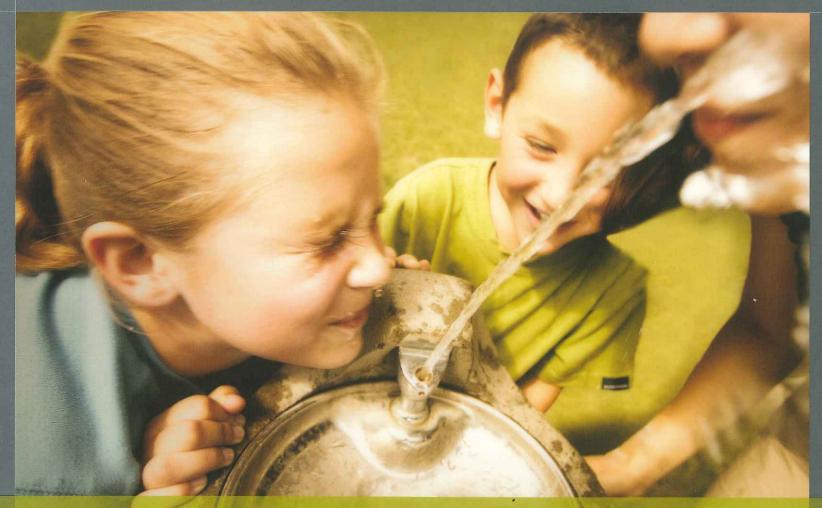
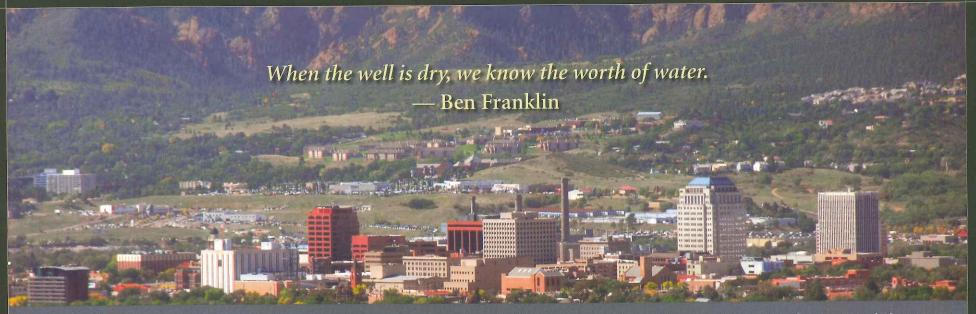
Water is our greatest challenge and our greatest success.



WATER SUPPLY · WATER QUALITY · WATERSHED MANAGEMENT AND PROTECTION · WATER CONSERVATION · DROUGHT PLANNING



#### MEETING OUR COMMUNITY'S WATER NEEDS



As the largest city in Colorado that is not located on a major water source, delivering water to Colorado Springs has been one of our community's greatest challenges – and one of our greatest success stories. We understand the value of water because it must travel long distances before it makes its way to the nearly 450,000 people we serve. That understanding guides how Colorado Springs Utilities manages every drop of this precious resource every step of the way. We have built an elaborate and comprehensive system to store, transport and treat our water – from where it falls to where it is used and then returned.

## Our Water History

Long-term water needs might not have been the first thing on General William Jackson Palmer's mind when he founded Colorado Springs in 1871. The beauty of Pikes Peak was his inspiration. At the mountain's base, Palmer found the potential for a thriving resort town. But he also found an arid climate, with no river or large body of water nearby. So began the historic challenge of supplying a safe and reliable water supply to Colorado Springs.

Our first water supply came from shallow wells and from nearby Fountain Creek. Early settlers then voted to create a municipal water system and the city constructed a series of dams, reservoirs and

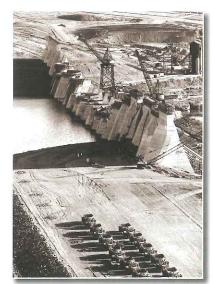


Photograph Courtesy of Special Collections, Pikes Peak Library District.

pipelines to transport water down from the north and south slopes of Pikes Peak and from the Northfield System.

