
COLORADO SPRINGS UTILITIES
UTILITY WISE
A guide to your four services
2025
Colorado Springs Utilities
It's how we're all connected

Utility Wise:
A Guide to Your Four Services

Edition II.I

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Edited and updated by

The Colorado Springs Utilities Public Affairs Department

For questions, suggestions or updates contact Community Engagement at engage@csu.org.

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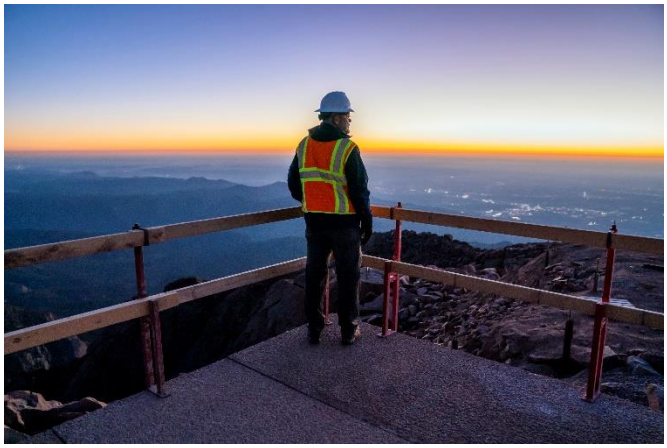

Colorado Springs Utilities employee working on Pikes Peak.

For more than 100 years, Colorado Springs Utilities has proudly provided safe, reliable and competitively priced essential services to those who call Colorado Springs home.

We are unique as a community-owned municipal utility that offers four distinct services: electricity, natural gas, water and wastewater. We are dedicated to exceptional hometown service and balance responsible environmental practices with our customers' input on utility operations.

The utility industry is evolving with new regulations and expectations. While parts of our organization will change, we are well positioned to meet the water and energy needs of our customers for generations to come.

Electric service

Our electric system features a diverse mix of generation resources to provide 99.991% reliable electric service to our customers. This level of reliability ranks us among the best in the nation.

Natural gas service

We operate and maintain five gate stations (where natural gas enters our system) and approximately 2,700 miles of distribution pipe, enough to stretch from coast to coast.

Water service

We provide safe, clean and reliable water service to our community. It takes long-term planning, careful monitoring and a commitment to conservation efforts to ensure our access to this precious resource lasts for future generations.

Wastewater service

We ensure the safe disposal and management of wastewater of one of the largest systems in Colorado to protect public health, water supplies and contribute to better quality of life for our customers.

Our leadership

Colorado Springs voters elect our City Council members, who also serve as our governing board. Community ownership assures a focus on customer service excellence, competitive rates, high reliability and a relationship with the community that reflects our values.

Our commitment to local governance ensures all utility decisions are made here in Colorado

Downtown Colorado Springs and the Front Range.

Springs, not by the Public Utilities Commission in Denver or at an out-of-state headquarters. The Utilities Policy Advisory Committee receives assignments from the Utilities Board to review and analyze potential projects or policies and provide recommendations to the Board members.

The Utilities Board also appoints our Chief Executive Officer (CEO), who directs our leadership team and oversees the day-to-day operations of the organization.

Benefits of community ownership

People taking part in a public meeting.

Since the first water delivery came into service in 1878 and a vote of the people to add energy services in 1924, citizens have input in the decisions and services we provide to meet their needs, values and community vision. The benefits of being a municipally owned utility include:

- **Lower bills.** Rates are set only high enough to cover the cost to provide service. There are no profits that go to stakeholders in another city. One organization overseeing four services saves money on operational costs, which keeps bills lower for our customers.
- **Environmental protection.** We live here too and want to keep our city clean and beautiful. It's why we crafted Sustainable Energy and Sustainable Water Plans that commit us to provide reliable service through responsible use of natural resources.
- **Better customer service.** We're consistently a top performing utility according to J.D. Power. We also incorporate customer feedback into our decision making through a robust community engagement program.
- **A thriving community**. Our employees and their families volunteered more than 18,000 hours and contributed over $158,000 in 2024 directly to support our customers and local non-profit organizations in Colorado Springs.

How to engage

Stay informed. Stay involved. As a citizen of Colorado Springs, you own your utility and have a voice in making utility decisions. Public participation is an effective way for you to voice your input. We provide a variety of different platforms you can use to engage with us:

- Attend Utilities Board and Utilities Policy Advisory Committee Meetings.
- Follow us on social media.
- Call us at (719) 448-4800.
- Attend open houses, classes or visit our Conservation Center, 2855 Mesa Rd.
- Sign up for one of our survey panels at www.csu.org/about/public-participation.

@ColoradoSpringsUtilities

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@CSUtilities

Colorado Springs Utilities

Colorado Springs Utilities

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Customers Count Panel

This is a group of residential customers who represent our citizen-owners and provide valuable input we use to make decisions.

By providing your feedback, you will help shape programs and services for the future and raise awareness of customer expectations.

Business Community Panel

This group of business owners provide valuable insights into the unique needs of our business community.

Your feedback gives us real-time insights into the needs of your business so we can help you uncover ways to be more successful.

When you join a panel, you'll periodically receive an email with a link to an online survey about a specific topic. Your confidential response is combined with other panelist feedback and reviewed by our staff.

Our commitment to safety

We are on a multi-year journey to transform our safety culture from one of compliance into a culture of commitment. We aim to empower our employees and contractors to actively engage with our safety programs.

Colorado Springs Utilities employee in personal protective equipment.

Why safety matters

Utility services come with inherent hazards. Much of our work occurs near public roadways and involves utility pipes and wires, which can pose significant risks if not handled properly. Ensuring the health and safety of our employees, customers and contractors is our top priority as we conduct our essential work every day.

Electric safety

Be cautious around overhead power lines.

- When carrying ladders or long tools, stay 10 feet away from overhead power lines.
- Always assume utility lines are energized. Don't touch a downed line or any object in contact with it.
- Call us at (719) 448-4800 if there is a downed line on your property.
- Please stay off utilities' equipment such as vault boxes and transformers.

Natural gas safety

Use the "Three S's" to detect natural gas leaks.

Yellow flag marking a buried natural gas line.

- **Smell**: Natural gas is odorless in its natural state, but we add the chemical mercaptan which gives off a rotten egg odor. If you notice this strong odor, it could indicate a natural gas leak.
- **Sound**: A hissing sound near pipes or appliances, a natural gas meter or pipeline is indicative of a natural gas leak.
- **Sight**: If you see bubbles in puddles or mud or blowing dust and leaves, it might be a sign of natural gas escaping through the soil or a pipe.

If you suspect a gas leak, evacuate immediately. Call 911 and then customer service at **(719) 448-4800**. Avoid open flames, sparks, or electrical switches around a natural gas leak.

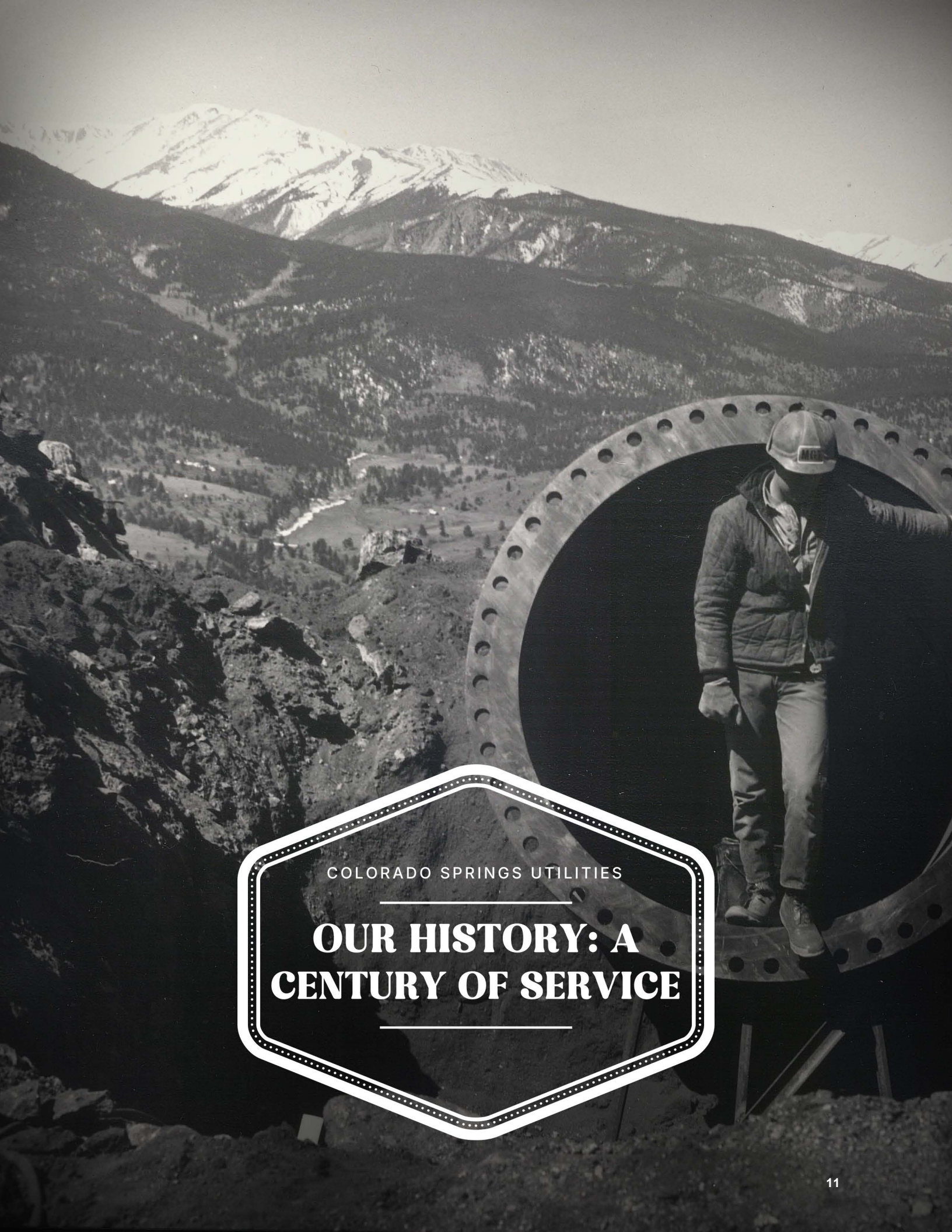
Carbon monoxide safety

Carbon Monoxide (CO) is an odorless, colorless, invisible gas. Reduce your risk of CO poisoning.

- Install a CO alarm on each floor of your home within 15 feet of sleeping areas.
- Maintain and use appliances such as gas stoves and water heaters properly.
- Never operate fuel-burning equipment including a generator or vehicle in a garage, even with the garage door open.
- Do not use your oven for heat.
- Inspect and clean your dryer vents properly and regularly to prevent blockages.

Contact 811 before you dig

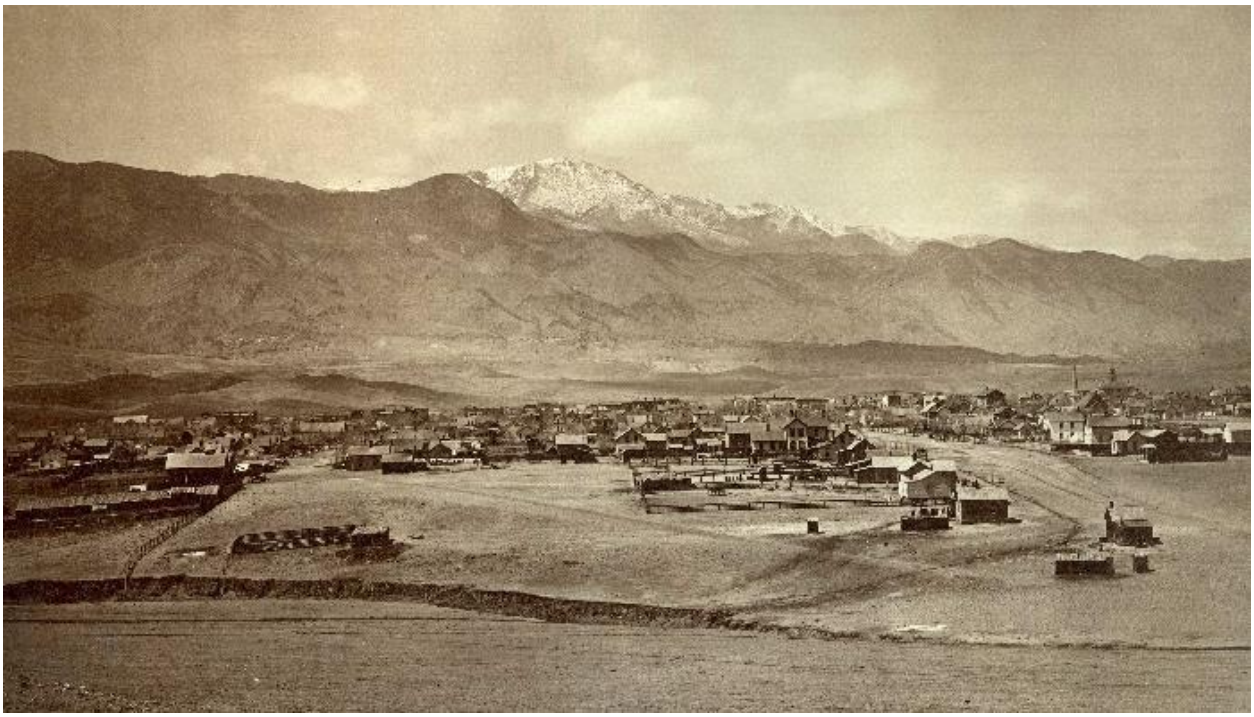
- Call or click http://colorado811.org at least three days before digging to have your utility lines marked for free.
- When landscaping around green utility boxes, allow eight feet of space in front and two feet of space on each side.



COLORADO SPRINGS UTILITIES

OUR HISTORY: A CENTURY OF SERVICE

Our history: A century of service



Panorama of Colorado Springs 1880 by Gurnsey. Courtesy of the Colorado Springs Pioneers Museum.

We are deeply connected with the founding of Colorado Springs. Our story starts more than 50 years before we were established as a four-service utility in 1924 by a vote of the people. Population of Colorado Springs at the time of the vote was about 30,000.

General William Jackson Palmer, the man who founded the city in 1871, understood the future was dependent upon the development of its utilities, beginning with the essential resource of water.

Palmer was instrumental in the construction of the El Paso Canal, the first aspect of utilities infrastructure built in Colorado Springs in the fall of 1871. That canal provided water to our community, a tradition we proudly continue today.

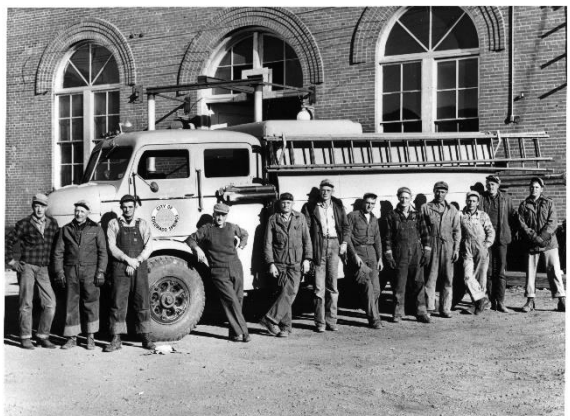
A small community develops alongside new technology

In the decades after the city's founding, additional municipal services were needed as the population grew. In 1878, Colorado Springs voters approved an $80,000 bond issue to build a municipal water system, marking the establishment of the first of our four services. Voters would pass another bond in 1888 to build the first sewer system, addressing sanitation needs.

The El Paso Electric Company established service in the mid-1880s, using coal power to illuminate about 350 homes and five streetlights in the city. In the years that followed, as many as eight companies provided electric services in Colorado Springs.

The Colorado Springs Gas and Coke Company provided natural gas, which was primarily used for lighting until the 1890s when residents began using gas appliances, providing new conveniences and comfort.

As the city developed and expanded, residents grew tired of unpredictable, inadequate electric and gas services. In 1909, voters adopted a Home Rule Charter, which allowed the community to buy the electric or gas system if it voted to do so. Within 15 years, they did.



City of Colorado Springs Electric Division employees. Courtesy of the Colorado Springs Pioneer Museum.

Our organization's founding

In 1910, the companies that provided electric and gas services to Colorado Springs consolidated into one, forming the Colorado Springs Light, Heat & Power Company.

This company faced immediate scrutiny from the newly formed Public Utilities Commission (PUC). A PUC hearing found the company's electric rates to be excessive and ordered the company to stop the unethical practice of offering discounted or free service to its employees.


WOMEN ASK COUNCIL FOR RATE REDUCTION

GAS AND ELECTRIC SERVICE AND CHARGES ATTACKED

Committee Suggests Eight-Cent Electricity and 80-Cent Gas Maximum

Newspaper clipping by the Women's Club of Colorado Springs calling for rate reduction, 1920s.

The public continued to complain about high rates and a lack of reliable infrastructure. It was during this time that a group of women helped lead efforts to instill public control over electric and gas services.

Lillian Kerr, the first president of the Woman's Club of Colorado Springs and a co-founder of the Colorado Springs Civic League, led efforts to file a petition to investigate the possibility of the City purchasing private utilities. That petition spurred the creation of a 15-member committee to study and make a recommendation about public utility ownership.

That committee made several major recommendations:

1. No privately owned company shall be given use of municipal water rights.
2. The city government (City) must hire "a competent engineer to help resolve the city's … light, heat and power problems."
3. That no more private electric franchises be granted, pending approval from voters.

