It's How We're All Connected:

The Story of Colorado Springs Utilities

By Jerry Forte, P.E., Chief Executive Officer With Margaret Radford

Other contributors: Kerry Baugh, Dave Grossman, Charles Morgan and the employees of Colorado Springs Utilities

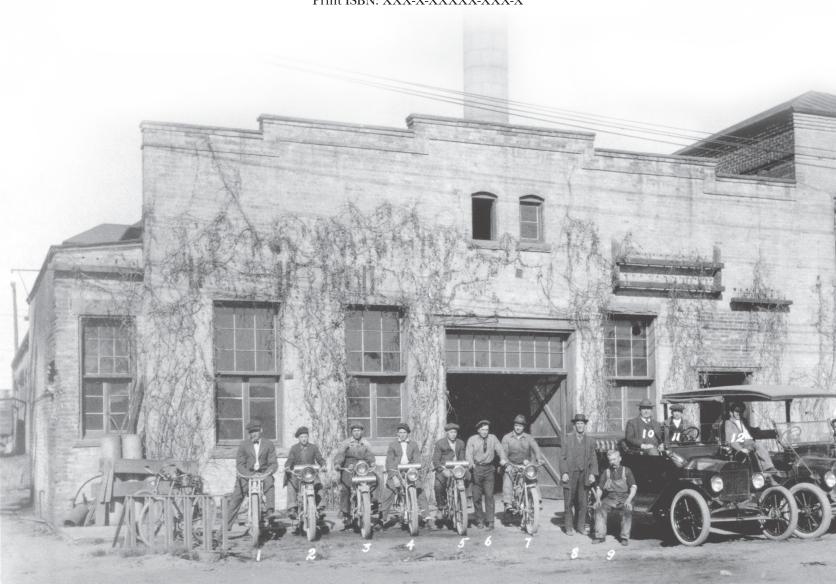
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It's How We're All Connected: The Story of Colorado Springs Utilities

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To my precious bride, Denise, and to the employees of Colorado Springs Utilities, past, present and future.



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It's How We're All Connected:

The Story of Colorado Springs Utilities

During my research for this book, I found myself journeying back to 1871 as the first stake was placed at the corner of Cascade and Pikes Peak. I saw ditch irrigation, grasshopper plagues and amazing foresight with four evolving services — water, wastewater, gas and electric.

One fact became overwhelmingly evident: In every era, every crisis, with every challenge, leaders arose with wisdom, courage and commitment, to build the amazing organization that serves us today. I am in awe of the dedication, compassion and foresight of such legends as our founder General William Jackson Palmer, Colorado Springs Mayor John Robinson, Mayor George Birdsall, Councilman Martin Drake, activist Lillian Kerr, and so many more. We owe them a debt of honor, gratitude and respect. This is their story, and in many ways, it is also our story.

Colorado Springs Utilities — It's How We're All Connected. That motto was born in 1993 when voters gave City Council authority to hire the head of its new four-service utility enterprise, formerly a collection of City departments. While the motto was new, the concept represents a tradition nearly as old as Colorado Springs itself: Through our City government, we citizens own our utilities so that we may own our today and our tomorrow.

City water service came early. Without it, not much could happen at the base of Pikes Peak. Yet General Palmer's vision of water services was only a fraction of what we see today. Water was our biggest challenge, and greatest reward, perhaps a tribute to its essential role in our lives.

Gas, electric and wastewater service arrived as community needs and technology advanced. Gas and electric services started clumsily in the private sector, so our predecessors chose the certainty of City ownership. Chalk it up to their Western self-reliance, a virtue we still value today. Our forebearers ensured that utility services existed for themselves — yes — but they also provided the way for us all.

We refer to "citizen-ownership" throughout this work to celebrate this concept. Technically, we are owned by the City of Colorado Springs and



1



The Edward W. Bailey Water Treatment Plant, dedicated in 2016 as part of the Southern Delivery System, adds treatment capacity for decades to come. our citizens enjoy the benefits of ownership through governance by our elected leaders. This governance requires us all to take responsibility: Elected leaders, business people and everyday utility customers have adapted and rolled up their sleeves to build our utilities business. From humble beginnings, early citizens became the giants upon whose shoulders we stand today.

What we own today is a treasure: We, the people of Colorado Springs, decide what we pay for utilities services; where and when we build facilities; even the mix of fuels we rely upon to benefit all. We set rates only high enough to cover costs and invest in our systems to ensure safety and reliability.

We're all connected in the success we share through our community-owned, community-governed utilities enterprise. Over 1,800 employees today are motivated to honor you, serve you, to come alongside and support all you do to make our community great.

What you are holding in your hands, or viewing on a computer screen, is not just a book: It's the history of how our unique entity was built. Our history helps us understand the treasure we own and how we can continue molding our future together.

Welcome to your story of Colorado Springs Utilities.

Jerry Forte, CEO, Colorado Springs Utilities

Population 1,480 – 29,078

Chapter One

THE BEGINNINGS OF SERVICE

If General William Jackson Palmer had slept better that night in late July 1869, the words you are reading right now might never have been written about this place we call home.

Perhaps we owe thanks to the bouncing stagecoach, or the bright moonlight or "keen mountain air," as Palmer put it. Maybe it was fate itself. Whatever it was, something woke the retired Civil War officer from his sleep as he rode on top — not inside — the stagecoach.

And what he saw when he opened his eyes changed everything for Palmer and for all who followed: Pikes Peak, elevation 14,115 feet.

"I found the magnificent Pike's Peak towering immediately above, topped with a little snow. I could not sleep any more with all the splendid panorama of mountains gradually unrolling itself, as the moon faded and the sun began to rise...I sat up and drank in, along with the purest mountain air, the full exhilaration of that early morning ride."

- Palmer's letter to his future wife, Queen

That morning, July 28, 1869, Palmer enjoyed breakfast among the red rocks in an area already known as the Garden of the Gods. He "freshened up by a preliminary bath" in the nearby waters of Fountain Creek. He found the area "enticing,"

noting its suitability to become a "famous resort," and he resolved to build a new city that would become Colorado Springs.

In those first impressions, Palmer observed two water sources: Fountain Creek and the snow atop Pikes Peak. While important, neither would be enough to sustain the community he envisioned, much less the community of today. Yet Fountain Creek and local snowmelt were enough for a start, and Palmer and his successors — including ourselves — would find other water.

And so municipal services began with water, and soon other utilities were added to the range of services now owned and governed by the citizens of Colorado Springs.

Water: The First Building Block

The region that Palmer found to be rich in beauty was not necessarily rich with water resources. Colorado Springs lies in a high desert with a semi-arid climate, with average annual precipitation of 16 inches. In the early years residents were responsible for getting their own water from shallow wells and ditches, a common practice. Most communities had no water distribution pipelines.

Yet drinking water was not Palmer's primary water concern. As an early real estate developer, he began platting and selling lots in what is now the Old North End and Colorado College area.

He soon realized the barren, treeless landscape would not attract buyers. He envisioned gardens and parks yet wondered how and where he would get water to irrigate them.

One of Palmer's first efforts was to use his private Colorado Springs Company to build a ditch for transporting water for irrigation. The El Paso Canal was completed in less than four months, from August 4 to November 27, 1871.

"The first ditches in the City were made by a plow turning a single furrow," according to Manly Ormes in "The Book of Colorado Springs (1933)."

The El Paso Canal, 11.5 miles long, 6 feet wide and 2.5 feet deep, diverted water from Fountain Creek. It began near what is now Highway 24 and 33rd Street behind the Safeway store, just downstream from the current 33rd

Street Pump Station. In 1872, the terminus of the canal was the 10-million-gallon Boulder Reservoir.

To fulfill his vision of a beautiful urban landscape, Palmer arranged for 6,000 cottonwood trees to be brought from Canon City in the spring of 1872, planting them 25 feet apart along the canal and its tributaries. Nearly 150 years later, City foresters believe none of the Palmer cottonwoods are still alive, although their descendants continue to thrive in the area.

To convey water from the canal to individual residences, lateral lines were built near where Columbia Street is today. Those lines led to ditches that were built to run south along main streets such as Cascade and Nevada avenues. When canal gates were opened, water flowed



"All parties are requested not to throw straw, paper, shavings or other litter into yards and streets, which blown away by winds, lodge in the waterways and make them filthy. To make Colorado Springs a place of beauty par excellence, the running water must be kept clean and sweet."

— R.A. Cameron, Superintendent of Fountain Colony, later renamed Colorado Springs, in 1872.

This map shows the El Paso Canal, which began just off of 33rd Street and meandered to the north and to the east.

down the ditches and into bubble heads within individual yards.

In the early years, canal water was available to anyone who needed it. "If you had a big tub and a strong back, you could lug home all the water you needed by scooping it out of the various ditches that meandered through Colorado Springs." (Department of Public Utilities: An Informal History, 1872-1969.)

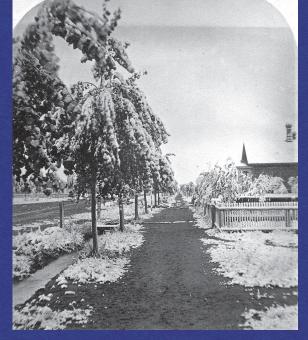
Even though the canal was used ostensibly for irrigation, clearly citizens used it for drinking water. Water was not filtered or disinfected, and no one had the expectation that it would be. It was a convenience simply to have raw water delivered to the community.

Nonetheless, small steps were taken to protect water quality and public health. In 1876, an edict was issued prohibiting spitting on the sidewalks as spit ran off into the canal and polluted the water. Just a year later, the City underscored the canal's importance when it bought it from the Colorado Springs Company.

The El Paso Canal also met the need for fire protection. Six wooden cisterns were built and placed strategically around the city for fire protection, each holding 100 barrels of water or about 5,300 gallons.

Work continued on the canal's systems. Prospect Reservoir (now Prospect Lake) was built in 1891 to store water delivered from Ruxton Creek and to serve as the terminus of the El Paso Canal. The reservoir primarily irrigated Evergreen Cemetery. Three years later, Pikeview Reservoir was built to add Monument Creek water to the Fountain Creek water already in the El Paso Canal. In 1900, Boulder Reservoir was filled in and became Boulder Park.

The canal was not without its detractors. As early as 1901, concerns arose that the canal





"Annie described to me many times how she and her many brothers and sisters played in the water from the canal that came running down in the ditches. They loved it." — Jan Doran recounting memories of Ann Claus, later Ann Allen, who was born in 1911 and grew up at 2515 N. Cascade Avenue.

VULNERABILITY LEADS TO COMMUNITY WATER PLANNING



In the 1870s, Rocky Mountain locusts arrived by the millions, eating crops and everything else they could. Their bodies polluted our water sources and had to be collected and carted away. Some locusts seemed to be as long as the wagon driver's fingers.

By its very nature, our water — rain and snowmelt conveyed in natural creeks and stored openly in lakes and reservoirs — can be vulnerable to natural and man-made threats. Yet planning for these threats leads to good decisions such as diversifying or adding to our water sources.

The "grasshopper plague" experienced by Colorado and much of the rest of the West and Midwest in 1873 was both a crisis and a cautionary tale.

First, the crisis. To call the insects "grasshoppers" is a bit of a misnomer. They were Rocky Mountain locusts, almost a weaponized form of locust that is now considered extinct. The infestation peaked from 1873 to 1877 with swarms over the Kansas prairie that covered 198,000 square miles (approximately twice the

size of Colorado) and contained at least 12.5 trillion insects weighing 27.5 million tons.