Success in building systems to collect and transport water directly from our closest mountains led to the construction of even more elaborate ones to bring water from across the Continental Divide. These transmountain systems began with the Blue River System in the 1950s, which was instrumental in locating the Air Force Academy in Colorado Springs.

Next came the Homestake System in the 1960s, which includes the Homestake pipeline. Today, we rely on this pipeline to deliver up to 70 percent of the water used in Colorado Springs.



Pueblo Dani under construction 1974. Photograph by Myron Wood, © Pikes Peak Library District

The addition of the Twin Lakes and Fryingpan-Arkansas Project supplies in the 1970s and the Colorado Canal supply in the 1980s added to our diverse portfolio. Finally, the securing of our Exchange Rights in the 1980s more than doubled the potential benefit of transmountain water by providing an effective way to reuse those water supplies to extinction.

The water we use is stored in 25 reservoirs and comes from three major river basins. It travels from as far away as 100 miles to our community through 200 miles of pipe, into treatment facilities that purify it before it's delivered to our homes,

military installations, businesses and schools.

We continually upgrade our system to make the most of our resources and enhance system reliability. Colorado Springs has implemented several projects including the expansion of the Otero Pump Station and Homestake Pipeline, which, in 2004, have added more than 15 million gallons per day of water to our system.

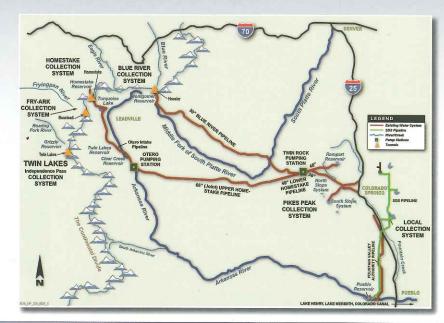


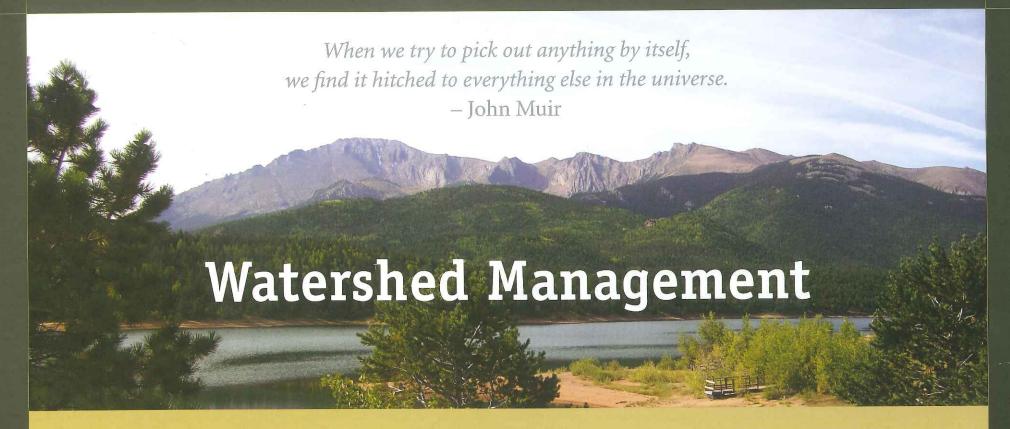
### Planning for the next century

In 1996, Colorado Springs Utilities formally adopted the Water Resource Plan. For more than a decade, we have been implementing the four major components of this plan including conservation, non-potable water development, system improvements and a new water delivery system.

Even with our active water conservation program, water reuse and system improvements, the 1996 Water Resource Plan determined that 55 percent of our future water supply would require a new water delivery system. Colorado Springs Utilities studied hundreds of options and selected the Southern Delivery System as the most cost-effective and environmentally responsible way to deliver that water.