In 1923, voters formally denied Colorado Springs Light, Heat & Power Company an electric franchise. In July of 1924, voters approved a $1.25 million bond that authorized the City to buy the consolidated Colorado Springs Light, Heat & Power Company.

On June 30, 1925, Colorado Springs citizens formally took ownership of the community's electric and natural gas system, marking the creation of our community-owned four-service utility. The vote led to rapid improvements in electric reliability, a rebuilt streetlight network and the installation of the city's first gas pipeline in 1931.

Income from sales of electric and gas services paid for all system improvements. The citizens' investment of $1.25 million in 1924 produced a system valued at $4.43 million in 1939.

Colorado Springs Water Department, 1914. Courtesy of the Colorado Springs Pioneer's Museum.

Meeting growing needs

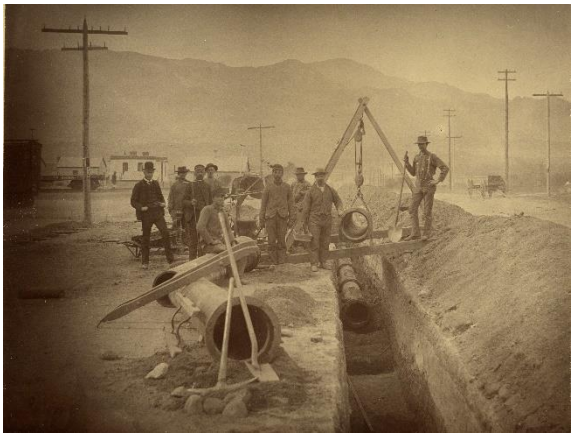
Improving the electric system was only one major priority at this time; securing water rights for the city was arguably even more important.

The work to secure water for future generations started close to home, on the slopes of Pikes Peak. Construction of seven reservoirs on the South Slope of Pikes Peak spanned nearly 40 years, from 1890 to 1929.

The City eyed the North Slope of Pikes Peak for water rights, completing multiple purchases of land surrounding North and South Catamount, Crystal and North and South Cascade creeks. Congress acted to set aside 10,000 acres of land for use in this effort, ensuring work could begin on these projects. Despite the Great Depression, the South Catamount and Crystal reservoirs were added to our system between 1934 and 1937.

Blue River Project

Even with an improved local system in place, the city continued planning for additional growth and the introduction of "transmountain water" to our system.


Water construction workers laying pipe.

In the 1940s, we looked to the Blue River basin in Summit County to bring additional water to our city. The ambitious Blue River Project proposed constructing a 110-mile-long system to divert water west of the continental divide near Breckenridge to our local water system.

The City purchased land and water rights for the Blue River Watershed in 1947 and filed its claim for a conditional decree for appropriation and diversion of waters in the Blue, McCullough, Crystal and Spruce creeks and other Blue River tributaries that same year.

Communities in the Western Slope strongly opposed the Blue River Project and other projects to divert water across the Continental Divide to the Denver area, leading to lawsuits and competing proposals. However, through strategic alliances and the intervention of President Eisenhower, an

agreement was reached that allowed Colorado Springs and Denver to divert their share of Blue River water for their communities' use.

The Blue River Project played a major role in our city's history, as it was a significant factor in the Air Force's decision to locate the Air Force Academy in Colorado Springs in the 1950s.

Homestake project

As construction on the Blue River Project wrapped up, plans were already underway for the $60 million Homestake Transmountain Water Project. This initiative doubled the water resources of both Colorado Springs and Aurora by diverting water near Leadville and transporting it more than 100 miles to the Front Range cities.

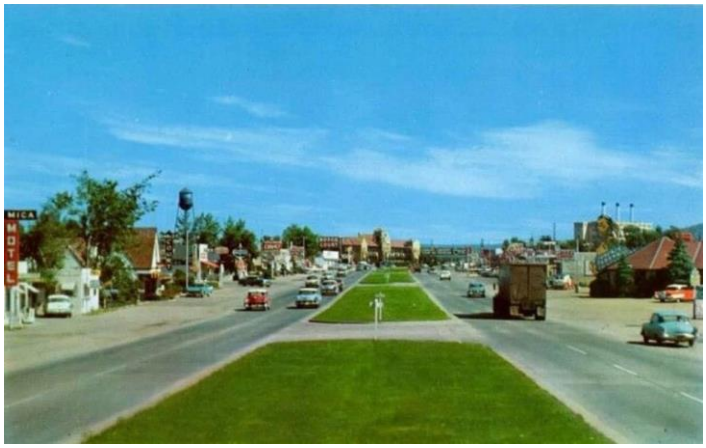
Workers in the Homestake tunnel.

Like the Blue River Project, the cities' efforts to acquire water rights were met with opposition and legal challenges from the Western Slope. The case ultimately made it to the Colorado Supreme Court in 1962, where the court sided with the cities of Colorado Springs and Aurora.

The decision allowed for construction on the massive project to begin in 1963. Homestake became our community's workhorse raw water system, transporting up to 70% of our water to Colorado Springs through Rampart Reservoir, which was completed in 1970.

Growing and improving to support our city

Careful planning and execution secured enough water for Colorado Springs to grow into a flourishing city. That same focus is true for our other services.



North Nevada Avenue. Birdsall Power Plant in the distance, 1955.

Electric service saw major leaps forward in the twenty-first century. We increased generating capacity and made improvements to the Martin Drake Power Plant several times and added the George Birdsall, Ray Nixon and Front Range Power Plants to our portfolio by 2003, supporting a population that grew from just over 30,000 in 1920 to more than 360,000 by the year 2000.

Natural gas service expanded along with electric generation to meet growing demands. Today, our system has more than 2,500 miles of main lines, serving more than 235,000 service points. The growth of the system was briefly paused in the 1970s, due to the natural gas crisis when a moratorium was placed on new natural gas permits. That was lifted shortly after the construction of our propane air plant in 1974, which is still used today to augment our natural gas system on our coldest days.

Wastewater and water quality infrastructure also saw big improvements. We built our first wastewater plant in the mid-1930s at the site now occupied by the Las Vegas Street Water Resource Recovery Facility, which saw numerous upgrades as technology improved to handle wastewater. In 1973, activated sludge, or microorganisms, were added to the process. The solids disposal facility was constructed in 1984 at Clear Spring Ranch.

Meeting the challenges of the 21st century

In the early 2000s, our water system was tested by a historic drought, bringing urgency to develop a new raw water delivery system. Following an extremely dry and hot spring and summer of 2002, our water storage dropped to an unprecedented 42%, a record low in modern times.

Last pipe used for construction of Phase I of the Southern Delivery System.

Conservation efforts and wetter weather patterns helped ease the stress on our water system in the years following the drought. Meanwhile, planning for the Southern Delivery System – the largest water delivery project in our region's history – was underway. After an extensive permitting process, construction began in 2011.

By 2016, the Southern Delivery System was completed on time and under budget. This included the installation of 50 miles of pipeline, three pump stations and the Edward Bailey Water Treatment Facility.


Aerial view of the Martin Drake Power Plant site and natural gas generators, 2021.

In addition to improvements to our water system, we were planning our energy future. In 2022, we closed and decommissioned the Martin Drake Power Plant, which began operation in 1924. To replace Drake's generation capacity on our grid, we installed six modular natural gas generators on the former plant's site. Our largest solar array, Pike Solar, came online in December 2023.

Our commitment in the years ahead

Our utility is committed to be “ready for today, prepared for a sustainable future." We are well positioned for the future, with plans to meet water and energy needs for generations to come.

Transmission line with steel monopoles in the eastern part of our service territory.

Some key projects beginning in 2025 include the Eastern Wastewater System Expansion (EWSE) and upgrades to the Horizon Substation campus.

The EWSE will install critical infrastructure, including new wastewater mains and lift stations, to support the Banning Lewis Ranch area. Future phases will expand capacity to handle increased waste flows.

At the existing location of the Horizon Substation, completed in 2023, we are adding ten natural gas generators like those at the Martin Drake Site along with other utility infrastructure. Expanding generation in the eastern part of our service area will allow us to ensure reliable energy for our entire electric system and support our movement to toward cleaner energy sources.

Just as it was in the earliest days of our city, we are prepared to help our community prosper and grow economically. These projects and others we are taking on over the next five years reflect our dedication to building a resilient and sustainable future for our community.

For more detailed information about the history of Colorado Springs Utilities, read “It’s How We’re All Connected: The Story of Colorado Springs Utilities” by Jerry Forte and Margaret Radford.


COLORADO SPRINGS UTILITIES
BUILDING
THE FUTURE

Building the future

Since 1925, we have supported our community's energy and water needs. It is projected that our population will exceed one million by 2045. We are taking the necessary steps now to make strategic investments in our infrastructure to meet this growing need.

Electric projects

Advances in our electric system ensure reliability and accommodate increased demand. Key projects include:

- New natural gas generation to support carbon-reducing regulations and generation need.
- Installation of a city-wide fiber network to enhance utility operations.
- Upgrades to transmission line equipment to increase import capability into the system.
- Expansion and construction of new substations to meet increasing energy demands.

Natural gas projects

Pipeline capacity expansions and system reliability enhancements help meet the growing demand for natural gas. Key projects include:

- Pipeline and new gate station installations to ensure reliable supply to our electric generation units.
- Gas main and high-risk segment replacement of coated steel piping for safe delivery of natural gas to our customers.
- Installation of gas main extensions and service stubs to areas not currently served.

Natural gas construction crews installing pipeline.

Water projects

Water management is crucial for our community's future. Reservoir renovations, expansions and upgrades to our water infrastructure are underway. Key projects include:

- Continental-Hoosier System Project to increase Montgomery Reservoir’s storage capacity.
- Rehabilitation of 50 miles of aging water pipeline to ensure reliable water delivery.
- Development of new water sharing programs with agriculture to acquire water supply.
- New filtration, ozone, sodium hypochlorite and total organic removal facilities to support water quality.

Pipeline removal at South Catamount Reservoir.

Wastewater projects

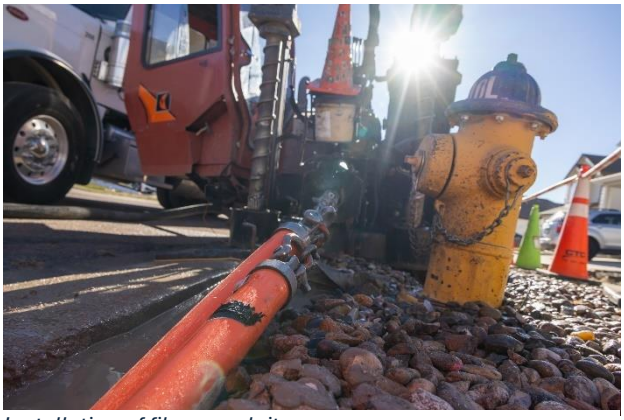
Wastewater system expansions and improvements to support public health and protect water supplies for our growing population are essential. Key projects include:

- Design and construction of a gravity interceptor and new lift stations as Phase 1 of the Eastern Wastewater System Expansion (EWSE) Project to provide wastewater services to the east part of the city.
- Construction of more than eight miles of pipe along N. Monument Creek to accept wastewater flows from two sanitation districts north of Colorado Springs.
- Evaluation, protection and repair of sanitary sewer pipelines that cross our watershed to support water quality.

Wastewater crew performing ongoing maintenance.

Fiber network

Our fiber network project is designed to modernize and enhance utility operations by providing a faster, more reliable and secure control network. This upgrade is crucial for meeting the demands of our rapidly growing community and supporting long-term operational needs and sustainable energy goals.



Installation of fiber conduit.

We're able to significantly offset construction costs by leasing dark fiber to companies including fiber internet provider, Ting Internet. While we build the fiber-to-curb network for our utility use, Ting Internet leases the extra capacity to provide retail internet services to customers. (For more information about internet service, visit Ting.com.)

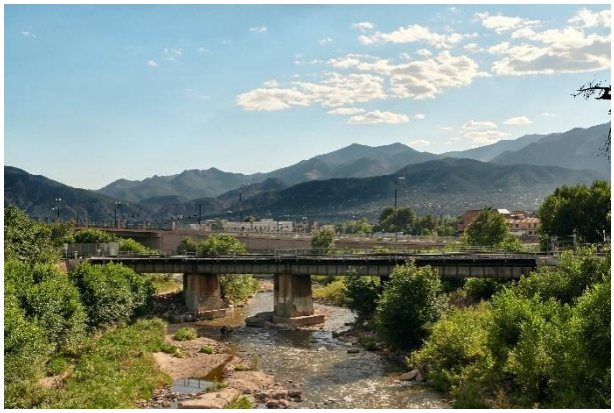
Active construction on the fiber project is underway in Colorado Springs. Before construction begins in your neighborhood, you will receive advanced notification by mail and email (if an email is provided to us through My Account). About a week prior, a notice will be placed on your door. Construction will occur in public rights-of-way or utility easements. If any damage to landscaping or irrigation systems results from construction, we will repair it at no cost to you, keeping in mind that landscape revegetation of sod or irrigation repairs will be completed during warmer months.

You can call (719) 448-4800 or complete the Customer Issues Intake Form at http://www.csu.org/current-projects/fiber-network if you have feedback or concerns related to restoration.

This project is a significant investment in our community's future, ensuring safe, reliable and efficient utility services for the next 50 to 100 years.

Customer Impact and Assistance

We understand that making investments to maintain and improve our systems directly impact our customers' bills. Because we are a municipally owned utility, we set rates just to cover the cost of our services and do not make money on the rates that are charged.



Bridge crossing Monument Creek on the Greenway Trail.

Base rates pay for infrastructure projects like the ones mentioned above. These projects help us maintain the reliability our customers have come to expect, while allowing us to support the city's growth and meet regulations.

We are facing a period of historic demands and industry change. We currently have about $4.6 billion of infrastructure in our system that has been built and maintained over our 100-year history. We expect to add another $3.9 billion in assets in just 5 years.

As a result, we must increase our budget to pay for these necessary projects. The 2025 budget is currently estimated at $1.8 billion – a 21% increase over the 2024 approved budget. Despite these challenges, we believe this plan will keep rates competitive compared to other Front Range utilities.

Increasing our budget to pay for these future projects will result in rate increases across all four services for the next five years.

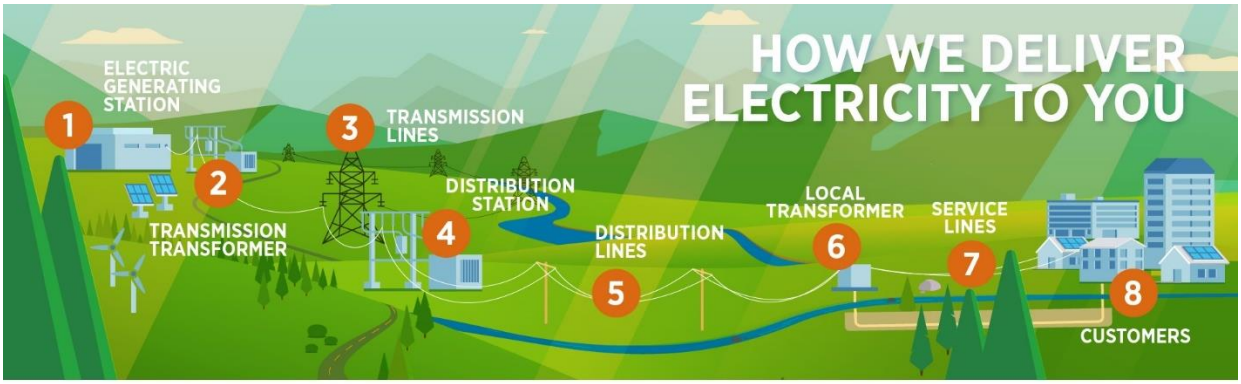
We understand increases have a financial impact on our customers and we are committed to providing payment assistance programs, rebates, efficiency information and rate options to support you. For more information on rebates and incentives, see page 50.

This list of projects is based on projections as of October 2024 and is not all-inclusive. Projections are subject to change.

COLORADO SPRINGS UTILITIES

ELECTRIC SYSTEM

Electric service overview



1 ELECTRICITY IS GENERATED A VARIETY OF WAYS, INCLUDING USING NATURAL GAS, COAL, SUN, WIND AND WATER
2 INCREASES THE POWER'S VOLTAGE FOR TRAVEL ACROSS LONG DISTANCES
3 232+ MILES OF UNDERGROUND AND OVERHEAD TRANSMISSION LINES TRANSPORT HIGH VOLTAGE ELECTRICITY ACROSS THE REGION
4 DECREASES THE POWER'S VOLTAGE FOR LOCAL DISTRIBUTION
5 3,300+ MILES OF UNDERGROUND AND OVERHEAD DISTRIBUTION LINES THAT DELIVER POWER TO NEIGHBORHOOD TRANSFORMERS
6 DECREASES THE POWER'S VOLTAGE FOR USE IN HOMES AND BUSINESSES
7 DELIVER ELECTRICITY TO CUSTOMERS EITHER UNDERGROUND OR OVERHEAD
8 FINALLY, THE ELECTRICITY IS DELIVERED TO YOU

DID YOU KNOW?

- We have more than 1,000 miles of overhead lines and more than 2,700 miles of underground lines.
- We provide electricity to more than 229,000 service points in the Pikes Peak region.