Colorado Springs was located on the western edge of the infestation, but the locusts still ate everything: crops, grass, trees, clothing, leather, dead animals, and even each other. Their bodies became so numerous that they slickened the railroad tracks around the City, literally stopping rail traffic for a time. The locusts clogged and polluted water sources, including the El Paso Canal and many local wells. The plague forced residents to haul water from a ranch nearby that was somehow spared.

Yet this crisis became the cautionary tale. Our community could not allow itself to become reliant on a singular water source. Citizens would need to work together to diversify our water sources for the future.

might spread noxious weeds by depositing mud and weed seeds on lawns and that the ditch boxes in the streets were unsightly, unsanitary and prevented proper crowning and drainage of the streets.

As Colorado Springs continued to grow, the canal water served a smaller percentage of the residents. The system had no metering capability to record water usage that would permit charging rates for recovering costs. In 1956, the El Paso Canal was decommissioned and covered over with concrete slabs. Traces of the canal can still be seen today, particularly on the wide north-south avenues in the Old North End. What looks like a second sidewalk next to the street is actually the original canal.

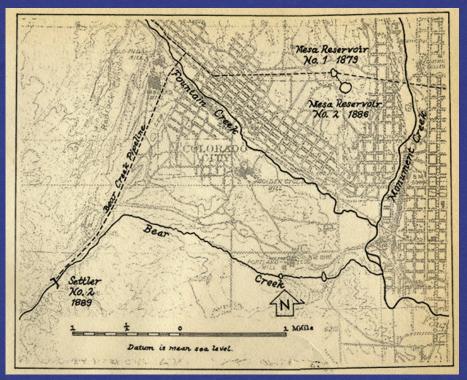
While the canal is no longer used, this water supply remains a vital part of our system. The water rights appropriated by Palmer are still used through a pump station and pipeline to serve our expanding community.

First Pipeline Delivery Begins

By 1878, it was evident that the El Paso Canal was not meeting the needs of Colorado Springs' growing population of nearly 4,000 people. The City also had become the main supply point for surrounding gold mining districts. The need for a more reliable water source again led to action and more lessons learned.

Colorado Springs voters approved an \$80,000 bond issue to build the first municipal water

This map shows Colorado Springs in 1889. The City encompassed nearly 3,000 acres, making it almost 10 times larger than when it was founded. The early water system focused on Ruxton Creek and other local water sources.



system — equal to nearly \$2 million in today's dollars. A 12-inch pipeline was built from Ruxton Creek to the new Mesa Reservoir, and an 8-inch distribution main extended from the Mesa Reservoir to Cache La Poudre Street. However, a 6-inch supply main between Manitou and Mesa Reservoir constructed too near the surface froze during the cold winter of 1880. It was replaced by an 8-inch line underground, paid for by an additional bond issue of \$25,262.

Leaders Foresee Water Value

The water system built in 1878 served the community well for decades, its value recognized by leaders. The City's Water Committee Chairman J.C. St. John noted, "I don't believe there is another city in the United States that has as pure water and as much of it as we have."

The City's provision of water was considered so important that in 1888, the Colorado Springs Board of Trade encouraged the City Council to take action for the future. Bankers and business leaders who promoted common commercial interests stated, "In the opinion of the Board of Trade, the City Council should acquire every available or purchasable water privilege contributory to the city ... and should promptly and decisively act to secure the greatest possible amount of water."

Just as compelling is former City Engineer Edwin Sawyer's letter written to the "Reader of the 21st Century" on August 2, 1901. It was included in the Century Chest Project, a time capsule prepared by citizens of the young town. "What is to stop the growth of a city like this? Nothing, it seems to me but the lack of water."

Voters Back Pikes Peak Reservoir

An 1890 drought forced the City's first water restrictions. To help protect the growing community from future droughts, water planners turned to Seven Lakes on the South Slope of Pikes Peak, named for the seven naturally occurring glacial lakes used for recreation. That year, South Slope land was purchased from private owners and the U.S. government, and construction began on the reservoirs.

By 1898, voters approved 10 bond issues to provide water in Colorado Springs, resulting in over \$1 million of indebtedness. In relation, the municipal government's entire budget, including wastewater and other functions, was about \$250,000 per year. This illustrates how seriously early leaders approached the need to acquire water and water rights well in advance of projected growth.

It would take planning, said Mayor John R. Robinson. "It is necessary to adjust our plans for public improvements on a scale to meet large future demands, and yet to conserve present needs and economical outlay."

Most of the construction of the South Slope reservoirs was completed by 1905. Big Tooth Reservoir, 3.7 miles from Manitou Springs, became the final addition in 1929. Today, the South Slope watershed includes seven reservoirs, two water conveyance tunnels and Dead Lake, a small natural lake with no natural inlet or outlet but with crystal clear water.

After being acquired by the City in 1913, South Slope closed to public access to protect this pristine and fragile watershed. It remained closed for over 100 years, until it reopened for limited recreation in 2014.

GENERAL WILLIAM JACKSON PALMER'S DREAM BECOMES OUR REALITY

William Jackson Palmer is revered for many things. He was a civil engineer, an industrialist, a Union soldier, Medal of Honor recipient, developer, visionary and philanthropist. Yet it was an early love of the railroad that led Palmer to the Pikes Peak region.

Growing up a Hicksite Quaker in Philadelphia, Palmer was fascinated by trains. At 15, he worked for the Hempfield Railroad and the Pennsylvania Railroad, including a year of study in England and Wales, until the start of the Civil War in 1861.

As a Quaker and pacifist, Palmer opposed war. But he also was a passionate abolitionist. His hatred for slavery led him to follow his conscience and enlist in the Union cause, where he rose to the rank of Colonel in the 15th Pennsylvania Cavalry regiment. By the war's end, Palmer was promoted to the honorary rank of Brevet General, in recognition of his meritorious conduct. General William Henry Thomas said Palmer's performance earned him that honor. "There is no officer ... with more intelligence, zeal or energy than General Palmer."

Palmer Tracks West

After the war, Palmer returned to railroads, his first love. In 1867, he headed west during the building of the Kansas Pacific Railroad as its director, officially engineering a link south from Denver, eventually reaching New Mexico. Ultimately, Palmer made plans for his own railroad with his partner, British physician Dr. William Bell.

Incorporated in 1870 as the Denver and

Rio Grande Railroad, the country's first narrowgauge railroad laid tracks running south from Denver in July 1871. Tracks reached the Pikes Peak region in October and Trinidad in 1873.

With Dr. Bell's help, Palmer incorporated the Fountain Colony on July 31, 1871. The next year, it was incorporated as Colorado Springs.

Although he also founded Manitou Springs, Salida, Alamosa and Durango along his railroad lines, Colorado Springs was Palmer's pride, his crown jewel.



Electricity Comes to Colorado Springs

Thomas Edison invented the incandescent electric light bulb in 1879 and first distributed electricity at the Pearl Street Station in Manhattan in 1882. Just four years later, commercial electric service came to Colorado Springs, albeit in a small way by today's standards.

The El Paso Electric Company and its 60-kilowatt, coal-powered plant began generating electricity to power business and street lighting in downtown Colorado Springs. The power was supplied by two 45-horsepower Westinghouse engines, along with two Westinghouse Electric Company dynamos.

By the end of 1886, the City bought electricity for five incandescent 1,000-candlepower street lights (about 20 watts each) fed by the direct current (DC) system at locations selected by the City Council. This first plant supported 350 customers. The plant was located between the modern-day City Administration Building and the United States Olympic Committee Building, in the alley off of what was formerly Huerfano Avenue, now named Colorado Avenue.

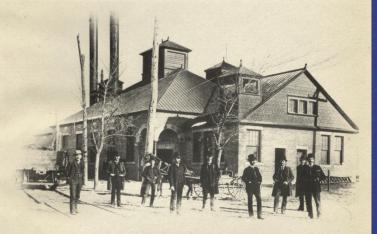
In 1887, El Paso Electric Company replaced

the original plant. The primarily alternating current (AC) plant, with some DC components at Cucharras and Sahwatch streets, sat behind today's Pikes Peak Center. This electric plant had a capacity of 100 arc lights and 4,000 incandescent lights.

The coal used for generation in both plants was mined in Colorado Springs. The City's old mining maps show coal mines from the Rockrimmon and University of Colorado at Colorado Springs (UCCS) areas east to the Colorado Springs Country Club. Some of these mines were as deep as 500 feet.

The mines, in an area known as Papeton, served as the location for an early coal-fired, steam power plant built by the Colorado Springs Electric Company in 1901. When it opened, the plant supplied AC power for the City's domestic and commercial needs.

In the 20 years between 1879 and 1899, the City issued franchises to eight companies to serve what we would call small areas today. The result was a highly complicated pattern of private operations in competition with each other, producing inconsistent and unreliable services.



ORIGINAL ELECTRIC COMPANIES

- El Paso Electric Company, 1886
- Colorado Springs Lowe Gas & Electric Company, 1889
- Colorado Springs Gas & Electric Company, 1884
- Colorado Springs Light & Power Company, 1899*
- Colorado Springs Electric Company, circa 1890*
- Citizens' Light, Heat & Power Company, 1899 (local interests only) First voter-approved franchise
- Colorado Springs Power Company, 1900
- Colorado Springs & Interurban Railway Company, 1901

10



The original coal gas plant on Conejos Street was built at virtually the same location as the subsequent red brick Gas Administration building, which was removed in 2013. This site east of America the Beautiful Park now stands vacant.

Duplication was so great that poles for the various operations had to be painted different colors to tell them apart.

This condition served as a catalyst for change. In 1889, when the City sought to use El Paso Electric Company's power poles for community good — to carry the wires of the fire alarm systems — El Paso refused. That led to the first citizens committee meeting in 1889 to look into the idea of a city-owned electric light plant.

Start of Gas Service Tied to Coal

The early groundwork for municipal gas operation goes back to 1879, when the Colorado Springs Gas and Coke Company was incorporated. The private, investor-owned company included four City Council members (then called aldermen) among the nine original incorporators. The Colorado Springs Gas

and Coke Company used coal to produce a rudimentary type of coal gas, which had about 50 percent of the BTU content of natural gas today. The manufactured gas was used only for lighting. The company levied a maximum charge of \$3 per 1,000 cubic feet of illuminating gas.

Later the process was changed to make water gas, using a method invented by Thaddeus S. C. Lowe. Water gas is a combustion fuel containing carbon monoxide (CO) and hydrogen gas (H₂), made by passing steam over heated hydrocarbons. It wasn't until after 1895 that gas started being used for heating and cooking, although it wasn't quickly adopted.

Colorado Springs residents were not immediately ready to give up their coal oil lamps and coal-fueled stoves, but eventually, they were lured away by the promises of convenience and ease of gas-powered appliances.

NIKOLA TESLA AND HIS EXPERIMENTS MAKE A MARK

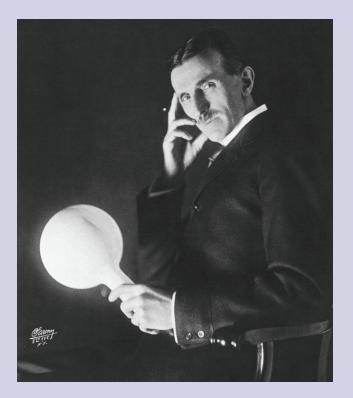
The name Tesla is forever linked to Colorado Springs, highlighted in recent times through Hollywood movies such as "The Prestige." What drew the Serbian-American inventor, electrical engineer and futurist to Colorado Springs was his hope that our thin, high-altitude air would facilitate his dream of wireless transmission of electricity.