Starting in 2016, the Southern Delivery System will transport water from Pueblo Reservoir through 62 miles of underground pipeline to Colorado Springs. The project will provide water for Colorado Springs, Fountain, Security and Pueblo West through 2050 and beyond. It is one of the largest water projects in decades being built in Colorado.

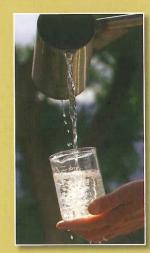




Being careful stewards of our water supply includes management and protection of watersheds or areas of land that contain a common set of streams and rivers that all drain into a single larger body of water, such as a river, lake or reservoir.

Our teams of wildlife biologists, natural resource planners and environmental engineers work to minimize the impact of erosion, stormwater discharges and other potential hazards to our water supply and the surrounding ecosystems. Colorado Springs Utilities allows recreation on our watersheds and reservoirs, but carefully manages these activities to ensure our water quality remains high.

The threat of high-severity wildfires in Colorado's forests poses several risks that could endanger our water supply. Events like the "Hayman fire" create significant damage to forests and watersheds.



The negative impacts to water quality and damage to physical structures, such as pump stations and pipes, could potentially cripple our water system operations.

To mitigate these risks, Colorado Springs Utilities' Forest
Management Program works to protect our water supplies and
infrastructure from catastrophic wildfire. Such efforts include
conducting forest management operations on city-owned watershed
lands to reduce wildfire hazards, and providing fire-suppression
capabilities through our Wildland Fire Team.

The team is comprised of employees who protect the city's watershed lands and provide regional support. Additionally, the water storage and infrastructure of the new Southern Delivery System project is generally located outside of wildfire threat areas.

## Water Quality

Colorado Springs residents are fortunate to have one of the finest sources of drinking water in the nation – snowmelt from the Rocky Mountains. Because most of our drinking water comes from the high country, we are primarily first-time users of the water.

Such pure water gives us a great start and we work hard to make sure the quality of our water meets, and in many cases surpasses, state and federal drinking water standards. We know that each time our customers turn on their taps, water quality is what matters most.

At our treatment plants, untreated, raw water goes through several processes that remove suspended matter and provide disinfection. The end product (finished water) then enters our



water distribution system, where it eventually arrives at your house or business through a water meter.

To ensure the quality of our drinking water during this entire process, our laboratory facilities monitor the quality of both raw and finished water. Water is tested and analyzed continually for chemical and biological factors. Some of these analyses are required to meet state and federal standards, while others are part of quality testing, such as taste and odor.

In fact, we complete 1,000 water quality tests a month to ensure drinking water meets all regulations. Additionally, our employees work day or night, and in all kinds of weather to ensure uninterrupted water delivery to our customers.



#### **Wastewater Treatment**



Colorado Springs Utilities treats wastewater to exceed our operating permit requirements. We operate one of Colorado's largest wastewater collection systems, along with two wastewater treatment plants – each with a regulated discharge permit. As part of our environmental stewardship, we are committed to improving our system

and protecting area streams. In fact, our rate of sanitary sewer overflows is significantly lower than most other wastewater systems.

Our treatment plants use ultraviolet (UV) light to disinfect wastewater. The UV light is applied at the end of the wastewater treatment process, just prior to being discharged. The intense light "zaps" bacteria from the wastewater and enhances the quality of the wastewater effluent, or discharge. By using this system, we no longer use gaseous chlorine at the treatment plants, which reduces safety risks for employees and the community, as well as decreases security threats.

#### Water Reuse



Colorado Springs pioneered the recycling of treated wastewater for irrigation in the early 1960s and has one of the largest non-potable water systems in Colorado. The wastewater treatment plants return treated water to the stream, where it is exchanged for reuse to extinction. Alternatively, treated water is delivered to the non-potable system. We use non-potable water to irrigate parks, golf courses, campuses and other community properties.

