

Saving Water in

Colorado



Just as Colorado's topography varies from the towering Rocky Mountains in the West to the flat Eastern Plains, the state's freshwater resources fluctuate depending upon location and elevation. Despite relatively abundant precipitation in Colorado's mountains, most of the state is semi-arid and heavily dependent upon annual snowmelt and its runoff from the mountains to the plains, where a majority of the population resides and most of the state's water is used. Because no major rivers flow into Colorado, the state relies nearly entirely on precipitation to replenish its freshwater resources. In fact, the Rocky Mountain states obtain 70 to 90 percent of their water from snowmelt, so a dry winter can mean drought in the summer.

SNOW MAKES WATER FLOW

Although its mountains can receive heavy snowfall, Colorado's annual precipitation averages only 17 inches statewide, and many areas receive less than that. The San Luis Valley in south central Colorado, for example, receives only 7 inches of annual precipitation. Complicating matters further, most of Colorado's precipitation does not fall near populated centers or during times when it is needed most. More than half of Colorado's water flows downstream to southwestern states.

Colorado experienced significant droughts from 2000 to 2004; southern Colorado had a drought in 2011; and the state experienced severe statewide droughts again in 2012. In a state famous for its snow, reduced precipitation can impact the ski industry, not to mention agriculture and residential water supplies.

Colorado's fast-growing population has also increased demand for water used both for drinking and landscape irrigation, straining the state's freshwater resources. Colorado's population growth is expected to maintain its rapid pace, increasing from nearly 4.4 million people in 2000 to 6 million by 2025, and 10 million by the end



The Rocky Mountain Columbine is Colorado's state flower.

of the 21st century. Consequently, statewide municipal and industrial water use is predicted to increase by 170 percent from 1998 levels by 2100.

In the Front Range, the eastern part of the state where the majority of the population resides, ground water is being tapped at a rate that will likely exhaust supplies. Front Range communities could face a significant water supply deficit by 2030, and shortages could be even more drastic depending upon the effectiveness of municipal conservation efforts across the state.

DOING MORE WITH LESS

Colorado's water resources are affected by climate, population growth, and existing agreements to supply water to states downstream. All of these issues highlight the value of water efficiency measures across the state to ensure the continued health of Colorado's water supply. Ever since Colorado's 1981 drought, the state has been ahead of the curve in addressing water supply issues. Many Colorado cities such as Colorado Springs have begun charging for water usage based on the water's true cost or adopting a tiered system in which heavy users pay more per gallon after they exceed certain usage thresholds.

Denver Water employs a three-pronged approach to addressing growing population and water supply issues: promoting residential and commercial water efficiency, recycling water, and finding new water supplies. In addition to providing free water audits, the utility is offering rebates for its residential customers on clothes washers, toilets, and certain outdoor water-saving devices, as well as additional rebates on other equipment for commercial customers.

In addition to promoting water-saving products, Colorado cities are fostering more water-efficient habits among its citizens. Thornton residents are encouraged to become Water Saving Champions by pledging to save 10 gallons of water each day. The city's social marketing campaign has helped significantly reduce local water consumption using a combination of tips, rebates, and outreach. Water Saving Champion

households have saved an average of 630 gallons of water per month, or 7,560 gallons per year.

Even those who aren't Water Saving Champions can reduce their water use by looking for products and new homes labeled by the U.S. Environmental Protection Agency's (EPA's) WaterSense® program. If every household in Colorado replaced its showerheads with WaterSense labeled models, for example, the state could save an equivalent amount of water each day to meet the needs of every household in Boulder.

Throughout Colorado, communities and organizations are working to promote water efficiency. The City of Fort Collins, for example, provides rebates for WaterSense labeled products. The nonprofit Center for ReSource Conservation works with local utilities and governments to provide free inspections for residential toilets, showerheads, and faucets. These inspectors have helped Fort Collins homeowners identify where WaterSense labeled fixtures could result in big savings. Additionally, the U.S. Army's Fort Carson also is moving toward "net zero" goals for water at this military installation in Colorado Springs. Among other strategies, the facility reuses gray water generated from showers and laundries to irrigate lawns and trees.

For more information on WaterSense labeled products and new homes, or other water-saving tips, visit www.epa.gov/watersense.

Colorado's First WaterSense Labeled Home Takes Savings to New Heights



Colorado Springs hosts the region's first WaterSense labeled home, constructed by WaterSense builder partner GJ Gardner Northgate. The home, known as "Ascension," incorporates WaterSense labeled products and uses water-efficient landscaping. Ascension's landscape was designed to reduce outdoor water use by more than 70 percent. The home also features an ENERGY STAR qualified dishwasher, washing machine, and refrigerator. WaterSense labeled homes can save a family as much as \$600 per year and 50,000 gallons of water annually, or the amount it takes to wash more than 2,000 loads of laundry. (Photo: EV Studio Planning, LLC)