He was lured by the offer of free land for his laboratory and AC electricity from El Paso Electric Company, courtesy of his friend and electric company associate Leonard Curtis.

By the late 1890s, electricity became an important element of daily life in Colorado Springs. In addition to powering street lights and the street car system, electricity provided lighting for retail window displays and for homes. It was the perfect place for Tesla to set up his experimental camp.

Tesla and Curtis set up Tesla's lab in Knob Hill, near North Foote Avenue and East Kiowa Street — close to what is now the Colorado School for the Deaf and the Blind. Most famously, the lab featured an 80-foot-tall wooden tower with a 142-foot metal mast supporting a large copper ball, and the largest Tesla coil ever built, 52 feet in diameter.

Tesla's moment with destiny here in Colorado Springs came on July 3, 1899, when he conducted his historic and most dramatic experiment. Using his gigantic Tesla coil, he

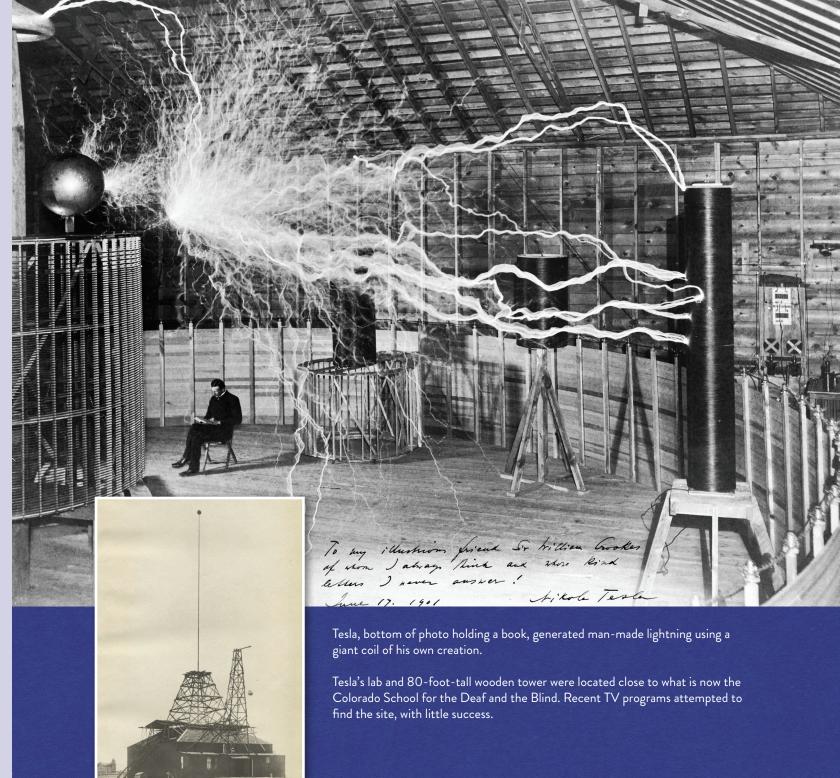


generated his own man-made lightning.

Myth has it that Tesla's experiment knocked the El Paso Electric Company's generator out and plunged the City into darkness. Not so fast, says Matt Mayberry, director of the Colorado Springs Pioneers Museum. "We've looked into that and there doesn't seem to be any truth to it."

What is known is that Tesla refused to pay his electric bill, and the private company sued him. Tesla's lab was dismantled in 1904 and auctioned off at the county courthouse — now the Colorado Springs Pioneers Museum.

Nonetheless, Tesla's invention of the AC induction motor and AC transformer designs are fundamental elements of today's electric power systems. CSU's Tesla Hydroelectric Plant built in 1997 is named after him.



1888 Brings First Sewer System

Wastewater "treatment" in Colorado Springs in the early 1880s was a series of open ditches directed to Fountain Creek, not unusual for the time. Still, for the sake of sanitation and aesthetics, citizens wanted better.

In 1888, voters approved a bond issue to build the City's first sewer system with eight miles of line. Lines laid along streets and alleys collected the wastewater and discharged it into Fountain Creek without treatment. A year later, ranchers below the sewer outlet joined together to sue the City of Colorado Springs to restrain it from discharging wastewater into the stream. Before trial, the City and the ranchers reached an agreement for the City to use the sewage for irrigation and not allow it to flow into the creek.

Land south of the City was leased (where the Las Vegas Street Water Resource Recovery Facility is now located) to create a 35-acre sewage farm. The wastewater was used to irrigate crops, and the water was quickly absorbed into the ground. This was an accepted disposal method at that time.

When a major drought occurred in 1892, the ranchers asked the City of Colorado Springs to resume discharging wastewater into Fountain Creek for irrigation use. That request was denied, and the more environmentally responsible disposing of water at the sewage farm continued.

Shaky Start for Hydroelectric Power

Hydroelectric power occupies an unusual niche in Colorado Springs history. To state the obvious, hydropower harnesses water to generate electricity. Yet one of the first hydropower franchises granted by the City was intended to capture future water supplies and ended up generating controversy.

The City granted its first hydropower franchise to George W. Jackson and Associates on September 8, 1898. Under the 25-year franchise, the private company was to build and operate an electric hydro generation unit, using any and all water in the City's water system. Jackson needed the electricity to complete the Strickler Tunnel on the South Slope of Pikes Peak, part of the City's growing use of Pikes Peak snowmelt.

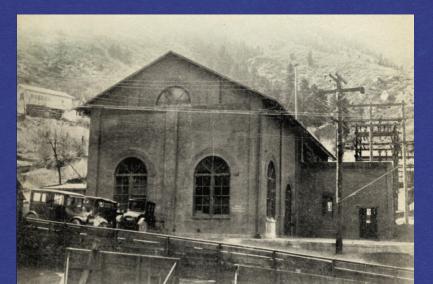
Yet only a few weeks later, Jackson sold his franchise — including the associated right to use the City's water — to the Pikes Peak Power Company for \$99,500. This sale put a public water supply in the hands of a private company for private benefit, and the public outcry led the City Council to repeal the franchise ordinance on February 23, 1899. However, the Pikes Peak Power Company took the matter to the federal courts, and on November 6, 1900, the U.S. Circuit Court of Appeals ruled that the franchise was valid. Still, the franchise provision that users of the Jackson franchise not waste or diminish the City's water would pay off in a few short years.

While controversial, the Jackson franchise did result in the construction of the Manitou hydroelectric plant, which began operation in early 1905. The Manitou plant was built by Pikes Peak Hydro-Electric Company, incorporated in 1902 by George A. Taff and William A. Otis. At that time, the plant had the highest head — or water pressure at the turbine — in the world, generating 2.25 megawatts.

Today, the Manitou plant has been updated and is a 5.5-megawatt plant. While constructed and operated initially in the private sector, the Manitou plant still serves our community today.







FIRST HYDRO PROJECTS

1898

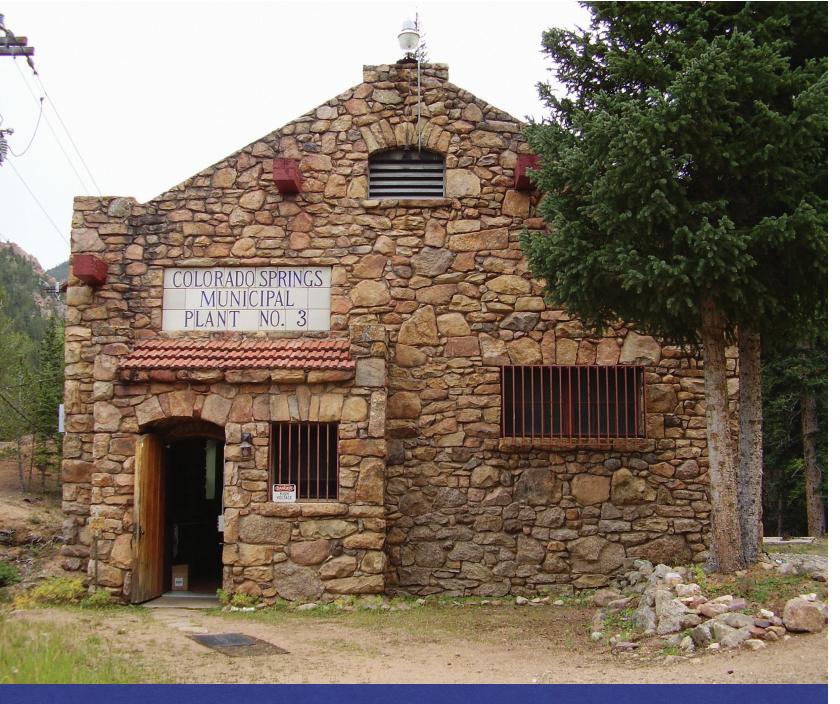
Top – Minnehaha Hydroelectric Plant in Engleman's Canyon on the south side of the Pikes Peak Cog Railway. Provided power to build Strickler Tunnel, then to Manitou Springs 1901-1907. Machinery moved to Crystal Creek and provided power to Green Mountain Falls 1911-1931.

1898

Center - St. John's, aka the Lake Moraine Hydroelectric Plant, built to power streetcars (trolleys) in Cripple Creek. Abandoned 1910. One of three facilities covered under the franchise granted to Irving Howbert and his Colorado Springs & Cripple Creek Electric Railway Company.

1905

Bottom – The Manitou Hydroelectric Plant began operation in early 1905. At the time, the plant had the highest head, or water pressure at the turbine, in the world. It remains in use today.



"If I have seen further than others, it is by standing upon the shoulders of giants."

— Sir Isaac Newton

The Ruxton Hydroelectric Plant, located three miles west of Manitou Springs on the Pikes Peak Cog Railway line at Ruxton Park, was the world's first fully automated hydroelectric plant. It was completed in 1925 and remains in operation today.

Population 29,078 - 36,789

Chapter Two

OWNING OUR FUTURE

As the 20th century dawned, Colorado Springs residents were satisfied with some aspects of community life: Water and wastewater services — City-run from the start — were operating as expected. Yet residents were frustrated with multiple private companies providing unpredictable, inadequate gas and electric services. They would soon find a solution in their growing sense of civic pride, and with it, a new form of government, a new flag and, ultimately, in their deep investment in all four utilities.

One source of public frustration stemmed from the privately-owned Pikes Peak Power Company and the franchise it held to generate hydroelectricity using the City's water supply. This resentment may have risen, in part, from the City's repeal of the franchise in 1899, only for the U.S. Circuit Court of Appeals to uphold the franchise in 1900, limiting the City's control over its own water assets.

With an eye to protecting their utilities and other matters going forward, voters adopted a Home Rule Charter on May 11, 1909, appointing a new superintendent of the Water Department and replacing city aldermen with four commissioners elected at-large. The new charter required that any franchise enacted in the future must allow the City to buy out the franchise and self-serve. If the community wanted to buy the electric system or the gas system, it now had authority to do so.

During this time, private industry began consolidating. In 1910, three companies — Colorado Springs Electric Company, Colorado Springs Light & Power Company, and Pikes Peak Hydro-Electric Company (operating five generation plants in Colorado Springs) — joined together to become the Colorado Springs Light, Heat & Power Company.

Home Rule Charts Future

Thanks to the new Home Rule Charter, Colorado Springs citizens had a say by their votes and granted a franchise to the new entity. Over the next 10 to 15 years, subsequent owners of that franchise consolidated many other private assets, including at least eight generators, generation units and gas companies. These consolidations would prove to be particularly important in 1924.