Colorado Springs Utilities
It's how we're all connected

The numbers:

- Electric service area: 478 square miles
- Number of active electric meters: 254,486
- Annual electric use: 4.85 million MWh (2023)
- Average residential electric use: 639 kwh/month
- Record peak demand: 1,011 MW (July 30, 2024)
- Net generating capability: 1,050 MW winter (2021-2022), 1,026 MW summer (2022)
- Average System Availability Index (ASAI): 99.9998% (2023)
- System Average Interruption Duration Index (SAIDI): 38.91 minutes
- Average restoration time during an outage: 45.66 minutes (2023)
- Miles of distribution power lines: 4,018 (1,038 overhead; 2,980 underground)
- Number of substations: 54

Electric generation assets

Our electric system has a total generation capacity of 1,250 megawatts (MW). This supports an electric system that is one of the most reliable in the industry with service available 99.99% of the time. Achieving this level of service is enabled by our diverse resource mix comprised of thermal, hydroelectric and renewable generating resources.

Thermal generation units

Facility	Fuel Type	Capacity	Year Built
Birdsall Power Plant	Natural gas Steam turbine	61 MW	1953
Ray Nixon Power Plant	Natural gas and coal Steam and combustion turbine	284 MW	1980
Front Range Power Plant	Natural gas Combined cycle	554 MW	2003
Natural Gas Generating Units at Martin Drake site	Natural gas Turbine	162 MW	2023

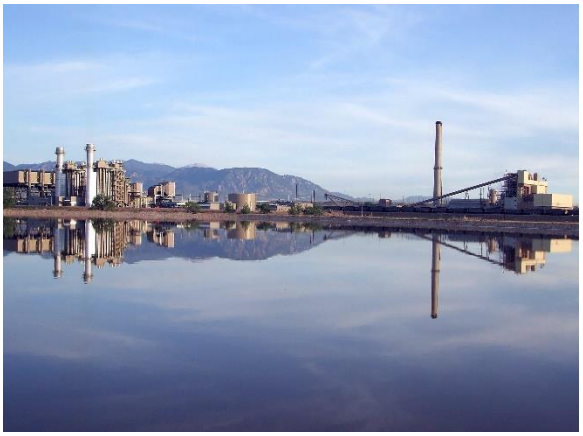
Birdsall Power Plant

In the post-World War II years, Birdsall Power Plant (originally known as North Plant) was constructed on the north side of town near an old airport. It was named after George Birdsall, former sheriff and Colorado Springs mayor 1930-1944.

Birdsall Power Plant.

Designed as a steam-powered plant, it was first built with two units. A third unit went online in 1957, giving Birdsall an overall capacity of 61 megawatts.

Originally, units one and two had Elliott steam turbine-driven pumps, which were replaced with electric motors. Unit three was nearly the same as the first two units, only larger. It had a General Electric steam turbine generator at 24 MW. All units can burn natural gas or diesel fuel, but the building was constructed with coal burners, which have never been used.


Ray Nixon Power Plant. Photo credit, Derek Hernandez.

Though not a main base-load plant, Birdsall can be powered up if needed. In addition to generation, the main control room also serves remote plant operations, which includes the hydro plants.

Ray Nixon Power Plant

The Ray Nixon Power Plant, located just south of Colorado Springs, has been a vital part of our community since it began operation in April 1980. Named after Ray Nixon, a former Director of

Utilities, the coal-fired portion of the plant has a total capacity of 208 megawatts. It is our last remaining coal-fired generating unit. In addition to coal, the plant also includes two natural gas-fired combustion turbines, each generating 38 MW. These units serve as peak resources, providing flexibility during periods of high demand.

Front Range Power Plant

Front Range Power Plant was initiated in 1999 and began commercial operation in 2003. Initially, a limited-liability partner, we purchased the plant in full in 2010.

Front Range is a gas-combined cycle plant, with two combustion turbine engines. Summer capacity is 460 MW and winter capacity is 480 MW. The combined cycle process is 60% more efficient than a single steam cycle plant.

Natural gas-fired Front Range Power Plant.

Natural gas generating units

Six modular natural gas generation units were commissioned into service in May 2023. They are in downtown Colorado Springs on the former Martin Drake Power Plant site to help serve peak demand while we add transmission lines and conduct other upgrades to our electric grid.

The modular units have many benefits:

- Cost effective to operate.
- Require limited staff resources.
- Come online within a matter of minutes.

Natural gas generators at the Martin Drake site.

We anticipate the units will be a permanent fixture on our electric grid for decades and will provide long-term value for our customers. These generators are dual-fuel capable with natural gas as the primary fuel and diesel fuel for backup.

With a positive experience with these units at the Drake site, we plan to install 10 natural gas-fueled generating units – featuring similar technology – at our Horizon Substation southeast of the Colorado Springs Airport by 2028. The units will have a total capacity of 400 megawatts (MW) to help meet the community's power needs for years to come.

Hydroelectric units

Facility	Fuel Type	Capacity	Year Built
Manitou Springs Hydroelectric Plant	Conventional hydro	6 MW	1905
Ruxton Hydroelectric Plant	Conventional hydro	1 MW	1925
Tesla Hydroelectric Plant	Conventional hydro	28 MW	1997
Cascade Hydroelectric Plant	Conventional hydro	1MW	2010

Manitou Springs Hydroelectric Plant

Manitou Springs Hydroelectric Plant.

The Manitou Springs Hydroelectric Plant, with a generating capacity of 6 MW, has been a reliable source of power for more than120 years, it is the oldest generation source in our electric system.

It began operating on February 15, 1905, as the Pikes Peak Hydro-Electric Company, boasting the highest water pressure in the world at the time, with a 2,380-foot drop from inlet to turbine and 940 pounds per square inch (psi) of pressure. Since then, the plant's water pressure features have fluctuated over time due to upgrades. Today it operates around 1,150 psi.

Originally, the plant had three 750 kW units. In 1925, Colorado Springs took ownership and by 1927, another 2,500-kW unit was added. The plant continued to evolve, with significant upgrades in 1939 and 2005, the latter adding a unit that generates up to 460 kW.

The plant operated 24/7 with a five-person crew until automation in 1994. In addition to their operator, the plant crew had to watch for frequency voltage and even manage the streetlight systems for Manitou Springs and Colorado Springs.

In 2019, it was honored by Hydro Review Magazine for its century-long operation. The plant's history is a testament to its resilience and importance to the community.

Ruxton Hydroelectric Plant.

Ruxton Hydroelectric Plant

The Ruxton Plant, located far up the Cog Railway's tracks and with a total capacity of 1 MW, holds the

unique distinction as being the first fully automated hydro plant in the world when it opened in 1925. Water from the Lake Moraine Dam flows through a 20-inch pipeline to the plant, dropping 1,160 feet and creating 500 psi of turbine inlet pressure.

While it shifted to on-site operations from 1931 to 2013, it is once again remotely run from the Systems Energy Control Center at the Birdsall Power Plant campus.

Tesla Hydroelectric Plant

Tesla Hydroelectric Plant

Tesla Hydroelectric plant, with a capacity of 28 MW, was built in 1997 on the U.S. Air Force Academy's property near Stanley Canyon. The plant was named after the renowned scientist and former resident of Colorado Springs, Nikola Tesla.

Much larger than its older hydro cousins, the plant features a 1,000-foot vertical shaft and a three-mile-long tunnel to deliver water from Rampart Reservoir. It has a 61.22-inch diameter Pelton turbine, with a generator built above the turbine that spins at 600 revolutions per minute. Total water pressure at the turbine nozzles is 953 psi at a total flow of 200 cubic feet per second. Used as a peaking unit, the plant is completely automated and controlled from the Systems Energy Control Center at the Birdsall Power Plant campus.

Cascade Hydroelectric Plant

Cascade Hydroelectric Plant.

Built in 2010, the Cascade Hydroelectric facility, with a capacity of 1 MW, is our newest hydro generation site. The plant was the result of the 2004 Electric Integrated Resource Plan (EIRP), calling for more diversification in our electric portfolio.

Cascade Hydro was constructed in place of an old water pressure-reducing unit that slowed the rate of water coming from the Old North Slope Pipeline. Cascade Hydro can produce enough power to support 530 residential homes.

Other renewable resources: Solar and wind

The addition of renewable resources to our electric generation helps to diversify our community's energy supply and meet our obligation to obtain 10% of retail electricity from eligible renewable energy sources as required by the Colorado Renewable Energy Standard. We also leverage Renewable Energy Certificates (RECs) from carbon-free resources to comply with this standard and generate revenue, which helps reduce electric costs for our customers. Renewable resources make up more than 20% of our energy portfolio.

Resource	Capacity	Year Built
U.S. Air Force Academy Solar Array	5 MW	2011
Venetucci Farm Community Solar Garden	0.5 MW	2011
South I-25 Solar Garden	0.4 MW	2012
Good Shepherd Community Solar Garden	0.5 MW	2012
Colorado Springs Solar Garden	0.5 MW	2015
Pikes Peak Solar Garden	2 MW	2015
Clear Spring Ranch Solar Array	10 MW	2016
Grazing Yak Solar Array	35 MW	2019
Palmer Solar Array	60 MW	2019
Pike Solar Array	175 MW	2023
Spring Canyon Wind Farm	60 MW	2021

Solar panels at the Pike Solar Array.

In 2015, the Utilities Board approved a project to build a 10 MW solar array on our Clear Spring Ranch campus, located on about 156 acres south of the city. The array came online in late 2016, producing enough energy to power about 3,000 homes annually.

In 2021, construction began on Pike Solar, the largest solar facility in our generation portfolio. Consisting of 400,000 photovoltaic panels, the 175-megawatts generated by this solar plant powers approximately 46,300 homes a year.

Though some resources are built on Springs Utilities land, we have long-term electricity supply agreements, or Power Purchase Agreements (PPAs), with the suppliers that own and operate these resources.

New generation and storage

To supplement renewable energy sources like solar and wind and enhance overall system resiliency, we're introducing our first 100 MW battery energy storage system at Jackson Fuller Electric Substation, located just east of Colorado Springs. The new system will be online by June 2025.

Battery energy storage systems consist of large-scale lithium-ion batteries that store electrical energy in the form of chemical energy, converting it back to

Lithium-ion batteries installed at the Jackson Fuller Substation in northeastern Colorado Springs.

electrical energy when needed, particularly during times of peak use. To supplement the new renewable resources we plan to add, we expect to introduce between 100-200 MW of additional battery storage capacity to our system by 2028.

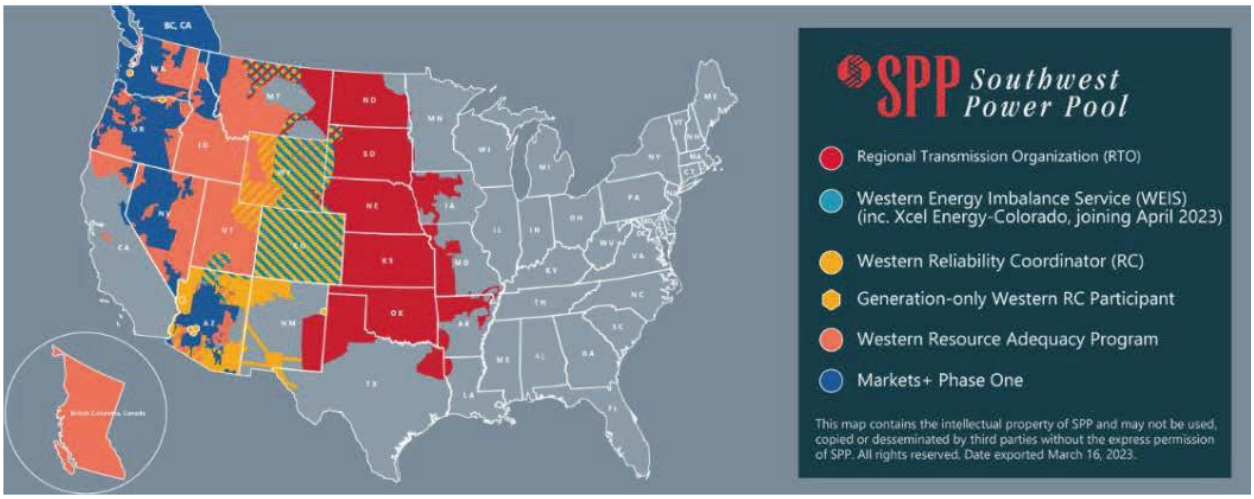
On July 30, 2024, we set a new peak electric use record with 1,010 MW, eclipsing the previous records of 989 MW set in 2021 and 1,001 MW set July 12, 2024. We are exploring other technologies for future generation including:

- Nuclear Small Modular Reactor (SMR)
- Geothermal / Thermal Heating Services
- Thermal Storage
- Hydrogen
- Renewable Natural Gas (RNG)
- Pumped Storage

Spring Canyon Wind Farm at dusk.

Membership in the Southwest Power Pool (SPP)

In August 2022, we entered the Southwest Power Pool (SPP) Western Energy Imbalance Service (WEIS) market. SPP is a regional energy transmission organization and nonprofit corporation mandated by the Federal Energy Regulatory Commission to help organizations like ours meet energy-related goals and better manage costs for customers.



Map of the organizations that comprise the Southwest Power Pool.

SPP's WEIS provides real-time access to the latest market intelligence and the lowest cost resources from other member utilities at any given time. When our system is generating more energy than our customers are using, that excess energy can be sold in an organized market to help offset customer costs. On the other hand, during times of peak use, energy can also be purchased to ensure service reliability.

With the successes achieved as part of SPP WEIS, we intend to join SPP's Regional Transmission Organization (RTO) by spring 2026. By joining the RTO, can greatly enhance our access to regional energy resources and transmission line capacity more quickly and cost effectively than if we were to develop these resources on own.

This type of regional access to resources is incredibly important as the energy industry continues to experience high demand, supply chain challenges, growing regulatory mandates and other market-related pressures.

Electric transmission and distribution system

We maintain and operate nearly 3,800 miles of electric distribution lines and more than 200 miles of transmission lines around the city.

Like the 54 electric substations that occupy many portions of our electric grid, these electric lines play a critical role in delivering reliable and safe electricity to your homes and businesses. While distribution and transmission lines sound similar, they play very different roles on our electric system and often require different installation methods and standards.

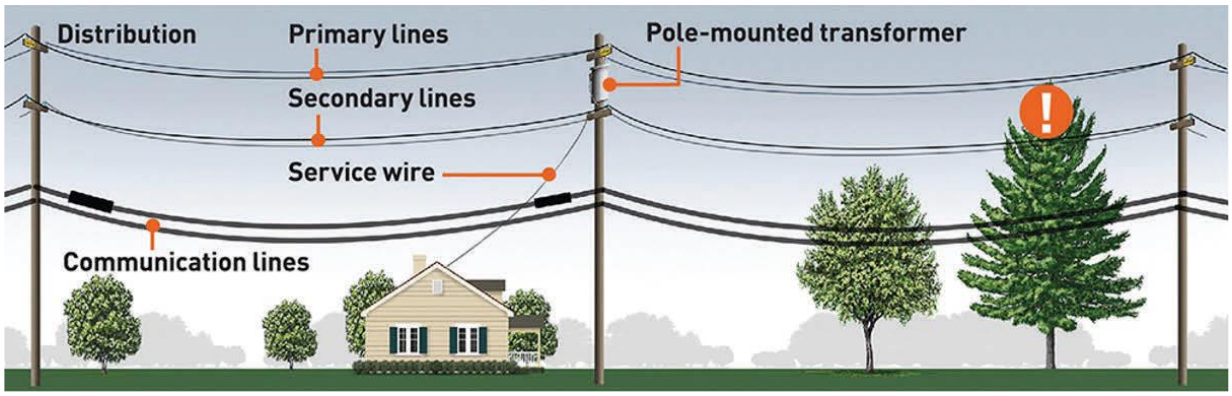


Diagram of electric distribution lines.

Large portions of our electric grid, to include substations and transmission lines, are undergoing important upgrades to prepare us for a new energy future and new demands related to regulatory requirements, city growth, increased electric vehicle ownership and electric-based technology in homes. These projects and other related initiatives are part of our Sustainable Energy Plan.

Transmission vs. distribution

Transmission lines deliver electricity at a high voltage from a generation source (power plants, solar arrays, windfarms, etc.) to an electric substation. Distribution lines deliver electricity at a lower voltage from a substation to a local electric distribution network that may include transformers and/or switches (green boxes) or overhead service lines that safely feed customer homes and businesses with electricity.

Overhead transmission line near Falcon, CO.

Linemen repairing a distribution line after a storm.

Several of the new transmission line and substation projects underway or in the planning stage must be built in already-established areas of Colorado Springs, presenting limited route and siting options. To reliably serve our customers, substations are located near the area they serve. As we change the way we produce energy and the way we bring it into our city, new transmission lines are needed to connect existing substations in established areas.

To provide context, we've initiated energy projects that stretch across all geographic areas of our city – from Flying Horse, Briargate and the Austin Bluffs corridor to downtown and southeast Colorado Springs. Most of these projects have required the acquisition or use of easements on private property.

Overhead vs. underground

Nearly 3,000 of our 3,849 miles of distribution lines are underground (about 77%). In the 1970s, our city leaders passed an ordinance requiring all new developments to be connected to underground electric services. However, in comparison, about 89% of our transmission lines are overhead. The construction, operations and maintenance requirements of distribution lines versus transmission lines are very different.