Our reuse system, built in 1961, was one of the first built in the western United States. In 2001, we completed a non-potable master plan. Recent improvements have maximized our use of non-potable water, including the conversion of the Drake Power Plant's cooling towers to use non-potable water, which saves more than 1 billion gallons of drinking

water per year.

The J.D. Phillips Water Reclamation facility, completed in 2007, increased our potential non-potable water capacity by 10 million gallons per day. As a statewide leader in water reuse, Colorado Springs' water portfolio includes 13 percent of non-potable water.



## Water and Energy

As a four service utility provider, Colorado Springs Utilities understands the important connection between energy and power. Our Drake Power Plant is our largest non-potable water customer. This power plant uses non-pot rather than treated or raw water for its cooling towers, which affords large energy generation savings to the city. All of our major power plants use non-pot water or dry cooled technologies.

For more than a century, a portion of our community's power supply has come from renewable hydro electricity. Today, with four hydro-electric facilities, electricity is created when water from mountain reservoirs drops hundreds of feet through a pipe, creating an enormous amount of pressure to our hydro plants. Movement of the water through a turbine turns a generator to make electricity. Colorado Springs Utilities can use this high-pressure water flow to create renewable energy, and at the same time, reduce high water pressure in our system.





All the water that will ever be is, right now.

– National Geographic

## Drought

Colorado Springs' semi-arid climate is prone to periodic drought. Although there have been advancements in the field of long-term weather forecasting, we still cannot accurately predict future weather patterns or how they will affect our water supplies. These conditions may become more severe than we have ever seen.

From 1999-2005, the snowpack from mountain watersheds, which we rely on to replenish our reservoirs, was drastically lower than normal. As a result, Colorado Springs Utilities was forced to severely limit our customers' outdoor watering beginning in 2002. Even with stringent water restrictions, the levels of local reservoirs dropped significantly and took several years to return to normal.

Today, the Colorado River basin is experiencing an extended drought. Colorado Springs receives about 70 percent of our water from that basin and we compete with 30 million other people from seven states who also rely on the Colorado River for their water. There is obvious concern that our supply of water from the Colorado River could be adversely impacted as water demand in our state and the southwest outstrips the river's supply.

Because climatic changes cannot be predicted, we have a Drought Response Plan that provides a systematic response, should the need arise, to reduce customer demands due to a water supply emergency or drought event. This plan is used during highly unusual and infrequent events, and is not intended for use as a substitute for developing water supply projects or long-term conservation programs.

Additionally, the Southern Delivery System will provide critical system redundancy and the ability to diversify our water supply, as well as new reservoirs to provide water storage closer to home.

# Xeriscape

Nearly half of the water used by Colorado Springs households is for landscapes. Of that amount, much is wasted by inefficient irrigation practices, inadequate soil preparation and improper plant selection. Xeriscape is a proven landscape approach that uses plants and landscaping practices appropriate for Colorado's soils, climate and scarce water resources.

In the 1990s, the community opened the award-winning Xeriscape
Demonstration Garden and developed extensive customer education programs.
The garden shows that xeric landscapes transcend native plants and unplanted

rock mulch, to gardens that include a wide diversity of plants with attractive colors, textures and forms.

In addition to saving water, investments in efficient, beautiful landscapes have generated significantly better financial returns than all other home improvement projects, including kitchen and bathroom remodels. Every \$1 invested in landscaping yields a return of as much as \$1.12, while \$1 spent on a bathroom or kitchen remodel only yields about \$.68 in return. (Source: Dr. Charlie Hall, Texas A&M).



### **Water Conservation**

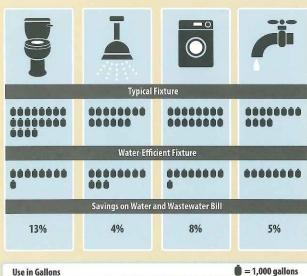
To maximize our water supply and encourage wise water use, Colorado Springs Utilities has had an active and successful water conservation program in place for decades. In the 1940s, the city was fully metered to help customers gauge their water use and conserve, long before it was standard industry practice.