Inconsistent, fragmented utility service went beyond Colorado Springs, affecting communities nationwide, leading to the establishment of the Public Utilities Commission in 1913. Within two short years, the PUC put Colorado Springs Light, Heat & Power Company in its sights. A PUC hearing on its reasonableness of rates, adequacy of service, rules, regulations and practices concluded that the private company's electric rates were excessive and unreasonable, prompting the PUC to establish a new rate

schedule. It also ordered the company to stop its unethical practice of providing free or reducedcost electricity and gas to officers or employees.

Meanwhile, cultural changes began transforming communities statewide. Colorado's men voted in 1893 to amend the state constitution to recognize the right of Colorado women to vote — more than 27 years before suffrage would be recognized for all women in the United States. By 1900, Colorado women strengthened their resolve to become more active in community and government affairs.

Enter Lillian Kerr, founder and first president of the Woman's Club of Colorado Springs and co-founder of the Colorado Springs Civic League. Unlike private, elitist ladies' clubs of the day, Kerr's organizations welcomed all women and aspired to make life better for all. So influential was the League that it demanded and received a desk in the City Council Chambers at the new City Hall. Kerr sat at that desk for five years as chair of the Council Proceeding Committee, scrutinizing the allmale council decisions and reporting back to the public. In recognition of her contributions, the mayor eventually appointed Kerr to the City Planning Commission, an unusual honor for a woman in that era.

Providing the best quality gas and electric service arose as one of Kerr's top priorities. Public conversation centered around high rates, poor service and infrastructure considered lacking or non-existent. Kerr's solution was to champion for City ownership to ensure public control. And champion she did!

In 1918, at the height of her local influence, Kerr filed a petition with the City Council containing signatures of 600 citizens (about two percent of the population) who supported investigating the possibility of the



The Colorado Springs flag was designed by the Colorado Springs Civic League, founded in 1909 by utilities champion Lillian Kerr. The official resolution adopting this flag in 1912 stated, "The white field is intended to represent the cleanliness and health of the city, the blue border represents our blue skies, the shield carries the sun of which we are justly proud, the mountains stand for Pikes Peak and on it are pictured the gold ingots of our mining industries, and the green band about the shield represents the park system surrounding the city."

City purchasing existing private utilities. In 1919, Kerr's requested report was compiled by Mayor C.E. Thomas and City Attorney J. L. Bennett, calling upon the Chamber of Commerce to create a "Committee of 15" to study and make recommendations on whether the City should acquire the private gas and electric operations.

The Committee of 15 developed two pivotal recommendations: First, that no privately-owned company be given use of City water rights, referring to the issues of the past, and secondly, that the City hire "a competent engineer, to help resolve the City's ... light, heat and power problems."

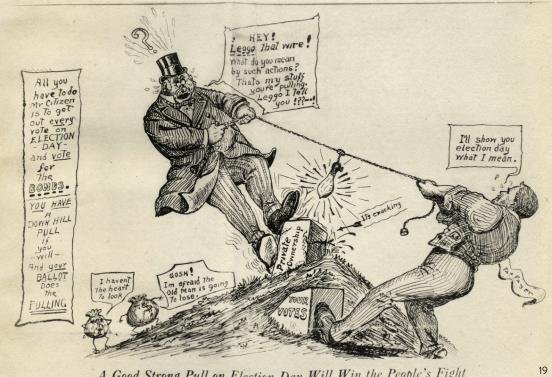
Engineer George A. Anderson prepared a report on the power mess in Colorado Springs, and the Committee of 15 proposed that no more private electric franchises be granted.

Public fervor around utility issues was so great that citizens voted to increase public control via a special election July 6, 1920, moving the City to a council-manager form of government. The next year as the council-manager government was about to launch, voters chose nine City Council candidates who promised the best water system administration, along with the development of an improved power program.

Public concerns about the Colorado Springs Light, Heat & Power Company providing electric service proved to be warranted, at least financially. By 1920, the private company was in severe financial difficulty and unable to make its bond payments. In 1923, increasingly uncomfortable voters denied the company a

A Good Strong Pull on Election Day Will Win The People's Fight: This editorial cartoon circa 1924 shows citizens being on firm footing in the vote to turn private gas and electric services into City utilities. Note the electric light on the wire between the two figures and the footing of the private ownership cracking.

Credit: Source unknown



A Good Strong Pull on Election Day Will Win the People's Fight

new franchise. The City Council instructed its city manager to hire an engineer to evaluate the electrical distribution system and draw up a proposal to improve the distribution and generating system.

When voters approved a \$1.25 million bond issuance on May 20, 1924, the ballot language they considered represented a new thought: that when the City would buy out the consolidated Colorado Springs Light, Heat & Power Company, it would be acquiring an electric power and light plant and system from which "the City of Colorado Springs will derive revenue."

Citizens Add Electric, Gas Systems

At midnight on June 30, 1925, Colorado Springs citizens took ownership of the community's electrical and gas system christened as the City of Colorado Springs Light & Power Department. The next few years reflected stunning progress as the utilities expanded and modernized to keep pace with growing demand; achieved financial strength; reduced rates; and built close cooperation with its new citizen-owners through causes that improved community life.

Just four months after the City purchased the electrical system, it opened a steam power plant at 700 South Conejos (now known as Martin Drake Power Plant). The boilers burned lignite from coal mines north of town. Coal was delivered by the Denver and Rio Grande Western Railway in cars from railroad companies, including the Colorado Springs and Interurban Railway.

The City's innovative thinking produced the first fully-automated hydro plant of its type in the world in 1925: the Ruxton plant located three miles west of Manitou on the Pikes Peak Cog Railway line. Interestingly, Colorado Springs met its average daily demand with the Manitou Hydroelectric and Ruxton Hydroelectric plants; Colorado Springs used renewable energy to supply its base load long before many other cities. The City's Municipal Steam Plant actually served as a backup for the hydro plants.

In keeping with its Western tradition of neighborliness, Colorado Springs began selling power to Fountain in the summer of 1925 when the town shut down its power plant. Colorado Springs also extended a power line from Manitou Springs to Cascade, and one from the Broadmoor Hotel to the top of Cheyenne Mountain. The electric distribution system that supplied power to the Broadmoor Hotel and its residential area — not yet annexed to the City — was purchased in July 1931 and became part of the South Suburban electrical system.

Along with these changes, many other improvements were made to the electric distribution system. Street lighting was finally rebuilt and changed to a different system between 1925 and 1930. Old carbon arc lights were replaced with 6.6 ampere Mazda lamps, and automatic electrically-operated time switches were installed at various transformer banks. Street lighting had come a long way from the five original lights installed in 1886.

By 1928, 565 street lights brightened Colorado Springs, varying in size from 100 to 400-candlepower. The system was more efficient and required less maintenance.

Another opportunity that citizen ownership made possible was the conversion from coal gas to natural gas in 1931 when Colorado Interstate Gas brought the first natural gas pipeline to town. This new fuel source required the Gas Department to change out the gas burner tips in customers' gas appliances to burn natural gas with its higher heat output.

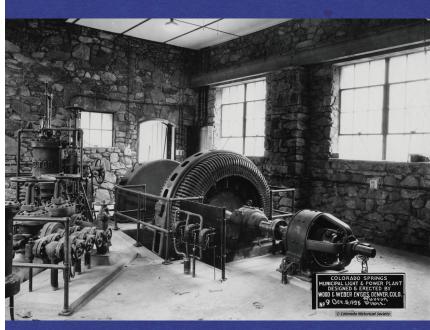
In addition to upgrading the system to meet demand utilizing up-to-date technology, a strong emphasis was placed on making the citizen-owned utilities financially viable. Sound management between 1925 and 1939 made it possible to meet a public demand for electricity that more than doubled; to achieve about 27 percent growth in the number of meters (customer accounts); and astonishingly, to reduce rates seven times, while still increasing gross revenues from \$834,000 in 1926 to \$1,135,000 in 1939.

And to top it off, income from sales of electric and gas service paid for all system additions and improvements and permitted utility-related debt to be retired in late 1939. The citizen-owned utilities needed no financial assistance from other City government departments. The citizens' investment of \$1.25 million in 1924 produced a system valued at \$4.43 million in 1939. Compared to the conditions during private ownership, the combined Department of Public Utilities — water, electric and gas divisions — was off and running.

Appliances Boost Electrical Use

The abundance and affordability of electricity paralleled the invention and sales of many consumer products that transformed American life and inspired cooperation and trust between the citizens and the utilities they owned.

By 1930, a majority of Colorado Springs homes enjoyed electrical service. Back then, homes likely featured small electrical appliances, such as irons, vacuum cleaners and toasters, and even coffee percolators, room heaters and fans. During the 1930s,



A view of inside the Ruxton Hydroelectric Plant on October 5, 1925. The plant looks very much like this today.

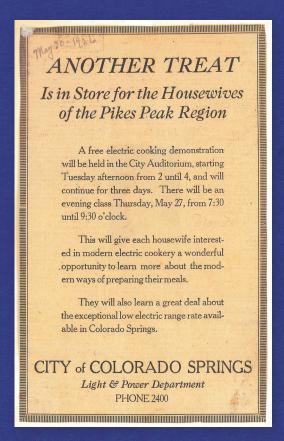


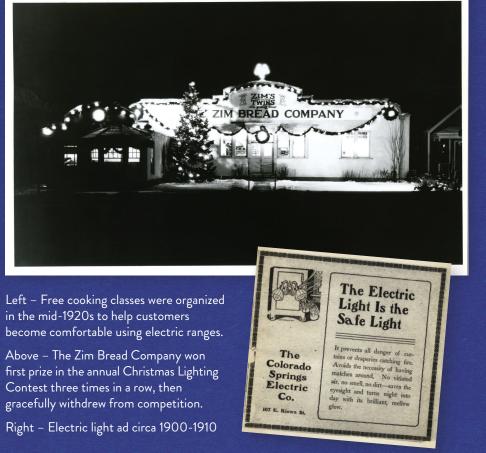
The original red brick Municipal Steam Plant, or Plant Number 1, now the Martin Drake Power Plant, at 700 South Conejos Street in 1925.

electrical use expanded to include major appliances, such as stoves, refrigerators and washing machines. Since electric stoves were still regarded as a fairly alien innovation, the Colorado Springs Light & Power Department offered free cooking schools to teach women how to use these new appliances. An overwhelming response sparked newspaper accounts of the hundreds of women who turned out to participate. By teaching the public how using electricity enhanced their lives, usage increased. And the relationships between citizens

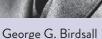
and their electric utility deepened.

The tradition of employees decorating downtown with Christmas lights started during this era. The utility joined the Chamber of Commerce and others supporting community ownership of utilities in sponsoring holiday lighting contests. Commercial and residential customers created elaborate displays, a tradition that continues today. Even during the Depression, Colorado Springs citizens kept their spirits bright with festive lighting made possible by their own electric utility.