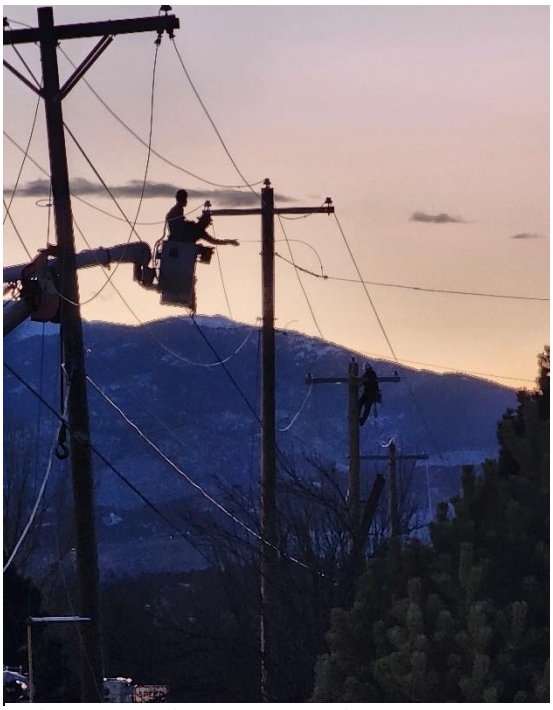
We install overhead electric transmission lines for three primary reasons: cost, installation disruption and outage restoration.

Cost

Undergrounding an electric transmission line is approximately three to five times the cost of an overhead equivalent; a cost that would be shared by all Colorado Springs Utilities ratepayers.

Disruption

Although it is often assumed that undergrounding a large transmission line is less disruptive to surrounding property owners and vegetation, the construction is more disruptive to both. During initial installation and in cases of service restoration efforts, considerable digging and vegetation clearing is required. Use of space under an overhead line can be maximized, but usable space over a buried electrical system is limited. For example, trees can grow under the transmission line and be limited to a certain height, but they cannot grow or have a root ball over underground cable.



Linemen working through the night on the overhead distribution system. Photo credit, Jena Ward.

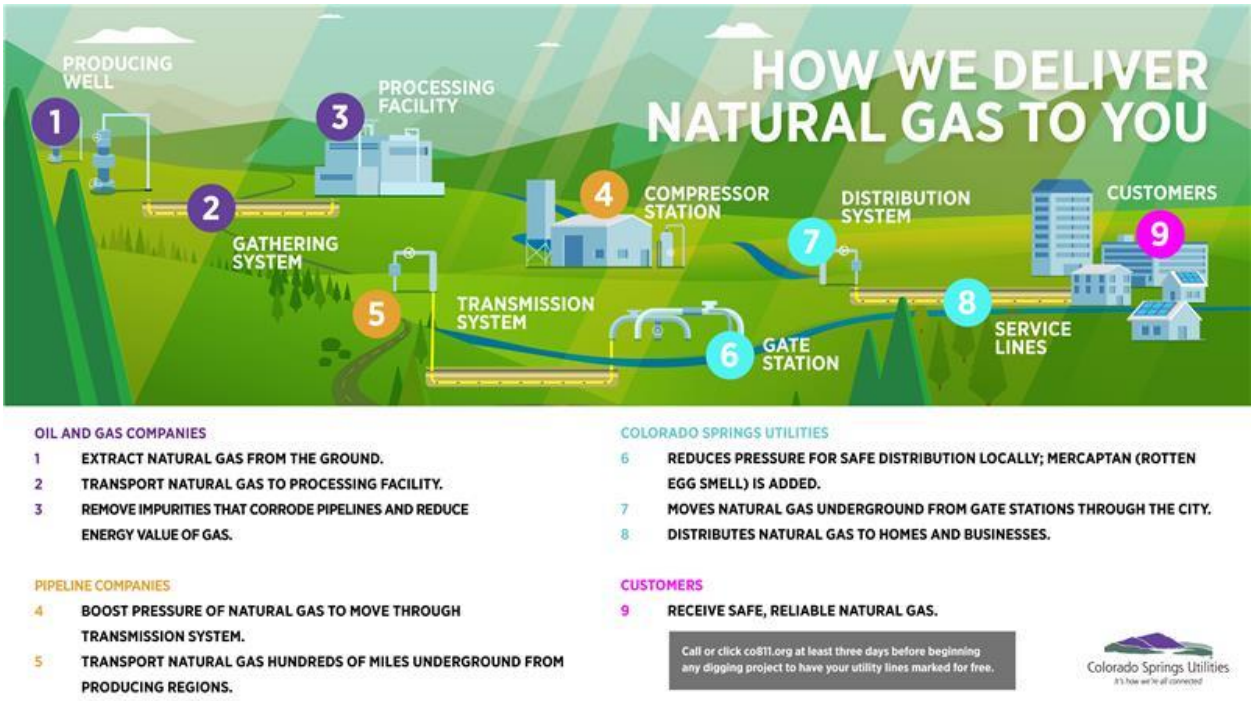
Service restoration

If an electric outage is traced to an underground transmission line, the process of finding the exact cause of the failure is much more involved. It is sometimes necessary to make several digs to find the source. This translates into longer outages and more disruption to roadways, easements and surrounding vegetation.

We offer a System Improvement Program for us to share with our customers the cost of burying primary voltage power lines. You can find more information in our Electric Line Extension and Service Standards manual at www.csu.org/electric-service/system.


COLORADO SPRINGS UTILITIES
NATURAL GAS SYSTEM
CSU

Natural gas overview



The numbers

- Natural Gas service area: 527 square miles
- Number of active service points: 228,390
- Total net throughput volume: 24,793,222 Dth (dekatherms)
- Peak demand: 254,032 Dth
- Miles of distribution mains: 2,756
- 5 gate stations
- 47 pressure districts
- 4 natural gas-powered electric generating plants:
    - Birdsall Power Plant
    - Natural Gas Generators at Martin Drake site
    - Front Range Power Plant
    - Nixon Power Plant
- 1 propane air plant

Natural gas and our energy future

Natural gas plays a vital role in our daily lives and in our energy generation. Natural gas is a fossil fuel primarily composed of methane (CH_4) along with smaller amounts of other hydrocarbons. It is a non-toxic, colorless, odorless substance that is 40% lighter than air, making it an efficient energy source. The ignition temperature of natural gas is 1200 degrees Fahrenheit and is flammable within a narrow range of 5-15% natural gas-in-air. Natural gas is widely used for heating, water heating, cooking, electricity generation and in manufacturing plastics.

Natural gas is an important resource that can help us in our transition away from coal-based generation. It releases 90% less sulfur dioxide, five times less nitrogen oxide and 50% less carbon dioxide than coal when it is burned, making it the least carbon-intensive fossil fuel available that is compatible with our current infrastructure. Along with renewable resources, natural gas will make up 18% of our overall generation profile in 2030.

Natural gas crew member.

The Clean Heat Plan and you

In 2021, Colorado state legislators passed the Clean Heat Plan law that requires gas utilities to adopt programs to reduce greenhouse gas emissions from natural gas appliances and heating systems 4% by 2025 and 22% by 2030 relative to 2015 levels. In 2023, we submitted our Clean Heat Plan demonstrating how we will work toward these goals while managing cost impacts to our customers. To achieve the Clean Heat Plan targets, consumer use of energy inside homes and businesses will have to change and shift from natural gas-based appliances to electric appliances.

To support our customers with the transition to cleaner energy, we are offering rebates for efficient heat pumps, electric-based water heaters and heating/cooling options. We are also considering rate options to incentivize off-peak electric use to help manage shifts from natural gas to electric demand.

Natural gas distribution

Natural gas gate station.

Even though we don’t produce our own natural gas, we are the sixth largest municipal gas provider in the country by number of service lines (185,677) and seventh largest by miles of main piping (2,756 miles).

Our primary source of gas comes from the Denver-Joules basin, located east of Denver, which is transported on Kinder Morgan's interstate transmission pipeline. It's delivered to five city gate stations, located along the Marksheffel Boulevard

corridor. Gas enters our system at pressures between 300-900 pounds per square inch (psi). Once it reaches our gate stations, we add the chemical odorant mercaptan so any unburned gas can be detected by its rotten egg smell.

Natural gas regulator station.

From the gate stations, a series of gas distribution pipelines extend throughout our service territory. The largest pipelines carry natural gas at 145 psi with a maximum of 150 psi. The all-steel system has diameters ranging from two inches to 20 inches. We have 47 pressure districts with roughly 4,700 customers per district. Our local distribution system supplies natural gas to more than 225,000 meters throughout our service territory, to include Manitou Springs and several military installations.

Regulator stations

Our natural gas distribution system is a fascinating arrangement of pipeline mains, test valves, service lines, gate stations and over 5,000 miles of underground pipeline. One of the most important parts of the system are regulator stations that are strategically placed within our 47 gas pressure districts to reduce the pressure of natural gas as it flows from the system and into homes and businesses.

If you have a regulator station in your neighborhood, you may hear a small hissing noise coming from the valves and this means it is doing its work. A slight odor of the chemical additive mercaptan may also be detected, which is normal.

Gas Propane Air Plant tanks.

Gas Propane Air Plant (GPAP)

Our Gas Propane Air Plant is one of our remote gas plants. When it was constructed in 1974, the plant was located far from town with few, if any, structures close by.

Located on N. Carefree Circle, west of N. Marksheffel Road, the plant blends propane, air and natural gas to supplement natural gas supply to our distribution system. Keeping propane in storage at the facility enables us to supplement our gas supply when regional supplies are low and reduces the need to purchase gas when costs are high. The plant provides an economic way to meet peak load. One hour of plant production provides gas to heat approximately 20,000 homes.

Tank capacity:

- 42 - 30,000-gallon Liquid Propane Tanks = 1,260,000 gallons total capacity
- 1,100,000 gallons of liquid propane when full
    - 1 propane tank = 234,000 BBQ grill propane tanks

Natural gas public pipeline awareness

It is our goal to see that the community served by Springs Utilities' natural gas distribution system, both customers and non-customers, are provided with key messages about natural gas and pipeline safety. Awareness messages are delivered through multiple tactics with regular frequency to ensure that we communicate:

Gas construction crew repairing a gas leak. Photo credit, Jane Zook.

- The **purpose and reliability** of our distributions pipeline.
- **Potential hazards** such as hit lines and unintended natural gas releases.
- **Damage prevention measures** for contractors, excavators and the general public to include knowledge of calling 811 before digging.
- **Leak recognition and response**: signs of a pipeline leak (e.g., hissing sounds, rotten egg odor, blowing dust or bubbles in water) and steps to take if a leak is suspected.
- Where to get **additional information** from Colorado Springs Utilities regarding natural gas.

We target four specific stakeholder audiences with messaging and engagement. Each group receives tailored messages relevant to their role and interaction with our distribution pipeline system.

Affected public

Regular mailings, bill inserts, community meetings and school presentations are conducted to inform residents about pipeline locations, safety measures and how to recognize and respond to leaks. We also use our social media channels and website to convey important natural gas pipeline safety information.

Emergency officials

We conduct annual training sessions and drills with local fire departments, police and emergency medical services to ensure they are prepared to handle pipeline emergencies.

Public officials

Individuals who hold positions of authority in local, state, or federal government and have responsibilities related to public safety, emergency response and community planning are targeted in public awareness programs. This is to ensure they are informed about pipeline safety, potential hazards and appropriate response actions in the event of an emergency.

Natural gas pipeline awareness contractor class.

Excavators and contractors

Individuals and organizations involved in activities that disturb ground near pipeline infrastructure such as landscapers, utility workers and cross bore

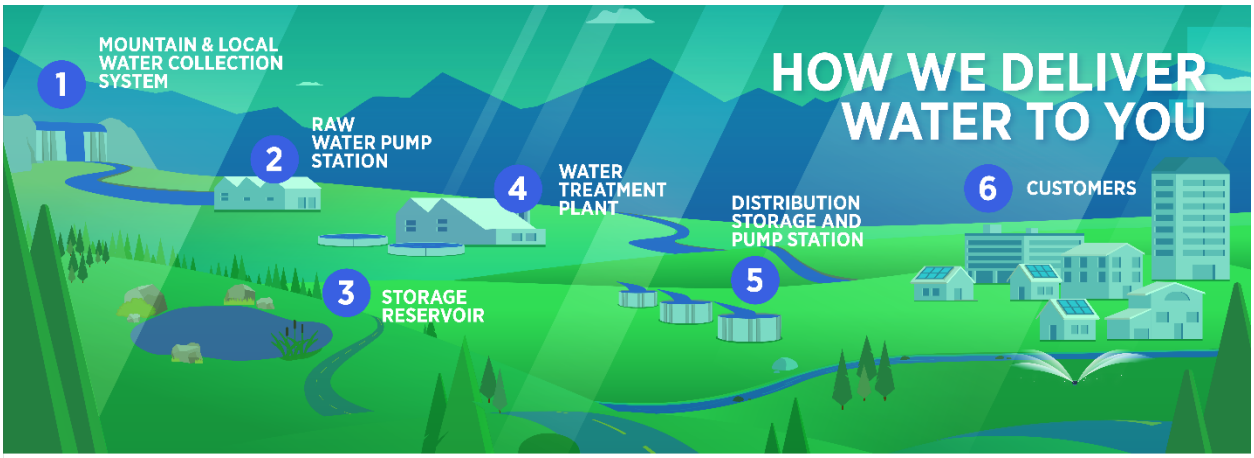
drilling operators are communicated with regularly. This audience is crucial because their work can potentially damage pipelines, leading to safety hazards. Outreach programs include safety workshops, distribution of safety materials and participation in local "Call Before You Dig" campaigns.

Our natural gas subject matter experts conduct program evaluations to assess our public awareness efforts and make necessary enhancements based on factors such as population density, development activities and feedback from stakeholders.

Gas pipeline main in preparation for a large-scale main replacement project.


COLORADO SPRINGS UTILITIES
WATER SYSTEM

Water system overview



The numbers

- Water service area: 206 square miles
- Number of active service points: 158,357
- Annual potable water deliveries: 65,615 AF (21.4 billion gallons) (2023)
- Treatment capacity: 214 mgd (sustained)
- Record peak demand: 182 mgd (July 2001)
- Average daily treated water delivery: 63.5 mgd
- Water System includes:
    - 4 transmountain diversion systems that carry water from more than 100 miles away
    - 2,283 miles of potable water mains + 283 miles of non-potable water mains
    - 25 raw water storage reservoirs
    - 9 raw water pump stations
    - 6 water treatment plants (1 of the plants is shared with Fountain Valley Authority)
    - 40 treated water storage tanks and reservoirs

AF = acre feet

MGD = million gallons per day

Our water systems

As the largest city in Colorado that is not located on a major water source, we understand the value of water because it must travel long distances before it makes its way to the approximately 540,000 customers we serve. That understanding guides how we manage 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.

Upper Blue Dam. Photo credit, Mike Cobb.

Our water service area covers more than 206 square miles. The source of water for our community is primarily high-country snowmelt coming from three river basins in the state – Colorado River, Arkansas River and the South Platte River. We import most water from 100-plus miles away through four major pipelines and seven collection systems. Our 25 reservoirs can hold up to three years of customer water demand and that water travels through 260 miles of raw water pipeline and is cleaned by five water treatment facilities (including Fountain Valley Authority).

On average we deliver about 63.5 million gallons a day (or about 22 billion gallons a year) to our customers through 2,283 miles of distribution pipe. We reclaim about 38 million gallons of water a day at our two wastewater treatment plants and one solids handling facility. We plan for future water needs at least 50 years ahead and consider factors like population growth, changes in demand, infrastructure challenges, regulation changes, climate variability and more. The following pages provide a brief overview of each of our water collection systems.

South Slope

The South Slope watershed was Colorado Springs' first major water source, with development beginning in the late 1880s (see History section). It's a diverse and biologically rich landscape on the south side of Pikes Peak. The seven reservoirs on the South Slope have a combined storage capacity of approximately 7,016 acre-feet. Water from Mason and/or McReynolds Reservoirs flows through the St. John's Tunnel to Lake Moraine on Ruxton Creek. This sensitive and rugged area provides a backcountry experience for visitors. It's home to bighorn sheep, cutthroat trout and an array of migratory birds. Hiking and biking are allowed on trails. Fishing is only allowed in McReynolds and Mason reservoirs with flies and lures only. A permit is required to access this area when it is open for the season. More information and permits for the area are found on the South Slope Recreation section of http://coloradosprings.gov.

In 2023, rehabilitation of South Catamount dam began. The dam structure was constructed in 1936 and requires a major rehabilitation project to enhance its safety and performance. Work includes resurfacing the dam's steel face and replacing infrastructure and is expected to be completed by 2026. A similar project occurred on Crystal Creek dam in the past decade and we plan to rehabilitate North Catamount dam next.

South Catamount Reservoir.

North Slope

The three reservoirs on the North Slope of Pikes Peak – Crystal Creek, South Catamount and North Catamount – have a combined capacity of about 18,157 acre-feet. This was the second mountain system purchased and developed for Colorado Springs. North Slope water can be discharged from any one of the reservoirs into the transfer line to Northfield or into the North Slope pipeline that delivers water to the Tollefson Water Treatment Plant.

Northfield

The Northfield water system consists of three reservoirs: Northfield reservoir built in 1890, Nichols Reservoir built in 1913 and Rampart Reservoir built in 1970. This system has a total combined capacity of approximately 41,733 acre-feet. This was the third watershed system to be purchased and developed for Colorado Springs.

Rampart Reservoir.

Most water stored in Northfield Reservoirs comes from other systems. This includes water transported from the North Slope of Pikes Peak, Homestake, Blue River, Twin Lakes, Fryingpan-Arkansas, Colorado Canal systems and exchange water delivered from the Otero Pump Station in Buena Vista.

South Suburban Reservoir

In 1965, the South Suburban Water Company was purchased, including water rights on North and South Cheyenne creeks. The dam was constructed in 1931 and was previously known as Mesa Dam and Reservoir. In the 1990's we built pipelines to convey South Suburban water to the Tollefson Water Treatment Plant and bring filtered water back to the area. Another pipeline connects the pump station to Penrose Reservoir to enhance the water supply for the Broadmoor's irrigation system and other non-potable uses.

