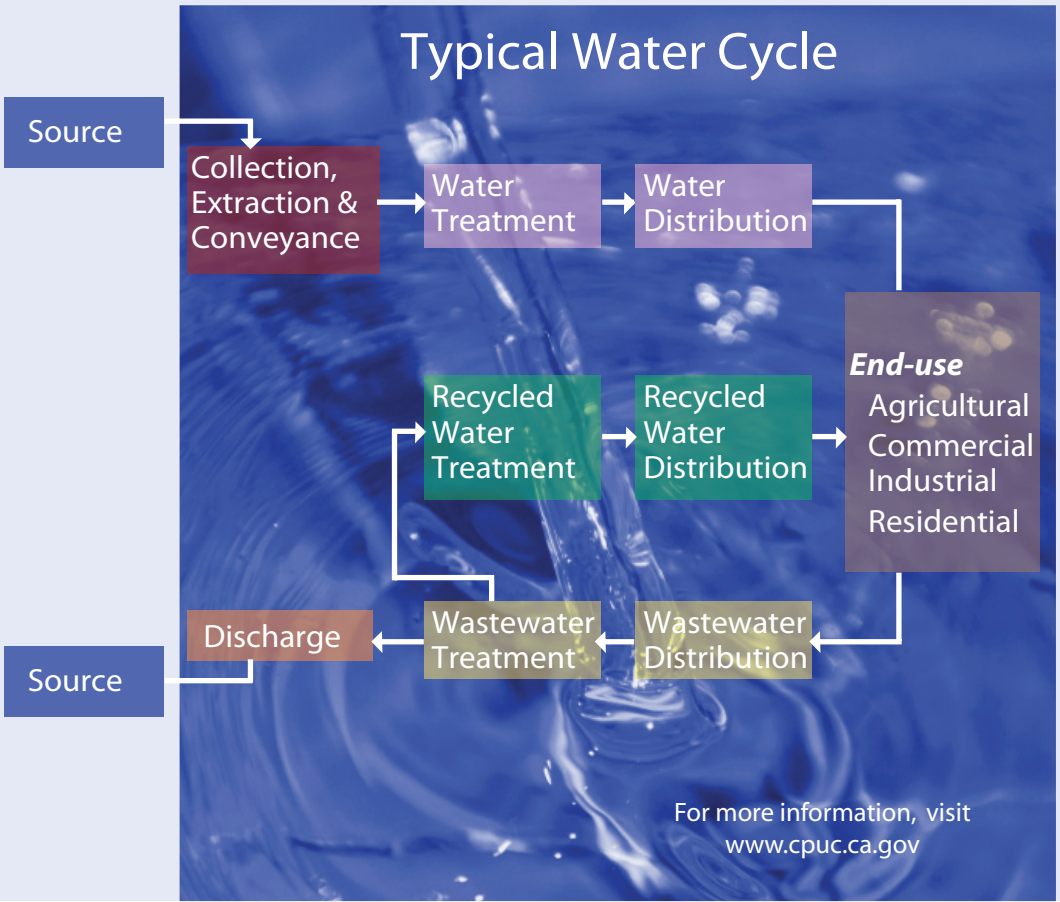
As directed by the California Public Utilities Commission (CPUC), California's leading investor-owned (IOUs) energy utilities (Pacific Gas and Electric; Southern California Edison; San Diego Gas & Electric; and Southern California Gas) will develop cost-effective pilot programs for reducing energy consumption related to water use.

The CPUC aims to:

- Create a methodology for calculating cost-effectiveness and evaluating water-derived energy efficiency programs
- Test a diverse set of water energy programs and measures, with emphasis on new technologies and low-income customers

This will lead to

- A better understanding of how energy is used in the California water system
- Reduction in energy consumption related to water use in a manner that is cost-effective for utility customers



Almost one-fifth of all energy consumed in California is attributable to water use, including collection, extraction, conveyance, treatment, distribution, and use of water, as well as wastewater management.