Martin Drake



Earl L. Mosley

EARLY LEADERS STEP UP FOR COMMUNITY-OWNED UTILITY

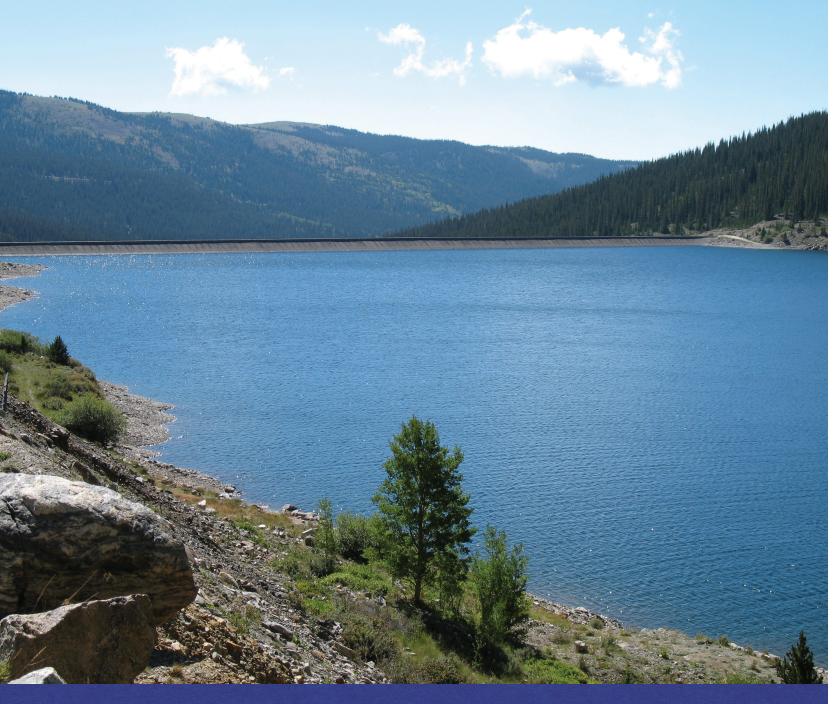
As overachievers go, George G. Birdsall tops the list. At age 20, he arrived in Colorado City (now Old Colorado City) in a boxcar. Before long, he became one of two paid members of the Colorado Springs Fire Department. By 21, he was appointed Colorado City's chief of police. He employed an iron fist that came in handy for enforcing an ordinance requiring saloons to close at midnight.

Birdsall was elected to Colorado Springs' City Council in 1921 and elected mayor in 1929. His passions became securing water rights, and local ownership and control of utilities. As mayor in 1937, Birdsall said the most forward-looking step the City had taken to date was development of water resources on the North Slope of Pikes Peak. Second was the city's venture into the light, power and gas industry. Birdsall Power Plant on North Nevada Avenue is named in his honor.

Martin Drake, a colleague of George Birdsall on the City Council, served nearly 25 years. An avid supporter of Colorado Springs, Drake eyed utilities as part of the City's fabric and battled for municipally-owned utilities. Drake's city councils

secured Blue River water, permitting the City to attract and retain military installations, including the United States Air Force Academy. At the time, Colorado Springs' water supplies were extremely limited, requiring quick and decisive action to forestall future shortages. Drake also was a champion for providing electric services at very reasonable rates. The Martin Drake Power Plant bears his name.

Earl L. Mosley, hired as the City's first utilities manager in 1925 and as city manager in 1930, worked alongside Birdsall and Drake as elected leaders. With a background as an engineer, businessman and building inspector, Mosley was known for his ethical approach to municipal ownership of utilities. The early years of the City's electrical operation were characterized by a spirit of customer service and expansion attributable to Mosley and others. As a civil engineer, he contributed to technical papers on topics such as standpipes on South Slope, as well the merits and stresses of riveted steel construction. During his distinguished career, he served as Denver's utility director after leaving Colorado Springs.



"Hardships often prepare ordinary people for an extraordinary destiny."

- C.S. Lewis

Montgomery Reservoir is a part of the Blue River System and receives water from the western side of the Continental Divide for transport through the Blue River Pipeline.

Population 1,480 – 70,194

Chapter Three

SECURING OUR WATER

Forty-four words adopted as part of Colorado's Constitution in 1876, and refined over the years by Colorado court cases, pretty much drew the map for the Colorado — and Colorado Springs — that we know today.

"The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided."

Article XVI, Section 5,
 Colorado Constitution

In concept, these words mean the waters of the state belong to everyone in the state — not just to people on whose land the water sits or runs — based on who proves they can use the water first and put it to an appropriate and beneficial use. That idea, tested and upheld in 1882 with the Colorado Supreme Court case, Coffin v. Left-Hand Ditch, established the legal foundations upon which water is governed, managed and distributed in Colorado.

In practical terms, these words mean that farmers didn't have to own the land that water runs across to divert the water to their croplands. They had only to own the right to use that water. It was also affected by the doctrine of

prior appropriation, which means "first in time, first in right." These concepts enshrined in the constitutional provision were derived from the practices developed by early gold miners. They agreed among themselves to use water running across land they didn't own to process their valuable ore, and to respect those who were there first, regardless of where on the stream they staked their claim. This is the nature of Western water law.

If the riparian water law of the Eastern United States, which ties water use to land adjacent to the flowing rivers, had somehow prevailed here, farming might never have been able to grow large enough to sustain increasing populations. Mining might never have brought and built wealth in Colorado. And the cities and rural communities we know today might never have existed — at least not where they are today, Colorado Springs included.

We don't have the same local creeks and rivers enjoyed by other cities on Colorado's Front Range. Abundant water wasn't General William Palmer's inspiration for founding Colorado Springs, unless one counts the Manitou Springs mineral waters that he observed as supporting a fine tourist destination.

Pikes Peak and the Garden of the Gods inspired Palmer, so early on, he and his successors responsibly set Colorado Springs on a path we continue on today: securing water rights;



Our local system, including Northfield, North Slope and the South Slope systems. Northfield is fed mainly by our trans-mountain systems and delivers water to Pine Valley and McCullough treatment plants. South Slope and North Slope deliver water to the Mesa Water Treatment Plant.

building our collection, storage, treatment and distribution systems; and stewarding water resources for ourselves and our posterity. Along the way, we had to take the long view in our planning, yet be flexible enough to seize opportunities as they arose. We would learn some tough lessons. Among them, if the pursuit of water were considered a war, we would win some battles and lose some. But we could never give up.

Water Close to Home

As discussed previously, our water supply began with shallow wells, and then El Paso Canal, to irrigate Palmer's cottonwood trees brought from Canon City. The canal was ostensibly not for drinking water, but clearly it was used by many for that purpose. Then in 1878 came water pipelines from Ruxton Creek to Mesa Reservoir and related distribution lines into the early community.

South, North Slope Systems Key

Beginning in 1890, water came from Palmer's inspiration — Pikes Peak — with development of the "Seven Lakes" on the South Slope of Pikes Peak. By 1898, voters approved 10 bond issues to provide water to Colorado Springs. Most of the South Slope reservoirs were completed by 1905, but Big Tooth Reservoir was added to the South Slope System in 1929.

Even while Colorado Springs was completing the South Slope System, it had its eye on the horizon — namely, the North Slope of Pikes Peak. Surveying started in 1901, and as early as 1908, the City began investing in North Slope property. This included about 160 acres from Alexander F. Crowe on North and South Catamount, Crystal, North and South Cascade creeks. Colorado Springs' quest was so important that in 1913 an Act of Congress set aside 10,000 acres on the North Slope. Snowmelt collected

in the watersheds of these creeks was piped southeast to the Ruxton Creek Intake and distributed through the City's system.

Our investment in water rights did result in additional obligations. The damming of Crystal and Catamount creeks cut off portions of the water supply to the towns of Green Mountain Falls and Chipita Park. While the resulting legal dispute was not resolved until 1926, Colorado Springs assumed the obligation to supply their needs. The legacy remains, as these two are the only other municipalities supplied by the City's municipal water system.

To verify its planning, the City commissioned a comprehensive report by George G. Anderson

in 1916 on water resources and needs. In a sense the precursor of today's Integrated Water Resource Plan (IWRP), Anderson's report considered water resources, storage, condition of water mains, distribution system needs, recommendations for metering, consumption, water rights, watershed protection, and cost estimates for improvements. Perhaps early for its time, the report even looked at water use and ways to conserve water. Most importantly, Anderson's report affirmed the importance of expanding the water system and developing water on the North Slope of Pikes Peak.

On the strength of the resulting planning, the City continued to purchase North Slope

City staff hold a water meeting circa 1930.

Note the hand-labeling of individuals' names.

From the paneling, coved ceilings and decorative beams, it appears this meeting was in the Council Chambers at Colorado Springs City Hall.



property, including 1,000 acres from Empire Land and Water Company in 1930 and additional property from Ute Pass Land and Water Company in 1942.

Even the Great Depression didn't dampen our community's rightful quest for a secure water supply. It may have helped that the U.S. government stepped up and paid 30 percent of the cost to build Crystal Creek and Catamount reservoirs and other North Slope projects. Between 1934 and 1937, South Catamount and Crystal reservoirs were added to the system.

By the time our country was on the verge of World War II, Colorado Springs was making full possible use of the major sources of local, South Slope and North Slope water. Decades of planning turned out to be critically important, as our community was about to become a vital training center for the military. Without the North Slope developments, and pioneering South Slope projects, the City could not have supported its extensive military obligations.

Sources Expand with Trans-basin, Trans-mountain Water

Until the late 1930s, most of the water that Colorado Springs needed was defined as local, meaning that the rain and snow providing the water fell generally in our area and flowed into Fountain Creek, then into the Arkansas River, and then toward the Gulf of Mexico. Yet as early as the 1890s, our community made use of something else: water that fell as snow or rain on the south side of Pikes Peak that would naturally flow into the Beaver Creek basin, coming nowhere near Colorado Springs. Using tunnels and Ruxton Creek as a conduit, our community diverted South Slope water and imported it into our Fountain Creek basin. It was considered

"trans-basin" water, and while it was important in its own right, it set the stage for something much more important, "trans-mountain" water.

The first major step toward trans-mountain water came in the 1940s, when Colorado Springs looked to the Blue River basin, starting in Summit County. Since such water actually originates on the other side of the Continental Divide, the term trans-divide might be more appropriate. Bringing water from there was a dream for decades. The most feasible source at the time was the headwaters of the Blue River on the Western Slope; it was nearest to Colorado Springs and the elevation made gravity the means of moving the water through tunnels and collection canals without the need to pump.

The plan was a 110-mile-long Blue River System near Hoosier Pass, south of Breckenridge. The City began making steps toward achieving this dream in 1947 when it acquired land and water rights for the development, storage and diversion on the Blue River Watershed.

It is noteworthy that Colorado Springs did not possess enough secure, court-adjudicated rights to Blue River water when it began construction of the Blue River System. So wrote our city attorney at the time, Frederick T. "Rick" Henry, in his paper, "The Colorado Springs Municipal System Emphasizing the Saga of the Blue River Project." There were some senior rights associated with an earlier irrigation ditch that crossed the divide at the Hoosier Pass summit, but they were not enough to fulfill the vision for the project. So in 1947, Colorado Springs filed its claim for a conditional decree for appropriation and diversion of waters in the Blue, McCullough, Crystal and Spruce creeks and other Blue tributaries. The City also began construction of Hooiser Tunnel under Hoosier Pass to carry the Blue to the East Slope with a



Blue River System as it exists today.

"conditional" water decree. The plan was to earn a final decree when the facilities were completed, and water was being diverted and used for the community.

The law thus permitted that the entity that uses the water beneficially first becomes essentially the owner — "first in time, first in right." This was possible because the Blue still contained water that hadn't been adjudicated — "unappropriated water." Colorado law allowed for a city to divert such water to make and apply it to a beneficial use, such as serving its population.