South Suburban Reservoir.

Pikeview reservoir

Pikeview reservoir is a popular fishing area located south of Garden of the Gods Park and diverts water from Monument Creek. Up to six million gallons per day can be delivered to the non-potable water system or pumped to the Tollefson Water Treatment plant for treatment and use in our potable water system.

Continental-Hoosier

The Continental-Hoosier system, also known as the Blue River system, was our first transmountain water diversion project. It begins in the Upper Blue River basin, which is tributary to the Colorado River. The Continental-Hoosier system was developed to support economic growth in Colorado Springs, including the expansion of Fort Carson and the establishment of the Air Force Academy, as well as the need to diversify our supplies for drought protection. The diversion project began with construction of the Hoosier Tunnel near Alma, Colorado in 1951. Other system components were added later.

This system diverts water from several tributaries located in the headwaters of the Blue River Watershed. From Montgomery Reservoir, water travels 70 miles by gravity flow through the Blue River pipeline to terminal storage on the North Slope of Pikes Peak. The combined storage of Montgomery and Upper Blue Reservoirs is 7,178 acre-feet.

Homestake

Colorado Springs and Aurora are equal partners in the Homestake Project and share in the ownership, costs and yield of the water rights, collection system and much of the transmission infrastructure.

Homestake reservoir with Faro scanner. Photo credit, Chuck Reid.

Full capacity of the Homestake Reservoir is 42,892 acre-feet. The

water travels from the reservoir to Otero Pump Station, where it's boosted for travel over the mountainous terrain through a 66-inch diameter, 50-mile pipeline to the south of Spinney Mountain Reservoir in Park County. From there, we and Aurora have separate infrastructure to send water to our cities.

Twin Lakes

In 1930, the water users under the Colorado Canal enlarged their water supply by constructing the Independence Pass Transmountain Diversion System, taking water from the headwaters of the Roaring Fork River, which is tributary to the Colorado River, for direct flow use in the Colorado Canal system with storage in Twin Lakes Reservoir.

Arkansas River Diversion Project section near Buena Vista, CO. Photo credit, Tyler Endres.

A monumental water acquisition occurred in 1972 with our purchase of shares in the Twin Lakes Canal Company at a cost of $13.5 million. We exercised our options to own a majority interest (54.7%) in this water.

Fryingpan-Arkansas River Basin

The Bureau of Reclamation's Fryingpan-Arkansas Project is a transmountain diversion that supplies southeastern Colorado with a supplemental water supply for irrigation, municipal and industrial uses, hydroelectric power generation, transmission and recreational opportunities. This project was made possible by the signing of the Fryingpan-Arkansas Project Act by President John F. Kennedy in 1962. The project earned its name because it collects about 59,000 acre-feet of water each year from the Fryingpan River basin on the west slope of the Continental Divide and delivers to the Arkansas River basin on the eastern slope.

Creek crossing work by water construction crew.

Pueblo Reservoir, the largest reservoir in the project, is on the Arkansas River. The project also included construction of a 200-megawatt hydroelectric power plant at the base of Mount Elbert and a 7.5-megawatt plant at Pueblo Reservoir.

The communities of Colorado Springs, Fountain, Security, Widefield and Stratmoor Hills are beneficiaries of the project. All share ownership in the Fountain Valley Authority pipeline, which is used to move water from Pueblo Reservoir.

Streams

Over the years, local streams have supplied their share of water consumed in Colorado Springs. In the early 1930s, about 60% of the water used annually came from streams in the immediate area, compared to about 20% today. Local streams are North and South Cheyenne Creeks, Bear Creek, Sutherland Creek, Fountain Creek and Monument Creek.

Colorado Canal

In 1985, we bought water rights, storage, land and rights-of-way and a controlling interest in the Colorado Canal Company, the Lake Meredith Reservoir Company and the Lake Henry Reservoir Company, all located east of Pueblo.

These facilities produce an annual average yield of about 28,000 acre-feet. They also provide valuable additional storage rights that increase the operational flexibility of our other water rights.

Lake Henry has an active storage capacity of 9,363 acre-feet and Lake Meredith has an active storage capacity of 39,804 acre-feet.

Colorado Canal water is not delivered to Colorado Springs through any pipeline. Interest in this company allows us to exchange water to upstream reservoirs.

Recreation and public access

Paddle boarding on public waters in Crested Butte. Photo credit, Joseph Wintergerst.

More than 15,200 acres of municipal watershed lands and nine reservoirs are open for recreational use. We jointly manage lands and reservoirs with other agencies such as the U.S. Forest Service, Colorado Parks and Wildlife, El Paso County Parks and Community Services and Colorado Springs Parks, Recreation and Cultural Services.

In 2024, we began an analysis of existing public access and recreation activities on the North Slope Recreation Area (NSRA) to make recommendations regarding the current recreation access and trails, specifically regarding infrastructure protection and security, public safety and sustainability and alternatives for improved public access and recreational use. This study is expected to be completed before the NSRA season opening in 2026.

Our reservoirs and watersheds are a natural attraction for anglers, families, hikers, bikers and other outdoor enthusiasts. We strive to balance operational needs, environmental stewardship and recreational uses. Providing safe, clean, reliable drinking water is our priority.

Southern Delivery System

The Southern Delivery System (SDS) was built from 2010 to 2016 and completed at a cost of approximately $825 million - about $160 million under budget. SDS was constructed to transport water stored in Pueblo Reservoir uphill to Colorado Springs and its three partner communities: Pueblo West Metropolitan District, City of Fountain and Security Water District. The system includes three pump stations and the Edward W. Bailey Water

Southern Delivery System pipeline.

Treatment Plant. Future storage reservoirs are planned to help optimize our exchange rights.

Phase 1 constructed the North Outlet Works and valve house at Pueblo Dam. Under pressure from the weight of the water in the reservoir, water flows into a large pipeline that features turnouts designed to support a hydroelectric unit and a connection for Pueblo West's new pipeline that serves its pump station. The pipeline delivers water to Juniper Pump Station, about half a mile from the dam.

SDS Pueblo Damn connection test, 2012.

Phase II of SDS will be built as system demands require it. This phase includes the Gary M. Bostrom Reservoir for terminal storage, Harold Miskel Reservoir to store and release return flows to Fountain Creek, up to seven additional pumps at the pump stations and expansion of the treatment plant to serve additional pressure zones within the distribution system.

Water exchanges, reuse and non-potable water

Through the reuse and exchange of imported water, we stretch existing water supplies to optimize our operations. In many cases, each acre foot of water we import can be reused up to two additional times. Water exchanges and reuse are both critical ways to meet our community's water requirements now and in the future (see "Use to extinction" in glossary). Today, over 90% of our reusable water supplies are treated and used for augmentation, river exchanges, contract exchanges and in our non-potable system.

Lower Arkansas Valley Water Sharing Program

Our long-term water plan includes a balanced portfolio of programs and projects to help us meet the projected water needs of our city at full buildout. One way we are doing that is through our partnerships with agricultural water users in the Lower Arkansas Valley.

Wertz brothers that take part in the Lower Arkansas Valley Water Sharing Program.

Sharing water with farmers in our native Arkansas River basin provides water for our customers while protecting rural communities and the agricultural economy in our basin. Balancing municipal needs with farmers' needs means working to ensure both can succeed.

Our partnerships with farmers focus on improving irrigation efficiency. With less water needed to maintain crop yields, we can acquire the excess water previously used for irrigating farm parcels. Importantly, the remaining water is tied to the farms in perpetuity. Water sharing agreements help the farmers manage water supplies while keeping water in agriculture and sustaining economic growth.

We continue to build on the successes of our first water sharing agreements that started in 2015. In 2018, we partnered with the Lower Arkansas Water Management Association (LAWMA) to provide water for Colorado Springs municipal use in five of every 10 years, while farmers in the Las Animas and Lamar areas take additional water during the other five years. Since then, we've partnered with farmers in the Fort Lyon Canal company (FLCC) to transition flood-irrigated fields to center pivot irrigation, resulting in shares from parcel corners that will no longer be irrigated.

Sunflower crop from the water sharing program.

Reuse and non-potable water

We are recognized as a statewide leader in water reuse and have one of the largest non-potable water systems in Colorado. In the 1960s, we pioneered the use of treated wastewater for irrigation. The non-potable water distribution system is comprised of raw water (untreated surface and groundwater) and reclaimed water (wastewater that goes through additional treatment, including filtration). About 10% of our reclaimed water is used in our non-potable system. This water is used to irrigate parks, golf courses, campuses and community properties and for our own operations.

Water treatment and water quality

Water treatment involves physical, chemical and biological changes that transform raw water into drinkable water. Our water system includes five water treatment facilities, with a sustained water treatment capacity of 214 MGD. Once the Southern Delivery System (SDS) is built out, our sustained water treatment capacity will increase to 324 MGD and is expected to be sufficient until at least the 2040 decade.

Water Treatment Plants	Resource	Capacity	Year Built
Phillip H. Tollefson (formerly Mesa)	Conventional water treatment	42 MGD	1942, 2022
Pine Valley	Conventional water treatment	85 MGD	1969
Fountain Valley Authority	Shared facility with conventional water treatment	17 MGD total (10 MGD for CSU)	1982
Ute Pass	Conventional water treatment	2 MGD	1987, 2003
McCullough	Conventional water treatment	75 MGD	1993,1999
Edward W. Bailey	Conventional water treatment with added biological filtration and ozone processes	50 MGD (100 MGD at build out)	2016

Our system has approximately 2,300 miles of water distribution system mains, most of which have been installed post-1954 and made of iron, steel or plastic.

Water treatment plants

The Phillip H. Tollefson Water Treatment Plant, formerly Mesa Water Treatment Plant, was built in 1942 with a capacity of 6 MGD. Expansions and upgrades to the plant increased its capacity to 42 MGD. Other phases will continue to advance our use of the latest technologies in water treatment, which could also increase capacity.

Philip H. Tollefson Water Resource Recovery Facility.

The Pine Valley Water Treatment Plant was acquired with the 1949 purchase of the Northfield Water Company. The original plant, which had a capacity of 2 MGD in 1969, was retired when the 40 MGD Pine Valley plant was completed at the U.S. Air Force Academy in 1969. Other upgrades and expansions have raised the plant's sustained capacity to 85 MGD.

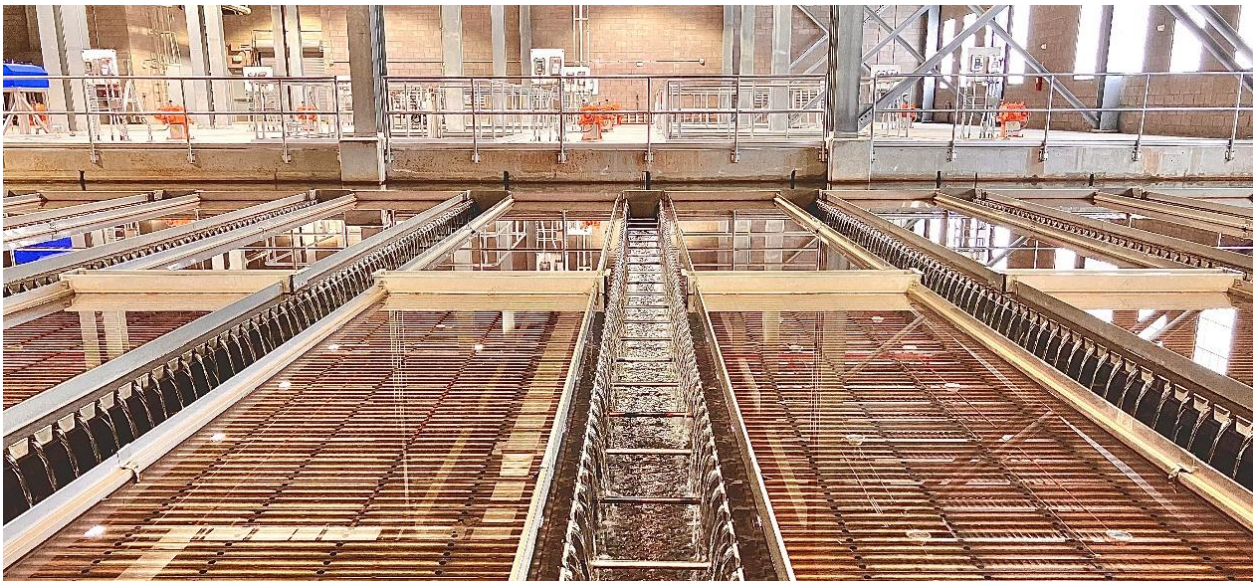
Water is also treated at the Fountain Valley Authority (FVA) Treatment Plant. It provides high quality drinking water for five different communities on the southern side of Colorado Springs and was built in 1982. The FVA is formed of Colorado Springs Utilities, the cities of Fountain, Security, Widefield and Stratmoor Hills Water & Sanitation District. The FVA Water Resource Recovery Facility is south of Colorado Springs. Our share of this plant is about 12 MGD, but through the Southern Delivery System (SDS) swap agreement with the City of Fountain it was reduced to 10 MGD.

Fountain Valley Authority Sedimentation Basins. Photo credit, Kevin Love.

A small, 1 MGD plant was added in 1987 in the Ute Pass area to serve Green Mountain Falls, Chipita Park and Cascade. The Ute Pass plant was expanded to two MGD in 2003.

The McCullough Water Treatment Plant, with a capacity of 50 MGD, was constructed as part of the McCullough Water Resource Recovery Facility. Construction began in 1988 and was completed in 1993. More filters were added to the McCullough Plant in 1999 to increase the capacity to 75 MGD.

The Edward W. Bailey Water Treatment Plant was completed in 2016 as part of the Southern Delivery System and provides state-of-the-art treatment for 50 MGD, expandable to 100 MGD.



Water treatment 'Zen Garden' at Bailey Water Treatment Plant. Photo credit, John Lewis.

Water distribution

Our water distribution generally uses gravity to distribute water to our customers. However, we provide pumped water service to some areas. Ground elevations range from about 7,800 feet to 5,750 feet in our service area.

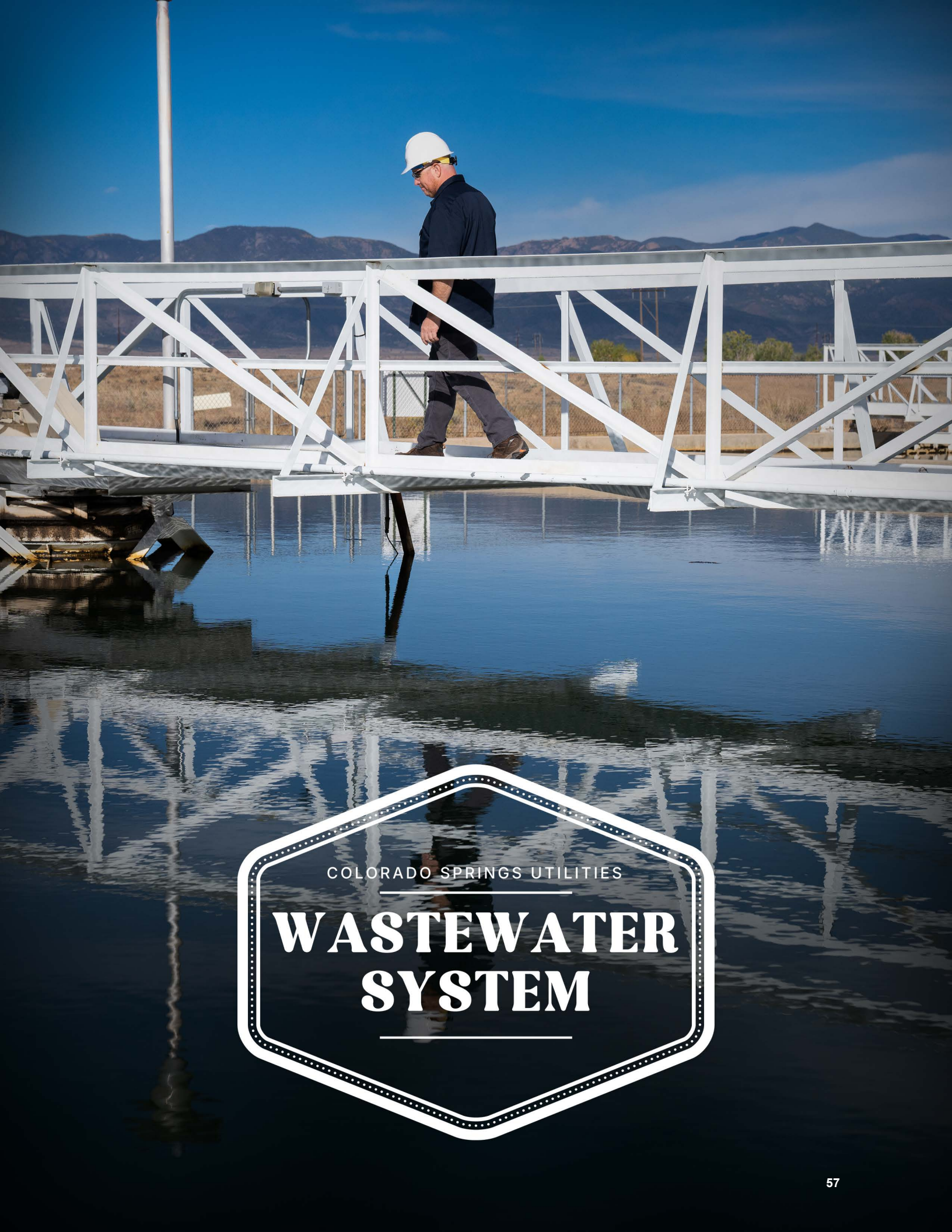
There are five major service areas: Briargate, Templeton, Northfield, Highline and Lowline. Each lower service level can be fed through regulators from the higher levels and from its own distribution storage tanks. The distribution system includes more than 2,300 miles of potable water mains and 40 treated water storage tanks and reservoirs.

