

CONSERVATION AND DROUGHT MANAGEMENT

Water conservation and drought management are related, but they are not the same.

Water conservation is a long-term effort to reduce the amount of water it takes to manufacture goods, manage households and care for landscapes.

Drought management is water-use rules initiated to deal with reduced water supply or increased demand in an emergency. Often the “emergency” is regularly expected as in an area where rainfall is erratic.

Both water conservation and drought management are reasonable ways to manage water resources. Effective use of water conservation and drought management meets water needs at a reduced cost to ratepayers.

Through technology and behavior changes, communities can get the same jobs done without using as much water. In the home, some obvious water conservation technologies are high efficiency toilets, showerheads, washing machines and water heaters. Behavioral changes include turning the water off except when rinsing while shaving and brushing teeth and putting full loads in dishwashers and washing machines. Using efficient irrigation systems and fixing leaks are also behavioral habits that can save water.

The use of low water-demand landscape plants probably qualifies as a technological change. However, a lush, colorful landscape using less water comes only if people caring for the landscape choose to use the right amount of water at the right time to take advantage of the plants’ capabilities.

Water purveyors can conserve water with good maintenance and leak repair of distribution systems.

New leak detection techniques fit in the technological conservation area, but getting the repairs done is a behavioral issue.



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Effective conservation can significantly increase water supplies. As a result of water conservation efforts, the city of San Antonio is able to provide water to 50 percent more people than it did in 1982, without using more water. Even more remarkable, BBC Research and Consulting did a cost benefit analysis of the program in 2003 and determined that every dollar invested in water conservation by San Antonio saved the community \$4-\$7 by reducing the need for more water resources and more wastewater treatment.

San Antonio spends about \$300 per acre-foot of water yield from conservation on education, incentives and enforcement. New water resources generally cost the community at least \$1,000 per acre-foot.

Drought management is typically used when reservoir supplies are diminished and water demand is high. Drought management tools include water restrictions and increasing water costs for users.

Landscape irrigation in the summer often accounts for 50 percent or more of the water used in a community, so reducing landscape watering can save a lot of water. Ideal use of drought management techniques involves temporarily reducing water use without slowing economic activity or causing permanent damage to landscapes.

San Antonio achieves this goal by restricting landscape watering when the Edwards Aquifer level falls because of drought.

This option is attractive because water use on landscapes can be reduced significantly without permanent landscape damage. In San Antonio, Stage 3 water restrictions limit lawn watering to once every two weeks, which local studies show is enough water to keep grass alive.

Tolerating a dry-looking lawn for a few months is a small price to pay to preserve available water for manufacturing and in-home use. Reducing demand also means that special water supplies do not need to be paid for every year for the less frequent occasions when demand would be high enough to use it. 