But as is common with water, the notion that it was unclaimed was not universally accepted. This resulted in the disputes and resolutions that defined the Blue River System then and ever since. Voters showed their support by approving a \$1 million sale of utilities revenue bonds in 1950, and the City was off and running on the Blue River System.

Strategic Allies Emerge

To paraphrase Henry David Thoreau, it's not just the destination that matters, it's the journey. Clearly, the Blue River System is critically important to our community today. Yet just as important are the lessons we learned in the quest to build the system: creative solutions and compromise are necessary; making allies out of opponents is required; the West Slope would be our rival again and again; and on occasion, a U.S. president just might intervene on our behalf. The Blue River development provides a story of statewide conflict and resolution that still affects and defines Colorado water today.

For while Colorado Springs was looking to the Blue River, so too, was the City of Denver. Meanwhile, the U.S. government — through the U.S. Bureau of Reclamation — had constructed the Green Mountain Reservoir and facilities for generation of electric power on the Blue, near Kremmling. As a component of the much larger Colorado-Big Thompson project, the U.S. government claimed most of the Blue water to fill the reservoir annually and develop power.

Denver had not yet built any facilities but planned a large reservoir (now Dillon) and construction of a tunnel under Loveland Pass (now the 26-mile Roberts Tunnel) to impound and divert the waters of the Blue, Snake and Ten-Mile rivers at their confluence near the base of Loveland Pass.

Not to be outdone, the Western Slope communities secured an interest in the Blue River, as well. They sided with the U.S. Bureau of Reclamation because they knew the Bureau's plan for Green Mountain Reservoir would result in more water going west down the Colorado River toward them. Sides were drawn, with all

three competing against each other for the same limited amount of water: West Slope and Bureau of Reclamation vs. Colorado Springs and Denver. The matter was set for a court trial in the fall of 1955. By then, litigation over the Blue River had been going on for nearly six years.

Eisenhower Steps In

That was too much for President Dwight D. Eisenhower. With family ties and reported great affection for the Denver area, the Eisenhowers had a stake in the Blue River battle.

The facts show that President Eisenhower caused not just one, but two, pre-trial conferences to be held among the aggrieved parties. The first, in Washington, D.C., occurred



Secretary of the Air Force Harold Talbott announces that Colorado Springs has been selected as the permanent site for the Air Force Academy.

The Air Force unveils a model of the Air Force Academy.

Courtesy 75bestalive.org



Rental Rates - Equipment

(Includes Operator)

Low Bed Trailer with Tractor

Flat Bed Trucks

Dump Trucks

D-8 Bulldozers, tractors

Compressor with drill equipment

1½ c.y. power shovel

Dray line or back hoe

1 c.y. power shovel

Concrete mixer

Portable pump

Tank Truck

10.00 per hour

3.50 " "

3.50 " "

11.00 " "

15,00 " "

15,00 " "

11.00 " "

11.00 " "

3.50 " "

Estimates from the 1951 Engineers Progress Report show the rates for rental equipment used to build the Blue River Project. Costs today would be at least 10 times more.



First load of 42-inch pipe received 1951



Hoosier Dam under construction 1952-1953



Section of pipe installed 1951-1952



South Portal Hoosier Pass Tunnel 1952

in September 1955, and was adjourned, with little business conducted, in favor of reconvening soon after in Denver so that more of the interested parties could attend.

"U.S. Attorney General Rogers appeared and announced that he had just been informed by President Eisenhower that he, the President, wanted this case settled," wrote Colorado Springs City Attorney Frederick T. Henry, who attended both conferences. He reported the Denver conference lasted several days and resulted in an agreement that basically became the Blue River Decree, preventing the need for a trial. The agreement provided that every year Green Mountain Reservoir was filled or was determined to be able to fill, Colorado Springs and Denver could divert their share of Blue River water for their communities' use. It also sorted out how the cities would divvy up the water between them.

Consigned to folklore are President Eisenhower's motivations in forcing a settlement. Certainly, he may have wanted to teach his federal subordinates a lesson after Denver Water representatives painted a picture of the Justice Department and Bureau of Reclamation as power-grabbing bureaucrats. It's worth noting that Denver Water representatives had the opportunity to make their pleas in August 1955 at Denver's Lowry Air Force Base.

Or, it may simply be that Eisenhower was trying to ensure that Colorado Springs had the legal right to operate the nearly-complete Blue River System to cement the decision his administration made the previous year: placement of the U.S. Air Force Academy in Colorado Springs. Our community was chosen despite the protests of our competitor communities — Lake Geneva, Wisconsin, and

Alton, Illinois — that attacked the adequacy of Colorado Springs' water supply. Further complicating our standing in the competition was the fact that 1954 was a drought year here and in much of the West.

Blue River Project Helps Seal the Deal

Fortunately, as Henry wrote, "the secretary of the Air Force and his advisers realized the situation in Colorado Springs as a temporary one and chose our community to receive the U.S. Air Force Academy" and its financial and prestige benefits. "However, I think it is apparent that without the Blue River Project, Colorado Springs would not have been considered seriously as an Academy site."

Hoosier Pass Tunnel, the first for the project, was completed in 1951. It initially brought water from the Blue River, Hoosier and East Hoosier creeks on the Western Slope, to the Eastern Slope, and into the Middle Fork of the South Platte. From there, the water was pumped 17 miles from Lake George through a pipeline into the City's reservoirs on the North Slope of Pikes Peak. Water now flows through a gravity system from Montgomery Reservoir on the South Platte to the North Slope of Pikes Peak. The system went on line in 1963 and is an important contributor to the City's water supply, providing as much water as the entire Pikes Peak System.

With the completion of the Blue River System, Colorado Springs' effort to secure its water was far from over. In fact, the City was already at work securing water rights and designing a project that would lead to the Homestake project and many more efforts to come.

EISENHOWERS HAD STAKE IN COLORADO AND WATER

President Dwight D. Eisenhower's intervention in Colorado's Blue River water dispute is legendary and probably true. What is not generally known is how fond "Ike," as he was known, and his First Lady Mamie Eisenhower, were of Colorado and its Front Range cities.

Young Mamie Doud's affection was primal. She was six years old when her parents moved from Iowa to Colorado for the health of her sister — first to Pueblo, then to Colorado Springs and ultimately to Denver. Some accounts say the future first lady attended a few early grades in Colorado Springs. Meanwhile, Ike famously grew up in Kansas and, perhaps less famously, was quite an angler. His passion for Mamie, and fishing, brought him to Colorado.

Mamie's family moved to 750 Lafayette Street, Denver, in 1906. Ike met Mamie in Texas and married her in 1916 in the parlor of the Lafayette house, which the two returned to as their home between 37 military postings. During his 40s, Ike discovered fly fishing for "wily trout" at the Bal Swan Hereford Ranch in Pine with Doud family friend Aksel Nielsen and at the Byers Peak Ranch for Boys in Fraser. For the Eisenhowers at that time, Colorado was home.

The Lafayette residence became the Summer White House for several years of Ike's presidency, which began in 1953, and the Lowry Air Force Base his center of operations. Ike and Mamie attended church at Lowry's Chapel 1, which currently operates as a wedding venue for public rental as a tribute to the First Couple.

The Eisenhowers only left Colorado because Ike's 1955 heart attack forced them to seek a lower elevation — Rhode Island — for their working summer vacation home. The Doud-Eisenhower home on Lafayette stands today. It's listed on the National Register of Historic Places and remains privately owned at this time.



President and First Lady Eisenhower exit the Lowry Air Force Base's Chapel 1 circa 1954.



The Doud family at their home at 750 Lafayette in Denver circa 1906. Mamie Eisenhower stands on the porch holding a bunny.



"Coming together is a beginning; keeping together is progress; working together is success." — Henry Ford

Rampart Reservoir, completed in 1970, receives water from both the Blue River and Homestake pipelines. This image taken in 2014 shows watershed damage from the Waldo Canyon Fire.

Population 30,150 – 281,140

Chapter Four

ONE GENERATION BUILDS FOR THE NEXT, AND THE NEXT...

"No one generation could ever build or afford to build its entire utilities infrastructure. Just as we benefit from the electrical, gas and water investments of past generations, we must invest today for ourselves and future generations." — CEO Phil Tollefson, circa 2003

The period just before and during World War II was one of growth and expansion for our community and our citizen-owned and citizen-governed utilities system. We needed to grow. Without significant expansion of the electrical, gas and water systems, our community would not have been able to meet its own needs, much less those of the U.S. military as it established several bases in Colorado Springs. After all, we were doing more than providing utilities service for our military. We were helping "the greatest generation" fulfill their sacred mission of securing freedom for the world.

Citizen-Owners Spur Upgrades

Getting to the pre-World War II era with adequate services took tremendous effort and investment. Faced with fragmented electric and gas utilities, and spotty service, our citizens chose to buy out the privately-owned companies in 1925, becoming citizen-owners. As part of the continuing effort to modernize our services, in 1939 the City Council directed the electric, water and gas utilities to be combined as the

Department of Public Utilities. By the early 1940s, Colorado Springs had made significant investments in its electrical service. In fact, our community continues to be served today by what was built or envisioned for future generations during this era.

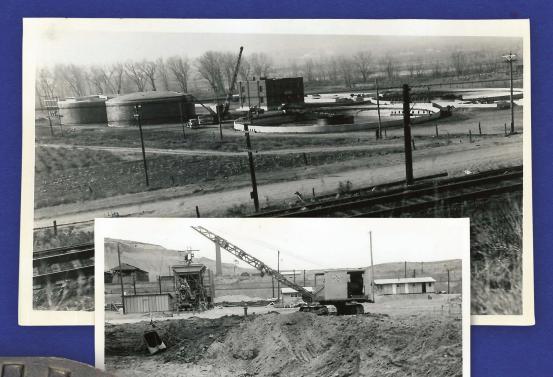
Electrical Power Important

As noted in Chapter 2, the first steam-power electric plant at 700 South Conejos — now Martin Drake Power Plant — was put into service in 1925, just months after the City purchased the electrical system. Its capacity was enough to supplement the hydro plant in carrying the community's electrical base load. That same year, the Ruxton Hydroelectric Plant was put into service. Two years later, one of Manitou hydro's 750-kilowatt generators was replaced with a 2,500-kilowatt generator, increasing its capacity nearly four times. Then in 1933, capacity of the plant at 700 South Conejos was doubled with completion of a 5,500-kilowatt turbine generator.

That electrical generation capacity quickly proved to be very important. By the summer

Colorado Springs Sewage Disposal Plant (now named the Las Vegas Street Water Resource Recovery Facility) constructed in 1936.

A sewer manhole cover from 1888 is from the first sanitary sewer line built in Colorado Springs. This sewer line is still in operation today.



ADVANCES IN WASTEWATER

Like our other services, wastewater leapt forward over the generations. The relatively primitive sewage farms were replaced by our first wastewater plant, built in the mid-1930s at the site now occupied by the Las Vegas Street Water Resource Recovery Facility. Operation of the division was transferred from the City's Department of Public Health to the Department of Public Utilities in 1947, making it a four-service utility. The treatment process improved again in 1958, when trickling filters were added. In 1973, activated sludge, or microorganisms, were added to the process, and the solids disposal facility was placed at Clear Spring Ranch.

of 1941, with World War II raging in Europe, the U.S. government was looking to place a U.S. Army Air Corps airfield in the vicinity of Colorado Springs. It took the Japanese bombing of Pearl Harbor in December 1941 to get a commitment. Within weeks of the attack, Congress authorized construction of military bases, and Colorado Springs residents began campaigning to bring an Army installation here. We offered what we, in the West, had: Land.