Water construction crew installing a new valve in the water distribution system.

Water quality

Our water comes from a variety of sources, though most of it is from high country snowmelt. This means we are primarily first-time users of the water. We prioritize delivering a reliable supply of high-quality drinking water. Our staff diligently monitors water quality at all stages of the process from source water and treatment processes to finished water and in the distribution system.

We run a state-certified water quality laboratory 365 days a year and use advanced instruments to ensure the high quality of our drinking water. We analyze more than 12,000 samples annually for regulatory compliance and permitting and we conduct 400 tests a month to monitor drinking water for quality. We thoroughly test our water for contaminants like viruses & bacteria, metals, pesticides & herbicides, PFAS and more.



COLORADO SPRINGS UTILITIES

WASTEWATER SYSTEM

Wastewater system overview

The numbers

- Wastewater service area: 202 square miles
- Number of active service points: 154,211
- Wastewater treated: average of 38 MGD
- Combined permitted capacity: 95 MGD
- Miles of sewer main pipe: 1,821 miles
- Wastewater System includes:
    - 3 resource recovery facilities, including 1 dedicated to biosolids handling
    - 20 lift stations

Our wastewater system

Our complex system of wastewater pipes, lift stations and treatment facilities work in concert to ensure the health of our community. We operate one of Colorado's largest wastewater systems, providing environmentally responsible, reliable wastewater collection and treatment services.

Wastewater crew and maintenance truck.

Close to 40 million gallons of wastewater flow through 150 square miles of pipe to our water resource recovery facilities each day. Sanitary sewer mains range in size from 6 to 66 inches in diameter. About 30,000 manholes provide access for the operation and maintenance of the system. In addition to hundreds of miles of gravity flow pipelines, 20 lift stations pump wastewater into mains.

Collection

Since 2004, Colorado Springs Utilities has invested a total of $250 million on wastewater collection system maintenance and improvements. Our spills per 100 miles of pipe are among the lowest in the nation.

Our collection system uses a variety of methods to minimize wastewater overflow and ensure protection of human health and the environment. Our rate of releases is significantly lower than most other systems of similar size.

Anaerobic digesters at sunrise at Clear Spring Ranch. Photo credit, Ramsey Knowles.

Treatment

The wastewater treatment process ensures that final effluent meets or is below discharge permit levels set by the Colorado Department of Public Health and Environment and the United States Environmental Protection Agency.

Our wastewater treatment process consists of five fundamental processes:

1. Preliminary treatment removes inorganic solids.
2. Primary treatment separates organic solids from the liquid. The organic sludge is pumped to the biosolids handling facility.
3. Secondary treatment involves helpful microorganisms to break down waste in the water.
4. Disinfection with ultra-violet light is used to remove any remaining pathogenic microorganisms in the effluent water. We then release the treated reclaimed wastewater, or effluent, as clean water into local waterways.

5. Tertiary treatment is used for non-potable water and consists of additional filtration through sand filters.

Our utility was one of the first in the state to obtain permission to use ultra-violet light to disinfect the reclaimed water (rather than chlorine). We switched to this newer, safer disinfection process for reclaimed water in 2010.

Las Vegas Street Water Resource Recovery Facility

The first facility of its type in Colorado Springs, the Las Vegas Street Water Resource Recovery Facility (LVSWRRF) was established in 1930, with upgrades in the 1950s, 1970s, 1990s and 2000s. The permitted capacity of this plant is 75 MGD. In addition to serving as our city's main water resource recovery facility, the LVSWRRF is also home to our water quality laboratories and industrial pretreatment management program.

Winter morning at Las Vegas Street Water Resource Recovery Facility. Photo credit, Tara Kelley.

J.D. Phillips Water Resource Recovery Facility

Located near Pikeview Reservoir, the J.D. Phillips Water Resource Recovery Facility came online in 2007 to help meet the increasing service demands of the north and northeast areas of our community. The permitted capacity of this plant is 20 MGD. The state-of-the-art facility is fully enclosed to help control odor and is operated by a small staff.

Clear Spring Ranch Resource Recovery Facility

Biosolids recovered from the Las Vegas and the J.D. Phillips facilities are processed at this campus, built in 1984 and located just south of the city of Fountain.

Sludge basins at Clear Spring Ranch Resource Recovery Facility.

After traveling through a 17.6-mile pipeline, solids are treated by an anaerobic digestion process, where complex organic substances are broken down into methane, carbon dioxide, trace gases and stabilized solids. Methane gas generated in the process is burned in gas boilers and used for digester heating.

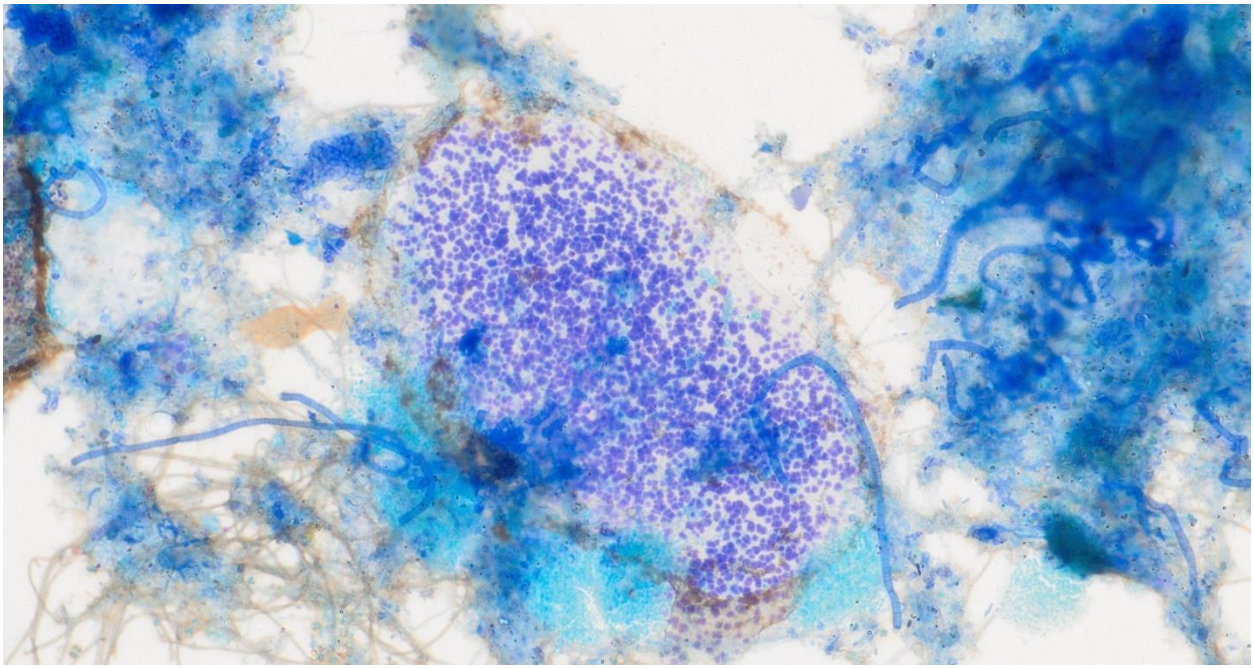
Biosolids are then stored in facultative sludge basins for up to five years for further treatment and then pumped from the basins and injected below the soil surface in fields. An adjacent dam prevents runoff or groundwater from leaving the disposal site. All liquids are contained on the site and are not moved to any external water sources.

Water Resource Recovery Facility	Resource	Capacity	Year Built
Las Vegas Street	Wastewater treatment	75 MGD	1930, 2018
J.D. Phillips	Wastewater treatment	20 MGD	2007
Clear Spring Ranch	Biosolids handling	O.3 MGD sludge	1984

Nutrient removal

As technology evolves, so do the methods by which we measure wastewater effluent quality. As of 2019, regulators require wastewater utilities to remove a larger percentage of nutrients, otherwise known as phosphorous and nitrogen, from treated wastewater.

Phosphorous and nitrogen, which are naturally excreted by the human body and found in fertilizers and household cleaners, have been linked to algae blooms in waterways.



'Facility Hero' of wastewater treatment; polyphosphate accumulating organism from Las Vegas Street Water Resource Recovery Facility. Photo credit, Kristy Sullivan.

Meeting increased nutrient regulations are large and expensive for utilities around the country. We transformed the Las Vegas Street Water Resource Recovery Facility (LVSWRRF) to advanced treatment capabilities in the early 1990s and built a second, state-of-the-art system at the J.D. Phillips Water Resource Recovery Facility in 2007, putting us significantly ahead of the curve in meeting regulations. A $12 million construction project for biological nutrient removal was completed at LVSWRRF in 2018.

Quality

Laboratory staff routinely examine the reclaimed water (effluent) for a variety of parameters. They also periodically analyze Fountain Creek water samples to ensure the effluent does not negatively impact the ecosystem or downstream users. Such processes ensure that final effluent meets or exceeds discharge permit levels.

Laboratory staff testing water quality.

Industrial pretreatment

Our industrial pretreatment program protects our wastewater collection system and treatment facilities, as well as the environment, by preventing toxic, dangerous substances from being discharged into the sanitary sewer collection system. In addition to issuing discharge permits, monitoring discharges, performing site inspections and enforcing pretreatment standards and requirements, our experts help increase local awareness by educating businesses about program requirements.

Recovery ponds

Any wastewater system carries a risk for spills. Should untreated wastewater enter Fountain Creek, the Fountain Creek Recovery Ponds (lined with concrete) divert contaminated water from the creek to the recovery ponds. The collection ponds are lined and can hold up to 18.5 million gallons of liquid. This is important for containing spills caused by vandalism, grease blockages and failed bypass operations so they don't reach downstream communities.

Captured water is transferred back to the LVSWRRF for treatment. To ensure that stream flows are supported, a 20-million-gallon capacity pond is located next to the recovery pond. The pond stores clean water for water rights exchanges.

Recovery ponds at Clear Spring Ranch.

COLORADO SPRINGS UTILITIES

CONSERVATION, RATES & CUSTOMER ASSISTANCE

Conservation and customer resources

In our rapidly growing, semi-arid community, it's crucial to use water and energy wisely. By following conservation guidelines and adopting new behaviors about how and when we use energy, we can manage our resources responsibly and continue to provide reliable serves for generations to come.

View of the Front Range in summer.

Saving water by being Water Wise

We are careful to ensure the beneficial use of this limited resource. Water connects us all and the water we use also serves a larger community across Colorado and the west. It will take all of us doing our part to ensure adequate supplies for our future. This means making careful water use decisions each day and planning, inspiring and implementing programs and services that gain the most beneficial outcomes.

We value water for our best future. We support a community that remains vibrant regardless of growth or climate. Our mindful approach to wise water use and the collaborative conservation ethic in our community have resulted in significant water savings.

The work of water conservation requires that we stay focused on simple goals. Since 2001, conservation programs have achieved measurable savings of more than 7,200-acre feet (AF). In that time, the average per person use moved from 139 gallons each day to 72 gallons each day.

Water Wise demonstration garden, Mesa Conversation Center. Free and open to the public. Photo credit, Kelli Guadagnoli.

Per capita, water usage rates have decreased 41% since 2001. That's more than 9 billion gallons per year.

Six Water Wise rules, tiered water rates for residents and seasonal rates for businesses help our customers make decisions about their water use.

1. Water up to three days a week (Sunday to Saturday). Customers can choose the days.
2. From May 1 to Oct. 15, water before 10 a.m. or after 6 p.m. to reduce evaporation.
3. Don't let water pool on hard surfaces or flow down gutters.
4. Repair leaking sprinkler systems within 10 days.
5. Use a shut-off nozzle when washing anything with a hose.
6. Clean hard surfaces (such as driveways, sidewalks and patios) with water only if there is a public health and safety concern.

We offer lawn establishment permits that allow customers to water outside the Water Wise rules.

Water conservation remains a key component of our long-term water plan and one way to meet future demand. Our current planning targets about 10,000 acre-feet of additional conservation savings are needed to meet anticipated demand at full buildout.

Shifting energy with Energy Wise rates

New time-of-day Energy Wise electric rates will play a critical role in responsibly managing our energy resources and long-term costs.

On Nov. 12, 2024, City Council approved this rate as the new 'standard' electric rate. It will be effective October 1, 2025, for most residential and business customers with smart meters.

With Energy Wise rates, customers can help reduce high demand and the need to build additional sources for electric generation, such as power plants. It will reduce the need to purchase power during peak periods when it is most expensive.

Benefits

Energy Wise rates give customers rate options to help manage their bill. These rates provide a more affordable electric rate during times when demand is low, called off-peak hours.

These rates are designed to shift demand away from peak hours (5 p.m.-9 p.m.). Generating electricity during peak hours often relies on fossil fuels, which contribute to greenhouse gas emissions.

Electric capacity and energy cost vary depending on the time of day and season. Moving to Energy Wise rates aligns our costs with the rates customers pay, creating a rate structure that better reflects how they use energy.

On-peak vs. off-peak

With Energy Wise rates, customers pay different rates for electricity based on the time of day it is used.

- Rates are lowest on weekdays before 5 p.m. and after 9 p.m., as well as all day on weekends and most holidays. These times are called off-peak.
- Rates are highest weekdays from 5 p.m. to 9 p.m. These are called on-peak times.

Using appliances like washers and dryers during off-peak hours can shift electricy use to times when it costs less.

On-peak and off-peak rates give customers more control over their bill since they can shift electricity use to times when it costs less.

Rates will be higher in summer when demand is highest (June-September) and lower in winter (October-May).

Residential Energy Wise rates

Energy Wise: The new standard rate option beginning Oct. 1, 2025, with a few exceptions. It includes on and off-peak periods.

Energy Wise Plus: Includes an even lower rate during off-peak "saver" periods and a higher rate during critical peak events. The off-peak "saver" period is 9 a.m. - 1 p.m., every day, including holidays.

Seasonal Fixed Rate: The fixed rate stays the same all day. This will be the standard option for customers who do not have a smart meter.

Commercial & industrial customers

Upcoming changes include:

- Alignment of time periods
- New commercial rate structure
- Addition of a commercial demand charge

Most industrial customers are already on a standard time-of-day rate.

As a result of this change, business customers will see a reduction in annual on-peak hours.

Customers can use a smart thermostat to monitor energy use.

Demand charges

Energy Wise rates include a demand charge for business customers with a maximum demand greater than or equal to 10 kilowatts. Demand charges better align with the cost of providing reliable electric service and the fixed cost of maintaining infrastructure.

For more details on these rates and how they can help you manage your energy use, visit www.csu.org/rates/energy-wise.

Rebates and incentives

We offer a variety of rebates and incentives to help residents and businesses save money while promoting energy and water efficiency. These programs are designed to provide immediate savings on purchases of efficient products, compounded with the long-term benefits from costs saved because of their more efficient performance.

For residential customers, there are several rebate options available:

- Insulation & Air Sealing: Save up to $3,750 when upgrading home insulation.
- HVAC & Heat Pumps: Receive a $900 rebate on a furnace, $1,200 on a boiler and $1,500-$3,000 on qualified heat pumps.
- Water Heaters: Get a $300 or $750 rebate on water heaters.
- Smart Thermostats: Enjoy a $50 rebate on smart thermostats.
- Toilets: Ultra-high efficiency toilets come with a $100 rebate.
- Showerheads: Participate in a free showerhead exchange to save 60% more on water and energy.
- Peak Energy Rewards: Enroll to receive $50 and an additional $25 each year for participation.

We offer rebates on furnaces, boilers and qualifying heat pumps.

For businesses, there are numerous rebate opportunities:

- Custom Energy Rebate: Reduce investment in energy efficiency upgrades and ongoing operating costs.
- Custom Water Rebate: Receive up to $60,000 for water-saving upgrades.
- Toilet Rebate: Save with ultra-high efficiency toilets and receive up to a $150 rebate.
- Water Management & Efficiency Rebate: Invest in water management technology with a rebate covering 50% of the cost.
- Water Heater Rebate: Get a $300 or $750 rebate on water heaters.
- HVAC & Heat Pump Rebate: Save with a $900 rebate on a furnace and $1,500-$3,000 on a heat pump.
- Showerhead Rebate: Install or retrofit 10 or more showerheads to earn a rebate.
- Smart Thermostat Rebate: Receive a $50 rebate for installing a smart thermostat.

We offer water savings rebates to businesses that upgrade materials to save water.

- Builder Incentive Program: Homebuilders constructing to high-efficiency standards can qualify for $200+ in energy incentives.
- Colorado C-PACE: Grow your business with C-PACE financing for commercial and industrial building owners and developers.

These rebates and incentives are part of our commitment to helping the customers save money while promoting responsible use of our natural resources. For more information and to apply for rebates, visit www.csu.org/rebates-incentives.

Customer assistance

We understand that things happen and we are happy to work with our customers who are having difficulty paying their utility bill.

If you need extra time to make a payment, you can create a payment plan online through My Account or you can contact Customer Service, (719)448-4800 to assist. For those requiring a more extended solution, a payment extension can be arranged by speaking with a representative.

We offer customer assistance programs to support you if you have challenges paying your utility bill.

Several assistance programs are available for those facing financial difficulties:

- Low-Income Energy Assistance Program (LEAP): This federally funded program helps with winter home heating costs. Applications are accepted from November 1 to April 30 each year.
- Project COPE: Provides one-time utility payment assistance to families and individuals experiencing emergencies, regardless of income.
- Pikes Peak United Way 2-1-1: A free bilingual service connecting people with resources for food, housing, clothing, transportation, medical care and more.