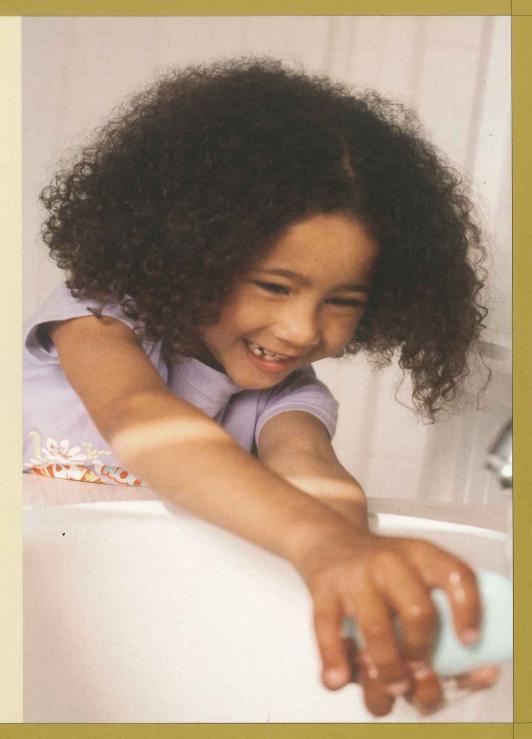
The 2002 drought heightened customer awareness of water scarcity and they reduced their water use. Today, thanks to their efforts, Colorado Springs per capita residential water use is among the lowest along the Colorado Front Range.

We offer customers rebates for water-efficient appliances and technologies, and use tiered water rates that benefit those who use less water. We help our customers save money and use water responsibly by offering classes and demonstrations. We teach which indoor fixture or landscaping option will save the most water and money. Our programs allow people to make affordable and smart changes, so that cost is not a barrier to doing the right thing for their budget and the environment.

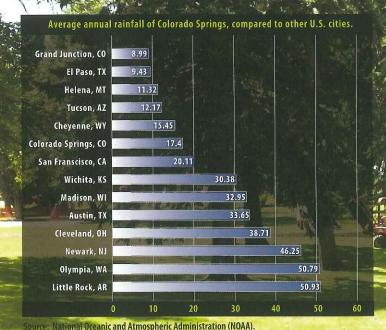
The average Colorado Springs family uses 110,000 gallons of water per year!

Low-flow appliances and fixures can help you save.





# Water Conservation in Parks



Colorado Springs Utilities is committed to sponsoring water conservation projects that support the sustainability of our city's resources. We developed a conservation program to encourage effective and efficient irrigation in Colorado Springs' parks system. The program has allowed our parks to maximize their water budget during challenging economic times and provides long-term sustainability through irrigation system efficiency upgrades.

#### LOOKING AHEAD

Due to careful planning and foresight, we have met our past and current water challenges with success. While managing for today, we continually look ahead to ensure Colorado Springs' residents and businesses have safe, reliable, competitively priced water and wastewater services that support the quality of life and economic vitality which they have grown to expect.











Since 1925, Colorado Springs Utilities has provided reliable electricity, natural gas, water and wastewater services to our customers in the Pikes Peak region. At Colorado Springs Utilities, our connections to customers go beyond pipes and wires—they represent our commitment to improving the quality of life here in the Pikes Peak region. Our citizens benefit from community ownership—enjoying affordable utility prices, responsible environmental practices, exceptional hometown service and a voice in how we operate. This all adds up to great customer value at less than one penny per gallon.

INFRASTRUCTURE • WASTEWATER • REUSE • WATER SUPPLY • WATER QUALITY • WATERSHED MANAGEMENT AND PROTECTION









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