Military Moves to Colorado Springs

Colorado Springs bought 5,533 acres south of the City limits from private owners for \$36,500 and offered it to the Army for the future Camp Carson. And the prize was worthy. The contract we sought was enormous. As described in "A History of Fort Carson," by William Harden, our City's net worth was \$28 million at the time we received a \$30 million contract for Camp Carson. The U.S. government purchased an additional

29,676 acres from private landowners for the Camp, which was to be named for Brigadier General and frontiersman Christopher "Kit" Carson. Construction on Camp Carson began in January 1942, less than a month after the attack on Pearl Harbor, and on January 31, 1942, the Camp's first building — its headquarters — was completed.

As the new Camp was built over the next six months, its explosive population made it nearly a city in itself. At the peak of construction, it employed nearly 11,500 workers. Facilities provided for 35,173 enlisted men, 1,818 officers and 592 nurses. Nearly all of the buildings were of mobilization type construction, with wood-sided exteriors. The hospital complex was constructed of concrete block, and considered to be semi-permanent, with space for 1,726 beds, expandable to 2,000 beds.

The remote, rugged location chosen for Camp Carson afforded advantages for its mission.



What it lacked was an air base to support it. Luckily, the Colorado Springs Municipal Airport, 10 miles away and in operation since 1926, seemed the ideal location for what would become the Colorado Springs Army Air Base. Construction began in April 1942.

The air base put photo reconnaissance training under the auspices of the Photo Reconnaissance Operational Training Unit (PROTU). Twelve photographic reconnaissance groups, each with three or four reconnaissance squadrons, were organized, trained and deployed to combat theaters overseas. The base became Peterson Army Air Base later in 1942 to honor 1st Lt. Edward J. Peterson, the first Colorado native to lose his life in the line of duty at the base. In 1976, it was renamed Peterson Air Force Base.

Just as Colorado Springs provided land for Camp Carson and an airport to anchor Peterson Field, we supported both installations with utilities. The U.S. War Department sent official correspondence to the Electric Department stressing the vital necessity of uninterrupted service. One of the Army's key questions about committing to our area for Camp Carson concerned whether we had enough water to support it. Based on our planning and investments in Pikes Peak and Blue River, we did.

That doesn't mean we had water to waste or appear to waste: City Council decided in 1940 it was time to gradually convert the entire community from a flat water rate to a metered rate to encourage water conservation. All meters were installed over a two-year period. As the city manager explained, "It is not the water user but the water waster that we are after."

Sacrifices Support War Effort

Just as World War II brought Camp Carson and Peterson Field with their related population and utility demand increases, the war also called on everyone in our community to make sacrifices. Most important, the ultimate sacrifice was paid by military personnel who called Colorado Springs their home. Of the



The Mesa Water Treatment Plant, built in 1942, was our first water treatment plant and has been updated four times over the years to reach its current capacity of 50 million gallons per day. Mesa is to be rededicated in 2018 — during another upgrade — in honor of Phil Tollefson, CSU's first chief executive officer.

nearly 2,700 Coloradans who gave their lives in World War II, 141 listed El Paso County as their residence, according to the National Archives.

Given the tremendous threat to freedom faced by the entire world, members of our community were willing to sacrifice and managed to "do without" quite well. Food rationing is the stuff of legend, yet critical electrical equipment, such as wire and transformers, also were needed by the War Department. We dealt with the rationing by reusing supplies whenever possible and by maintaining equipment that would normally have been replaced. In order to sustain service, machinery that was usually shut down once a year to be checked was kept in operation for three years without any shutdowns.

Innovation helped us weather the effects of the war. To deal with the growing problem of utility crowding in downtown alleys, we began installing large electrical transformers in underground vaults, which not only solved the problem downtown but pioneered the use of underground electrical distribution throughout the City. With our machine shop fabricating the underground vaults to hold the electrical equipment, this innovation became possible.

Sometimes, the U.S. government simply appropriated what it needed. Folklore claims that before the war started, we ordered a particular piece of machinery, and in 1941, the U.S. government needed it. Off it went to do its patriotic duty on a ship headed toward South America. As fate would have it, the ship went down, and no one made use of this specialty machinery.

In spite of the difficulties, the Colorado Springs Department of Public Utilities managed to keep service running smoothly during the war years, providing the public and the military with sufficient power. Hard work and planning paid off in confidence. When asked what he would do to generate electricity if supplies continued to run short, Manager Earl L. Mosley replied that he "thought about it, but he didn't worry about it."

Post-War Population Surges

Mosley's confidence was justified. By the end of the war when supplies were again available, the Electric Department picked up where it left off with expansion of the system and with technological improvements. In 1945, the Municipal Power Plant (now the Martin Drake Power Plant) added a second 5,500-kilowatt generator, and just four years later, a 10-megawatt natural gas unit, bringing the total plant capacity to 25 megawatts of electricity.

These and other improvements were vital in the post-World War II era as the 1950s became a period of explosive growth in Colorado Springs. Population increased about 5 percent on average per year for 10 years, resulting in a 50 percent increase.

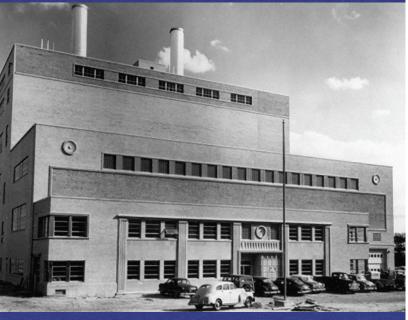
Utilities Diversifies

With only two hydropower plants and one coal-fired power plant, it was clear that Colorado Springs needed to diversify its electrical portfolio. That sparked construction of the George Birdsall Power Plant, designed to burn natural gas or fuel oil; three generation units came online between 1953 and 1957, capable of producing more than 59 megawatts of electricity.

As a further diversification in the 1950s, the Department of Public Utilities began interconnecting with other communities on the power grid. In 1953, construction was completed



The George Birdsall Power Plant under construction in 1953.



The completed George Birdsall Power Plant in 1955.

on a large power transmission line to Pueblo.

This link with Southern Colorado Power established the first transmission inter-tie with another utility company. Five years later, another connection was established with the construction of a large transmission line to Denver, in cooperation with Public Service Company of Colorado. From that point on, Colorado Springs was no longer just its own micro grid, but part of the statewide Intermountain Power Pool.

From transmission to delivery, residential electric lines began disappearing, in a manner of speaking. Continuing the trend that started downtown in the 1950s, the Electric Department started experimenting with underground distribution lines in 1957 in the Country Club Estates subdivision near Paseo and Circle drives. The first application of underground technology was fairly small scale, with the lines serving 28 homes when completed.

The machine shop continued to support this effort by fabricating the underground vaults. Another key component: The area's developer paid the difference between the cost of normal overhead service lines and that of the underground service. It cost \$515 per lot but increased property values. Ultimately, the City Council passed an ordinance in March 1970 requiring underground service in new residential areas. Today, more than 70 percent of City lines are underground.

Military Expansion, Prosperity Continue

The prudent expansion of electrical and other utilities services helped Colorado Springs continue an essential trend — recruitment and expansion of military installations. Camp Carson was well on its way to becoming Fort



North American Air Defense Command, later the North American Aerospace Command, or NORAD, was first based at the Ent Air Force Base. That site is now the U.S. Olympic Training Center.

Carson. Peterson Field was growing into Peterson Air Force Base. Ent Air Force Base opened in 1951 at the site of today's U.S. Olympic Training Center and became the first home of the North American Air Defense Command — NORAD.

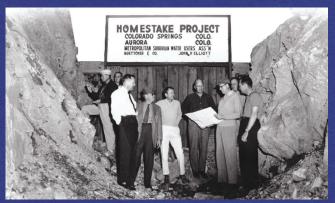
Then perhaps the crown jewel of them all — the U.S. Air Force Academy — was sited in Colorado Springs in 1955, thanks, at least in part, to President Eisenhower. So great was support for the Academy that Colorado contributed \$1 million to purchase land north of the City, a huge sum in 1955. That same year, the first class of 306 men was sworn in at a temporary site at Lowry Air Force Base while Academy construction continued. The Academy moved to its permanent location on August 28, 1958, and on June 3, 1959, the USAFA's first class of 207 graduated and received their commissions. Progress continued with other military installations. NORAD moved into its newly excavated Cheyenne Mountain complex in 1966 and later to Peterson Air Force Base.

Our military bases not only strengthened

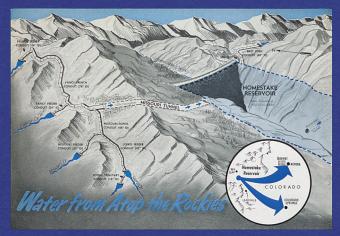
our nation, they helped fulfill our community's rightful quest to grow and prosper. As the 1960s approached, a large percentage of local employment was directly or indirectly attributable to the presence of the military bases. With that came projections for large increases in population and the resulting need for more water. While the Blue River System and local sources such as Pikes Peak had sustained our community so far, it was time to roll up our sleeves and get to work on our water future. This time it would be a multi-pronged approach.

Homestake Partners Prevail

While the Blue River System ultimately made Colorado Springs and Denver allies, the projected costs of the next project called for actual partners. Colorado Springs and Aurora teamed up to build the Homestake transmountain water project, the greatest, single construction project at that point in our history. Built between 1963 and 1967 at a cost of \$60



The Homestake Project, built between 1963 and 1967, was a cooperative effort between Colorado Springs and Aurora.



Illustrated map of the Homestake Project as shown in The EM-Kayan Magazine, November 1964



Homestake Tunnel construction crews celebrate the "break through" at 7:17 p.m. September 17, 1965.

million, Homestake starts 15 miles, as the crow flies, northwest of Leadville or about 160 road miles from Colorado Springs.

As the City's second major out-of-basin transfer of Western Slope waters, the Homestake system includes reservoirs, pump stations and a 66-inch pipeline from the Continental Divide that doubled the water resources of both Colorado Springs and Aurora. Homestake traveled familiar paths, in a sense, with East Slope needing water, West Slope opposing development, and with protracted legal battles. The cities sought water rights for the Homestake project but the Eagle County District Court ruled against Colorado Springs and Aurora. Eagle County's 1958 ruling was overturned by the Colorado Supreme Court in 1962, leading the way for the cities to enter into the Homestake Contract and begin construction in 1963.

Our community's investment paid, in part, for a branch of pipeline nearly 130 miles long and the Otero Pump Station, which went into operation on the east bank of the Arkansas River near Buena Vista in 1974. Now water stored in Turquoise Lake is piped to Twin Lakes Reservoir through the Mt. Elbert Conduit, and then the water from Twin Lakes is piped to Otero for delivery to Aurora and Colorado Springs. Homestake became our community's workhorse raw water system, transporting up to 70 percent of our water to Colorado Springs via the Rampart Reservoir.

President Kennedy Pays Tribute

Experience taught our water planners that even the mighty Homestake, together with Blue River and our local collection system, would not meet our needs forever. The other half of the two-pronged approach was something much longer term and with many partner communities — in fact, with "all the people of this country."

Those words came from President John F. Kennedy on August 17, 1962, during a celebratory visit to Pueblo, the day after he signed the Fryingpan-Arkansas Project Act into law.

"When [people] come to this state and see how vitally important [water] is, not just to this state, but to the West, to the United States, then they realize how important it is that all the people of this country support this project that belongs to all the people of this country."