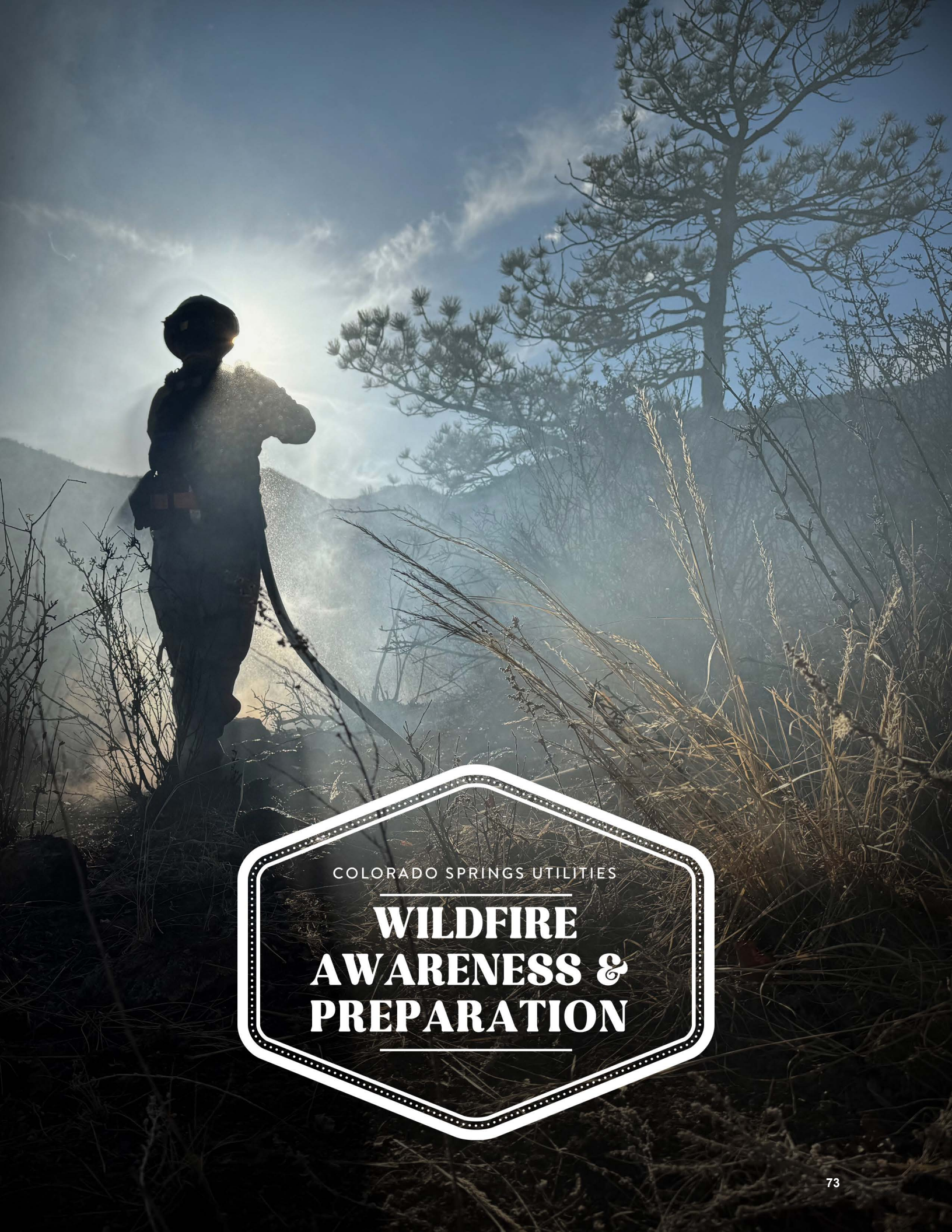
project COPE
CITIZEN'S OPTION TO PROVIDE ENERGY

For those looking to improve their home's efficiency as a way of helping reduce their money bill, we offer the following programs:

- Home Efficiency Assistance Program (HEAP): In partnership with the Energy Resource Center, qualifying homeowners can receive free energy and water efficiency upgrades.
- Colorado Energy Office Weatherization Assistance Program: Offers free weatherization services, including insulation, furnace repair or replacement and high-efficiency appliances for qualifying homeowners or renters.

- Home Repair Assistance: The City of Colorado Springs provides financial assistance for eligible low-income households for home repairs, including sewer and water line repairs, leak repairs and efficiency upgrades.

If you're having difficulty paying your bill or would like to explore options on how you might be able to save money, visit our website at www.csu.org/customer-assistance.


COLORADO SPRINGS UTILITIES
WILDFIRE AWARENESS & PREPARATION

Wildfire awareness and preparation

Catamount Wildland Fire team responding to a fire.

We proudly serve Colorado Springs community with safe, reliable and competitively priced utility services. Several of our assets are in areas with risk of large, fast-spreading wildfires. To be as prepared as possible in the event of a wildfire, we drafted our Wildfire Mitigation Plan, which details how we plan to respond to the increasing threat of wildfire and the actions we are taking to minimize risk.

The recommendations of our Wildfire Mitigation Plan center around:

- Vegetation management
- Improving systems and systems hardening
- Identifying and understanding wildfire risks

Fire risk in Colorado has increased significantly due to a combination of factors including changing climate, population growth and development patterns that extend into fire-prone areas, especially the wildland-urban interface (WUI). With hotter, drier conditions, the state has seen more intense fires affecting air quality and public health. Some of the contributing factors to this increase in wildfire risk include record-high temperatures, prolonged drought and more intense wind events that dry out vegetation and create conditions for fires to ignite and spread.

Goals of our Wildfire Mitigation Plan

The goals of the Wildfire Mitigation Plan are:

Catamount Wildland Fire team truck responding to a fire.

Public safety. We take public safety seriously. One goal of this plan is to assess and mitigate wildfire risk to protect lives, property and physical assets from danger.

Employee safety. We take employee safety seriously and strives to promote a culture of safety within our organization. Another goal of this plan is to assess and mitigate risk.

Emergency preparedness. Our community can experience a variety of extreme weather events to include wildfire. Our plan recognizes that wildfire is a recurring threat to utility infrastructure, utility watersheds, the communities we serve, employees and customers.

Watershed protection. We provide some of the finest drinking water in the United States to our community. It's delivered to our homes and businesses through a complex system, built on generations of thoughtful planning and hard work. Our watersheds are located in heavily forested areas protecting that infrastructure is another important goal.

Reliability. We take pride in providing affordable, reliable and sustainable electric service to our customers. We have one of the most reliable electric systems in the United States with services available more than 99.99% percent of the time. Our goal is to assess and mitigate wildfire risk impacts to our reliability.

Financial. We develop our annual budget to meet system needs, provide value to our customers' lives and support economic growth. Base rates support the annual budget and are designed to cover the cost to provide services. Base rates fund major projects, system improvements and maintenance to meet regulations, support customer needs and maintain service reliability. A goal of this plan is to mitigate the likelihood and aftermath of financial costs and potential liability associated with wildland fires.

Catamount Wildland Fire team preparing for a training exercise.

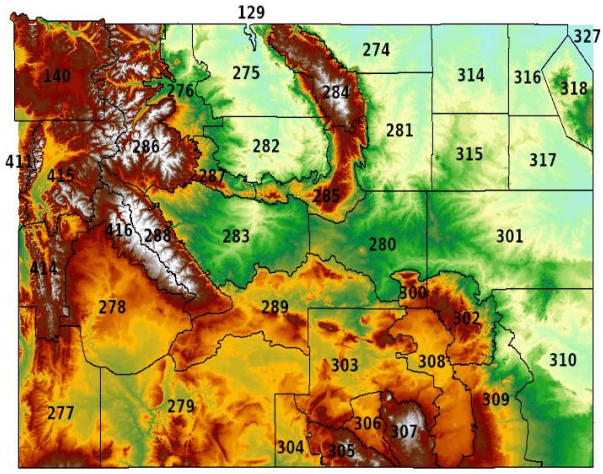
Risk assessment

We have several assets located in areas where the risk of large, fast-spreading wildfires could occur. With recent wildfire incidents, there has been increased concern for the risk that electric utilities pose to the ignition of wildfires. Our Wildfire Mitigation Plan has identified the areas in our electric

service territory with elevated wildfire risk and proposes strategies to further reduce the risk of our infrastructure contributing to the ignition or spread of wildfire.

Maps and modeling

We use a national dataset called Landscape Fire and Resource Management Planning Tools (LANDFIRE) to provide landscape scale geo-spatial cross-boundary analysis for wildland fire risk modeling. LANDFIRE is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and the U.S. Department of the Interior. To determine the severity of wildfire hazard, the model accounts for several factors including vegetation type, vegetation density, health of fuel, insect mortality and weather factors like wind. The data is overlaid with additional attributes (overhead electric, water pipelines, road crossings, post-fire analysis, etc.) to develop a spatial watershed-level risk layer with our infrastructure. These maps allow us to prioritize the areas with the greatest wildfire risk associated to electrical system infrastructure and wildfire risk across the landscape. In turn, this tool provides an area of focus for further analysis for wildfire mitigation strategies and appropriate equipment applications for wildfire prevention.



Fire Zone 3 map. Photo credit, National Weather Service.

Current mitigation practices

We have a variety of mitigation practices, programs and initiatives in place. The objectives of these existing practices are to:

- Reduce the probability of objects contacting overhead power lines which could lead to ignition of nearby fuel sources with vegetation management, by hardening at-risk portions of the overhead system.
- Reduce the probability of failed equipment sparking proximate combustibles, by improving asset inspections.
- Reduce the probability of equipment sparking under normal operation by deploying CAL FIRE exempt equipment in at-risk areas.
- Prioritize the deployment of this plan's recommendations where risk is greatest as identified by wildfire risk maps.

Catamount Wildland Fire team removing vegetation to reduce possibility of wildfire ignition.

Vegetation management

According to research, vegetation is the top cause of utility related ignitions. Therefore, we use prevention tactics related to vegetation contact through robust vegetation management programs and equipment upgrades. Mitigation efforts to prevent vegetation contact include a vegetation management plan, undergrounding, covered conductor and Enhanced Powerline Safety (EPSS) Settings.

Catamount Wildland Fire team member mulching branches as part of the vegetation management process.

Vegetation Management Plan

Vegetation management is an effective and proactive way to reduce wildfire ignitions due to vegetation contact. It is the foundation to prevent wildfire ignition on overhead assets.

We currently follow a vegetation management plan (VMP) that was developed and implemented to ensure system reliability and public safety of the overhead transmission and distribution system. The goal of the program is to comply with City Forestry ordinances and guidelines to protect the trees while minimizing the potential for electric outages, human injury and property damage. The VMP is managed by our certified arborist utility specialist and field work is performed by outside contractors.

The 230 kV system is inspected annually by the Vegetation Management Program Manager. Any work that is needed based on the inspection, such as trimming, herbicide applications or removals is performed at this time.

The 115 kV system is trimmed every three years and is then inspected by the Vegetation Management Program Manager after contractor crews complete field work. If any deficiencies are found, the contractors are sent back to correct the issues. The optimal trim cycle for Colorado Springs Utilities' distribution territory is a three-year cycle. Scheduled trim cycles seek to maintain appropriate clearances between scheduled trim cycles to prevent flashover between vegetation and overhead conductors. If trim cycles are extended beyond the three-year cycle, the cost per tree and the number of crews necessary to ensure we return to our planned timeline increase exponentially as the cycle period increases. The objective is to keep limbs from growing above or between the conductors. Once this occurs, trimming techniques must be modified for safety reasons and the time per tree increases significantly.

Catamount Wildland Fire team performing a prescribed burn on the South Slope of Pikes Peak.

Therefore, contractors are expected to trim one-third of the distribution system annually.

Many utilities are on a five-year or greater trim cycle. Comparatively, we are exceeding industry standards. This is a key tactic for wildfire mitigation on overhead infrastructure. Maintaining a three-year turnaround helps keep system reliability, public safety and contractor safety a priority. In addition, this keeps tree-related power outages, fire risk and costs to a minimum.

Undergrounding

There are many benefits to undergrounding for the purpose of wildfire mitigation. In fact, studies have found it to be an effective technique to reduce wildfire risk. However, the cost of undergrounding is typically 3 to 5 times the cost of bare wire overhead construction.

Our assets in the highest-risk wildfire areas are located on the west side of our service territory, often in mountainous, steep and rocky terrain. Location, access and granite bedrock impact feasibility, costs and complexity. Additionally, undergrounding a customer's electric service line to their home adds to the program costs and complexity. Furthermore, an underground electric outage requires locating the exact cause of the failure which is a much more involved process. It is sometimes necessary to make several excavations to find the source of the outage. This translates into much longer outages and more disruption to roadways, easements and surrounding vegetation.

Electric project to underground sub transmission line in a weather vulnerable area along Nevada Ave.

Covered conductor

While tree trimming is the first step to reducing risk of vegetation contact, additional strategies can further prevent wildfire ignition. Trimming back vegetation to its proper easement prevents vegetation contact under normal conditions, but windstorms and tornados can still cause dangerous vegetation-contact on bare lines and broken poles, resulting in conductors laying on the ground and/or vegetation. Covered conductors may further reduce wildfire ignition risk by addressing these concerns. Covered conductors will be evaluated for efficacy and feasibility.

Enhanced powerline safety settings

Remote control switches can be used to sectionalize circuits and reduce outage areas. Remote control switches are commonly used for operational flexibility but can be included in fire mitigation plans to reduce ignition risk in impacted outage areas.

Equipment inspections

Asset inspections on the transmission and distribution system are performed annually during line patrols in mountain areas and bi-annually in all other areas.

We maintain a 10-year transmission pole-to-pole climbing inspection with minor maintenance tasks. These pole inspections detect minor issues that cannot be seen from the ground and enable the execution of quick maintenance tasks, such as tightening hardware and repairing or replacing components on a periodic basis. Some components cannot be fully inspected from the ground line patrols or from overhead drone inspections. Condition assessments and maintenance can be conducted concurrently. The transmission pole-to-pole inspection and maintenance program involves de-energizing and climbing each pole over a ten-year cycle. Circuits are identified for preventative maintenance and work is completed when outages are approved and qualified crews are available. The program has been successful in identifying issues that might have otherwise gone undetected.

Wod pole inspectors investigating a pole as part of our Wood Pole Testing and Treatment program.

A 360-degree view from drones could enhance our inspection process. The Advanced Geometrics team recently acquired a drone that can be equipped with either a high-resolution camera for capturing clear imagery or a Light Detection and Range Sensing (LiDAR) sensor with a small backup camera to pick up rudimentary imagery when collecting LiDAR data. Select staff have received Federal Aviation Authority (FAA) piloting licenses and training to use the drone. While safety procedures, operational requirements and training are still in progress, drone inspections could be a beneficial tool for supplementing in-person inspections.

Wood pole inspections are performed on a 10-year cycle for transmission, distribution and streetlights within our service area. This includes ground line strength testing. Steel structure and foundation inspections on transmission systems ensure the reliability of our electric system and include measuring thickness of steel poles, coatings and concrete foundation hardness testing.

Wildlife protection

We have raptor and wildlife protection standards defined for the distribution system and is piloting different solutions to upgrade wildlife protection at overhead transformers. This pilot is taking place on 12SP-35, a circuit that has a higher number of outages due to squirrels than other circuits in the system.

Baby owl at our Cottonwood Substation.

Water distribution

We are dedicated to ensuring the community's safety and the reliable delivery of utility services, even during wildfires. The water system is designed to meet best practices to deliver water to customers and for firefighting needs.

We work closely with the Colorado Springs Fire Department (CSFD) to assess and meet water needs during firefighting efforts, ensuring seamless coordination. Conventional water delivery systems are typically sized to fight structure fires, not wildland fires. Wildland fires are more dynamic events covering a larger area, consuming fuels from vegetative cover and forested terrains in addition to those fuels provided by typical structures. Consequently, the firefighting water demands for a wildland fire in an urban setting will be higher than those needed for single structure fires.

Catamount Wildland Fire team preparing for a training exercise.

We worked collaboratively with CSFD to develop a water operations response plan for a large-scale wildland fire on the west side of Colorado Springs in the area known as the Wildland-Urban Interface (WUI). Four studies have been completed since 2008 with the most recent conducted in 2022. These studies provided alternatives and solutions to maximize the available water supply and identify how it can most efficiently be used in the event of a wildland fire resulting in Utilities and the CSFD having a better understanding of the water system's capabilities and limitations.

During these studies, CSFD fire assumptions included 'very high' and 'extreme' fire danger events. The project team determined that the total firefighting water demand based on the very high fire (3-alarm) scenario resulted in a firefighting demand of 7,500 gallons per minute (gpm) across multiple hydrants. For comparison, water distribution systems are typically designed for 1,500 gpm to fight a residential structure fire. In locations where greater than 1,500 gpm firefighting water demand is needed, it would be necessary to utilize more than one hydrant to achieve the predicted fire flow.

Ensuring operational hydrants

We work hard to ensures our city's hydrants remain operational through several key measures:

Maintenance responsibility. We maintain over 20,000 public fire hydrants, which are fed by the same water mains that deliver water to customers.

Hydrant Criticality Model. In collaboration with CSFD and the Fire Marshal, we use a Hydrant Criticality Model to identify critical hydrants. Approximately 2,200 hydrants are considered critical and are inspected annually, while non-critical hydrants are inspected every five years. The hydrant list is revisited every five years with CSFD to re-analyze the system.

Training and collaboration. We partner with Colorado Springs Fire Department to provide intensive training for firefighters and first responders. This training covers hydrant labeling protocols, hydrant spacing and proper tool usage.

Fire hydrant at the U.S. Olympic and Paralympic Training Center.

System redundancy. Redundancy is built into the hydrant system to ensure firefighting assistance can be met throughout the service territory. Firefighters have access to multiple hydrants in any given area should one be damaged or not produce needed pressure.

Preventative maintenance and inspections. Regular inspections and maintenance are crucial, but other factors such as vehicle collisions can impact hydrant performance.

Situational awareness - Identifying & understanding wildfire risk

Identifying high fire-risk geographic areas and high fire risk conditions is a crucial first step in preventing wildfires. Pinpointing the locations of highest risk across a service territory provides critical data that informs operational decisions.

Fire weather zones

National Weather Service (NWS) 'fire weather zones' (see link below) are designated areas where fire danger is evaluated and communicated based on local conditions.

There are three individual Fire Weather Zones in El Paso County: Zone 226 (Northern El Paso), Zone 227(Southern El Paso) and Zone 221(Teller and El Paso/Pikes Peak).

Red Flag Warning- National Weather Service

A Red Flag Warning (RFW) is determined based on a combination of weather and fuel conditions (as determined by (NWS) fire management partners) for any 3 hours or more in a 12-hour period. The criteria for the forecast area of the Pueblo NWS office are defined as follows:

Basic criteria

- Frequent gusts of 25 mph or greater
- Relative humidity (RH) of 15% or less
- Dry thunderstorms - 15% coverage or more, constituting a Lightning Activity Level (LAL) 6

A wildfire that resulted during Red Flag conditions.

Other factors

In addition to the basic criteria above, a combination of other elements may result in Red Flag Conditions.

- Haines Index of 5 or 6 - Indicates a moderate or high potential for large, plume-dominated fire growth
- Wind shifts associated with frontal passages
- First significant lightning event (wet or dry) after an extended hot and dry period
- Poor relative humidity recovery overnight (RH remains at 40% or lower)
- Any combination of weather and fuel moisture conditions which, in the judgment of the forecaster, would cause extensive wildfire occurrences.

Summary of RFW criteria

- Relative Humidity: <15%
- Wind Gusts: Over 25 mph
- Duration: Present for at least 3 consecutive hours in the zone
- Fuel Conditions: Must be dry enough to be considered 'critical', as determined by forestry partners

National situational awareness networks

We will continue to utilize the publicly available tools to help utilities coordinate response efforts. Maintaining close coordination with local and national weather services is critical, especially during fire season. Other tools such as ALERTWest and Watch Duty are being explored.

Catamount Wildland Fire Team

Colorado Springs Utilities has a wildland fire team actively working to prevent wildfires and respond in the event of a wildfire in the service territory. The Catamount Wildland Fire Team has members that represent all four services and the City of Colorado Springs. These fire team members are trained to fight wildland fires. They respond to wildland fires on Colorado Springs Utilities' property as well as support local fire departments.

Team mission

- Pre-fire mitigation/fire watch/Prescribed Fire Program
- Fire suppression
- Infrastructure protection
- Promoting strategic planning, decision making and leadership development for all team members

Catamount Wildland Fire team hiking out to fight a fire.

Operational strategies

- Determine Enhanced Powerline Safety Settings such as non-reclose settings, requirements/conditions for deployment, decision matrixes, crew response and other impacted operational procedures.
- Maintain vegetation management schedules, ensuring any identified priority circuits do not slip schedule.
- Enhance proactive equipment replacement programs to include transformer and recloser replacements on priority circuits.
- Continue in-house drone inspection pilot to determine viability of improving and assisting inspection programs (vegetation and assets).

Budget impacts

We develop our annual budget to meet system needs, provide value to our customers' lives and support economic growth. Base rates support the annual budget and are designed to cover the cost to provide services. Base rates fund major projects, system improvements and maintenance to meet regulations, support customer needs and maintain service reliability. A goal of this plan is to mitigate the likelihood and aftermath of financial costs and potential liability associated with wildland fires. Funding and budget needs have been included in the Colorado Springs Utilities five-year budget plan. These infrastructure protections will continue to be reviewed annually.

Catamount Wildland Fire team patch.

Community engagement and partnership

We actively participate in various utility industry meetings, summits, conferences and consortiums with a wildfire focus. Listed below are just a few of the utility industry partners we regularly collaborate with:

- American Public Power Association (APPA)
- Transmission & Distribution Maintenance Management Association (TDMMA)
- Large Public Power Council (LPPC)
- North American Transmission Forum (NATF)
- Alltricity Network (Formerly known as RMEL)

Regional and local fire partnership

PEAKALERTS
SERVING EL PASO & TELLER COUNTY
POWERED BY everbridge

Springs Utilities participates with our regional partners in the Peak Alerts notification system.

We also actively partner with a variety of regional entities to include Colorado Springs Fire Department, Colorado Utility Wildfire Consortium and the National Weather Service. Members of our Wildland Fire Team have provided firefighting resources to extinguish fires in nearby communities as well as other communities in the region and the nation.

Fire education

We educate elementary school age children on the dangers and fire hazards associated with electric utility infrastructure and provide helpful links to customers, so our community are wildfire ready.

How you can prepare

- CSFD Wildfire Ready- Home | Colorado Springs Fire Department
- Live Wildfire Ready | Colorado State Forest Service | Colorado State University
- Colorado Wildfire Risk Map- Wildfire Risk Viewer
- Pikes Peak Regional Office of Emergency Management- Pikes Peak Regional Office of Emergency Management | Pikes Peak Regional Emergency Management
- NWS Pueblo Fire Weather: Fire Weather Zone Forecast Information
- Land fire: LANDFIRE Map Viewer

Our commitment

Catamount Wildfire team hiking out to one of our reservoirs for a training exercise focused on protecting our watershed during wildfire.

We are committed to reducing wildfire risk. Commitments to vegetation management, system hardening and situational awareness will contribute to wildfire risk mitigation. The Wildfire Mitigation Plan will continue to build on the foundational efforts of the 2024 Wildfire Mitigation Plant. The Wildfire Mitigation Plan will evolve over time, and we will continue to enhance the electric system and maintain reliable service.

Glossary of terms

Acre-foot: Volume of water that covers one acre (43,560 square feet) to a depth of one foot (often averaged to 326,000 gallons).

Alternating current (AC): A type of electrical current, the direction of which is reversed at regular intervals or cycles; in the U.S., the standard is 120 reversals or 60 cycles per second.

Appliance: A device for converting one form of energy or fuel into useful energy or work.

Appliance energy efficiency ratings: The ratings under which specified appliances convert energy sources into useful energy, as determined by procedures established by the U.S. Department of Energy.

Appropriation: Amount of water a user has the legal right to withdraw from a water source.

Augmentation: Replaces water into a stream due to losses from well usage.

Average demand: The demand on, or the power output of, an electrical system or any of its parts over an interval of time, as determined by the total number of kilowatt-hours divided by the units of time in the interval.

Base load: The lowest level of power production needs during a season or year.

Base load unit: A power generating facility that is intended to run constantly at near capacity levels, as much of the time as possible.

Biomass: As defined by the Energy Security Act (PL96-294) of 1980, "any organic matter which is available on a renewable basis, including agricultural crops and agricultural wastes and residues, wood and wood wastes and residues, animal wastes, municipal wastes and aquatic plants."

British Thermal Unit (Btu): The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit; equal to 252 calories.

Capacity: The amount of electric power for which a generating unit, generating station, or other electrical apparatus is rated either by the user or manufacturer. The term is also used for the total volume of natural gas that can flow through a pipeline over a given amount of time, considering such factors as compression and pipeline size.

Carbon dioxide: A colorless, odorless noncombustible gas with the formula CO2 that is present in the atmosphere. It is formed by the combustion of carbon and carbon compounds (such as fossil fuels and biomass), by respiration, which is a slow combustion in animals and plants and by the gradual oxidation of organic matter in the soil.

CCF: One hundred cubic feet or 748 gallons.

Chemical energy: The energy liberated in a chemical reaction, as in the combustion of fuels.

Circuit: A device, or system of devices, which allows electrical current to flow through it and allows voltage to occur across positive and negative terminals.

Combustion: The process of burning; the oxidation of a material by applying heat, which unites oxygen with a material or fuel.

Conduit: A tubular material used to encase and protect electric wiring. Conduits are also a channel for conveying water or other fluid

Conservation: To reduce or avoid the consumption of a resource or commodity.

Contract water exchange: A water exchange between two bodies of stored water for the same amount of water. Contract exchanges are not dependent on river flows, so they can occur any time there is enough water in both storage locations to be exchanged. This saves the water naturally lost during the transportation process and avoids significant infrastructure and pumping costs.

Cubic foot: A common unit of measurement of natural gas volume. It equals the amount of gas required to fill a volume of one cubic foot under states conditions of temperature, pressure and water vapor. One cubic foot of natural gas has an energy content of approximately 1,000 Btu's. One hundred (100) cubic feet equals one therm (100 ft^3 = 1 therm).

Current: The flow of electrical energy (electricity) in a conductor, measured in amperes.

Demand: The rate at which electricity is delivered to or by a system, part of a system, or piece of equipment expressed in kilowatts, kilovolt amperes, or other suitable unit, at a given instant or other averages over a specific period of time.

Direct current (DC): A type of electricity transmission and distribution by which electricity flows in one direction through the conductor; usually relatively low voltage and high current; typically abbreviated as dc.

Distributed Generation: A distributed generation system involves small amounts of generation located on a utility's distribution system for the purpose of meeting local (substation level) peak loads and/or displacing the need to build additional (or upgrade) local distribution lines.

Demand management: Water and energy efficiency measures, practices or incentives implemented by Utilities to reduce or change customer demand patterns.

Diversion: Alteration in the natural course of a stream for the purpose of water supply, usually causing some of the water to leave the natural channel. In Colorado Springs this includes taking water through a ditch, tunnel, pipe, or other conduit.

Drought: Water supply shortage that is caused by natural conditions such as an extended period of below-normal precipitation.

Efficiency: The ratio of the useful energy delivered by a dynamic system (such as a machine, engine, or motor) to the energy supplied to it over the same period or cycle of operation. The ratio is usually determined under specific test conditions.

Electrical energy: The energy of moving electrons.

Electric energy: The amount of work accomplished by electrical power, usually measured in kilowatt-hours (kWh). One kWh is 1,000 Watts and is equal to 3,413 Btu.

Electro-magnetic field (EMF): The electrical and magnetic fields created by the presence or flow of electricity in an electrical conductor or electricity consuming appliance or motor.

Emission(s): A substance(s) or pollutant emitted because of a process.

Energy: The capability of doing work; different forms of energy can be converted to other forms, but the total amount of energy remains the same.

Energy resources: Everything that could be used by society as a source of energy.

Environmental Protection Agency (EPA): A federal agency charged with protecting the environment.

Electric vehicle (EV): a vehicle powered by electricity, usually provided by batteries but may also be provided by photovoltaic (solar) cells or a fuel cell.

Fossil fuels: Fuels formed in the ground from the remains of dead plants and animals. It takes millions of years to form fossil fuels. Oil, natural gas and coal are fossil fuels.

Frequency: The number of cycles through which an alternating current passes per second; in the U.S., the standard for electricity generation is 60 cycles per second (60 Hertz).

Generating station: A power plant.

Grid: The electric utility companies' transmission and distribution system that links power plants to customers through high power transmission line service (110 kilovolt [kv] to 765 kv); high voltage primary service for industrial applications and street rail and bus systems (23 kv-138 kv); medium voltage primary service for commercial and industrial applications (4 kv to 35); and secondary service for commercial and residential customers (120 v to 480 v). Grid can also refer to the layout of a gas distribution system of a city or town in which pipes are laid in both directions in the streets and connected at intersections.

GPCD: Gallons per capita per day.

Hydroelectric power: Electricity produced by falling water that turns a turbine generator. Also referred to as hydro.

Hydrology: the science concerned with the movement of water on or near the land surface through the hydrologic cycle including the processes of precipitation, evaporation, infiltration, runoff stream flow and the transport of substances dissolved or suspended in the flowing water.

In-basin water: See - Native water.

Integrated water resource planning: Open planning process emphasizing balanced consideration of supply and demand management options for meeting water needs; typically, in a 50-year window.

Investor-owned utilities (IOU): A company, owned by stockholders for profit, which provides utility services. A designation used to differentiate a utility owned and operated for the benefit of shareholders from municipally owned and operated utilities and rural electric cooperatives.

Kilowatt (kW): One thousand (1,000) watts. A unit of measure of the amount of electricity needed to operate given equipment. On a hot summer afternoon, a typical home, with central air conditioning and other equipment in use, might have a demand of four kW each hour.

Kilowatt-hour (kWh): A commonly used unit of measure telling the amount of electricity consumed over time. It means one kilowatt of electricity supplied for one hour. A typical household consumes 900 kWh in an average month.

Load: An end-use device or customer that receives power from the electric system.

Megawatt (MW): One-thousand kilowatts (1,000 kW) or one million (1,000,000) watts. One megawatt is enough electrical capacity to power 1,000 average homes.

Meter: A device for measuring levels and volumes of a customer's gas and electricity use.

MGD: Million gallons per day.

Natural gas: Hydrocarbon gas found in the earth, composed of methane, ethane, butane, propane and other gases.

Non-potable water: Water that has not been treated to make it safe for drinking or is not intended for drinking.

Peak load: The highest electrical demand over a specified time. Daily electric peaks on weekdays occur in the late afternoon and early evening. Annual peaks occur on hot summer days.

Peak load power plant: A power generating station that is normally used to produce extra electricity during peak load times.

Peaking unit: Power generator used by a utility to produce extra electricity during peak load times.

Pipeline: A line of pipe with pumping machinery and apparatus (including valves, compressor units, metering stations, regulator stations, etc.) for conveying a liquid or gas.

Potable water: Water suitable for drinking.

Power pool: Two or more interconnected utilities that plan and operate to supply electricity in the most reliable, economical way to meet their combined load.

Priority (in and out): Right to divert or store water, based on the Doctrine of Prior Appropriation. In Colorado, this is regulated by the Division of Water Resource and is based on the date of the water right (i.e., "first in time, first in right").

Reliability: Electric system reliability has two components-- adequacy and security. Adequacy is the ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and unscheduled outages of system facilities. Security is the ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system facilities.

Renewable energy: Resources that constantly renew themselves or that are regarded as practically inexhaustible. These include solar, wind, geothermal, hydro and wood. Although particular geothermal formations can be depleted, the natural heat in the earth is a virtually inexhaustible reserve of potential energy. Renewable resources also include some experimental or less-developed sources such as tidal power, sea currents and ocean thermal gradients.

Return flow: Wastewater effluent or excess water returning to the stream system from lawn irrigation.

Reuse: Additional use of previously used water or the beneficial use of treated wastewater.

Reusable water: Water with the legal characteristic of being able to be used, reused and subsequently used to extinction.

River water exchange: A water exchange in which water is stored upstream and in exchange a release of the same amount of water is made at a downstream location. River exchanges operate under a complex set of rules and can only be used when no injury would occur to the intervening senior water rights calling between the downstream and upstream points of exchange.

Service area: Territory in which utilities are required or has the right to supply service to customers.

Solar energy: Heat and light radiated from the sun.

Substation: A facility that steps up or steps down the voltage in utility power lines. Voltage is stepped up where power is sent through long-distance transmission lines. It is stepped down where the power is to enter local distribution lines.

Terminal storage: Storage in a water system, usually just upstream of treatment facilities, used to minimize risk by providing a reliable supply for water treatment plants and to minimize demand fluctuation impacts on delivery system facilities.

Transmountain diversion: Water project that diverts water from one river basin to another. For Colorado Springs, this typically is a project to divert water from the Colorado River Basin to the Arkansas Basin.

Transmountain water (transbasin water): Water diverted from the western slope of the Continental Divide. See also "reusable water."

Transformer: A device, which through electromagnetic induction but without the use of moving parts, transforms alternating or intermittent electric energy in one circuit into energy of similar type in another circuit, commonly with altered values of voltage and current.

Transmission: Transporting bulk power over long distances. Transmission can also be a pipeline that carries water or natural gas from points of supply to local storage reservoirs or gate stations to be distributed throughout the local distribution system to customers.

Use to extinction: Water that has been imported to a new river basin is considered 'foreign' with respect to the 'native' water that arises or accrues within the receiving basin. Foreign water (also called transbasin water) may be used successively by the importer within the receiving basin in contrast to native water that may only be used once by the first appropriator. Foreign water that can no longer be distinguished volumetrically from native water is 'used to extinction.'

Volt: A unit of electromotive force. It is the amount of force required to drive a steady current of one ampere through a resistance of one ohm. Electrical systems of most homes and offices have 120 volts.

Voltage of a circuit: The electric pressure of a circuit, measured in volts. Usually a nominal rating, based on the maximum normal effective difference of potential between any two conductors of the circuit.

Water right: Property right created by the diversion of water and the placing of it to a beneficial use (appropriation). Water rights become officially recognized and administrable when documented in a decree of the state water court (adjudicated).

Water Use Efficiency Plan: Colorado Springs Utilities' plan identifying water conservation and efficiency strategies to meet the statutory requirements of the Water Conservation Act of 2004.

Watt: A unit of measure of electric power at a point in time, as capacity or demand. One watt of power maintained over time is equal to one joule per second. Some Christmas tree lights use one watt. The Watt is named after Scottish inventor James Watt and is capitalized when shortened to W and used with other abbreviations, as in kWh.

Watt-hour: One watt of power expended for one hour. One thousandth of a kilowatt-hour.