- President John F. Kennedy

Speaking at the Pueblo High School Stadium (now Dutch Clark Stadium) at the midpoint of his presidency and just 15 months before his death, Kennedy conjured images of the turn of the 21st century, "when there are 300 million people in the United States, (when) there will be available to them land and water and light and power and resources and places to live and places to rest and places to work."

When JFK spoke about the future, he paid tribute to the earlier work of many. The Fryingpan-Arkansas project, known as the Fry-Ark, originated in 1935 from a much larger project conceived in the aftermath of the 1930s Dust Bowl. At first, the U.S. Department of the Interior suggested study of a diversion from the Gunnison River to the Arkansas River basin. Ultimately, this project simply faced too many obstacles. So, in 1947, the Fryingpan-Arkansas Water Project was born, a more modest endeavor but still Colorado's largest project after the Colorado-Big Thompson project, which serves Denver and other Front Range cities.



PRESIDENT KENNEDY SALUTES FRY-ARK CONTRIBUTIONS

President John F. Kennedy's 1962 speech in Pueblo emphasized key themes such as the unity of the 50 states, of working hard today to build a better tomorrow, and of ensuring that all citizens have the resources they need to thrive. "So we salute this project today, and we salute those who made it possible. And we look to the future and we look to the past, and we commit ourselves in 1962 not only to celebrate this project, but to move ahead in all the other areas stretching from California to Cape Cod, Massachusetts, in building this country up."

JAMES E. GLADNE FOR SUPPORT IN THE Golden Future OF THE ARKANSAS VALLEY FRYINGPAN-ARKANSAS Project supporters raised funds for lobbying efforts by selling small goldencolored frying pans for \$5 and large ones for \$100 or more. Donkeys were employed to carry the pans up and down the Arkansas Valley.

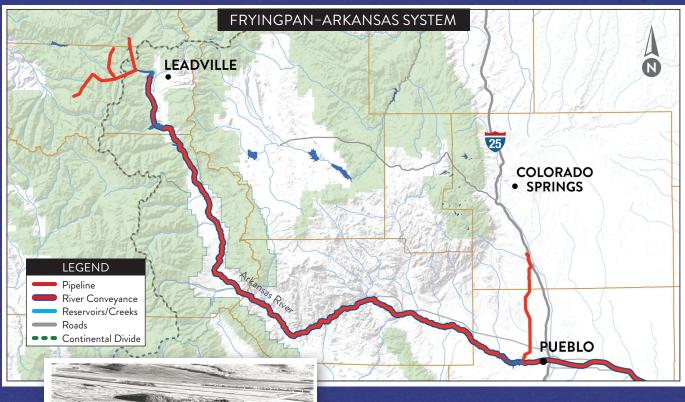
'Golden' Frying Pans Raise Funds

The visually inspiring name triggered a memorable fundraising idea. "Backers of the Project began peddling golden frying pans up and down the Arkansas valley to raise money for the lobbying effort that was soon to come," according to the Southeastern Colorado Water Conservancy District's website. "The sale of golden frying pans in the valley was brisk. Burros were used to carry the frying pans to towns up and down the Arkansas valley. During Water Week in January of 1955 groups were able to buy small frying pans for \$5 and large ones for \$100 or more. More than \$30,000 was raised by the end of the week. The money was used to send backers of the Project to Washington, D.C."

The Fry-Ark started as an irrigation project to reclaim arid land that is otherwise fertile. The first bill to authorize the Fry-Ark was introduced in Congress in 1952, but Colorado Rep. Wayne Aspinall of Grand Junction led the opposition on behalf of the Western Slope. From 1953 through 1956, the state Senate approved, but the House opposed, it. And then another drought struck the Arkansas Valley.

It took the formation of the Southeastern Colorado Water Conservancy District — under order of the Pueblo County District Court after 3,400 owners of irrigated land, and city and town representatives, signed petitions — to move the project forward. The District quickly retooled it for multiple uses — adding municipal, hydropower generation, flood control and recreation. But Rep. Aspinall and his constituents still weren't having it as late as 1958.

Finally, Gov. Stephen L.R. McNichols intervened and essentially forced a compromise via drafting of new Operating Principles for the Fry-Ark. Opposition from California and a few



Fryingpan-Arkansas system as it exists today.

FRYINGPAN-ARKANSAS PROJECT

The Fryingpan-Arkansas Project, above, conveys water from the Fryingpan River, in the Roaring Forks Watershed, through the Boustead Tunnel into Turquoise Reservoir. Water is stored in Turquoise, Twin Lakes and Pueblo reservoirs for delivery to Arkansas Valley municipalities and agricultural users and to Colorado Springs via the Fountain Valley Pipeline and the Southern Delivery System.

Pueblo Dam, under construction at left, is made up of earthen embankments and 23 buttresses up to 180 feet high, among the highest in the world when they were built. Construction took five years from 1970 to 1975.

Eastern states stalled the legislation for two years, but the Fry-Ark finally was authorized in 1962.

In the end, the confluence of multiple uses made the difference. While non-Coloradans may have questioned the cost and benefits, the Cold War preyed upon the minds of many. That made support for Colorado's thirsty steel and defense industries a justifiable end. Colorado Fuel and Iron in Pueblo was Colorado's biggest employer and the nation's ninth largest steel producer. Colorado Springs, meanwhile, needed to provide water to its military bases.

Ultimately a majority of Coloradans supported the Fry-Ark, from agricultural groups on both sides of the Continental Divide, to electrical power interests, to trade unions, newspapers, and even recreational and angler groups. Construction began in 1964 and was completed 17 years later. The five dams and reservoirs, three hydroelectric plants and 22 tunnels and conduits cover about 87 miles.

Colorado Springs' first access to water in the Fry-Ark's Pueblo Reservoir came in 1985 with completion of the Fountain Valley Authority pipeline, which also serves our regional partners, including the City of Fountain, Widefield Water and Sanitation District, Security Water District and Stratmoor Hills Water District. Critically important, the Fry-Ark's Pueblo Reservoir made possible the Southern Delivery System — our largest water project to be built and put into service at one time.

Continued Investment, Development

As the Fry-Ark was completing construction of the major components, Colorado Springs

invested in the purchase of majority interest in the Twin Lakes Reservoir and Colorado Canal Company. This trans-mountain project was originally built for agricultural use in the Arkansas Valley and diverted water from the headwaters of Roaring Fork River with an all-gravity system. It supplemented the Colorado Canal system, whose junior Arkansas River water rights were never quite enough to make the farms it served as prosperous as its neighboring ditches east of Pueblo.

After the collapse of the sugar beet industry in the late 1960s, this extremely valuable transmountain water system was put up for sale, and Colorado Springs secured it. This system provided not only a valuable water supply, but also came with significant storage in Twin Lakes Reservoir.

Around the same time, Colorado Springs purchased water rights and storage in Turquoise Reservoir from the CF&I steel mill, which dovetailed with the development of the Fry-Ark system. Then in 1984, Colorado Springs purchased controlling interest in the rest of the Colorado Canal system, which added more water supply and valuable storage space in the lower Arkansas Valley.

This storage helps Colorado Springs manage its multiple water supplies and facilitates water exchanges on the Arkansas River. With these acquisitions, the City secured both storage and supply to complement and capitalize on the infrastructure provided by the Fry-Ark and Homestake projects to take our community well into the future.

EMPLOYEES CONNECTED BY MISSION AND FAMILY

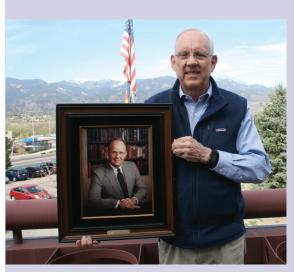
Our employees are united by a shared mission: to provide essential utilities services to our community. Some employees take pride in even deeper connections — family ties spanning generations.

Next time you visit Rampart Reservoir, hike down to Nichols Reservoir. It's named for S.J. "Sid" Nichols, an operator at Manitou Hydroelectric Plant in the 1930s who rose to chief of operations before he retired in 1972. An electrical engineer, Nichols worked on several of our large water projects. Sid's daughter, Ann Nichols, started in 1977 as a regulatory economist in the rates department and became Director of Finance in the early 1990s. Now retired, Ann serves on the board of the Southeastern Colorado Water Conservancy District, of which her dad was a founding member.

Another key player, Attorney Louis Johnson, started in the late 1940s as an assistant to then-

City Attorney Frederick T. "Rick" Henry. Louis represented our utilities for 32 years across all services, but is especially known for his work on water projects. His son, Greg, also an attorney, later represented CSU for decades. As a teen, Greg traveled with his dad to observe construction of water projects and to hear legal proceedings. Under Greg's leadership, Colorado Springs acquired the Colorado Canal system and earned our water exchange rights.

Representing the Wertz family is the brothersister team of A.J. Wertz, who is a construction coordinator in the Water Main Replacement Program, and Tiffany (Wertz) Cannon, an administrative specialist in Water Systems Operation. They carry on the legacy of their dad, Eugene Wertz, who started in 1991 as a truck driver and retired in 2016. Interestingly, all three either worked, or now work, at the Leon Young Service Center.



Greg Johnson, retired CSU attorney, followed in the footsteps of his father, Louis.



Ann Nichols served as a financial leader; her father, S.J. "Sid" Nichols, was chief of operations.



For father Eugene Wertz (center), daughter Tiffany (Wertz) Cannon and son A.J. Wertz, CSU is the family business.



"We will make electricity so cheap that only the rich will burn candles."

— Thomas Edison

Electrical crews work in a bucket truck to relocate power lines associated with the Cimarron Interchange reconstruction in 2015.

Population 70,194 – 360,890

Chapter Five

OUR FOUR-SERVICE UTILITY MATURES AND MORPHS

Every community has a story to tell of its history — how it started and grew, faced challenges and succeeded, or adapted and tried again. For Colorado Springs, that story began with a railroad scout's dream on a moonlit night and flourished with the hard work and perseverance of generations of its citizens.

Our community's development was propelled forward by World War II and the Cold War, teaching us valuable lessons. Among them: We, the people, possess the right and the responsibility to make water and energy decisions for today and tomorrow. In taking ownership of our gas and electric services in 1925 and maintaining stewardship of our water resources, we attracted multiple military installations that formed a solid foundation for our economy for decades. Once we learned we could use our community-owned utilities as a tool to gain prosperity, we would do so again and again in the 1970s through the end of the 20th century, turning challenges and even a few setbacks into a bright future.

Offer to Sell Rejected

First, we would have to weather an existential challenge — an offer from a prominent citizen in a powerful position — to buy our community-

owned utilities. In 1965, Charles Hughes, a member of the Citizens Committee on Finances charged with suggesting ways to improve operations, offered \$65 million for all utilities assets. Hughes stated that his offer was made as a private citizen — not as chairman of the committee. And indeed, the committee's own report made no recommendation for the sale of the Utilities Department.

At the time, some suggested that Hughes' offer was just an empty gesture to make a point. But Hughes brandished a \$10,000 certified check he was carrying as earnest money if the Council voted to sell, according to the Nov. 7, 1965 Gazette-Telegraph.

Hughes' offer was taken seriously enough that other committee members felt it necessary to distance themselves. Ultimately, the City Council voted unanimously to reject his offer. Council members spoke eloquently of the value that owning water and energy services provided to the citizens of Colorado Springs. Electric rates, for example, were lower in Colorado Springs than in many communities. Councilman James Johnson reported his own hotel in Pueblo would pay at least 25 percent more.

Council members also noted that the Department of Utilities' payments in lieu of

taxes were \$800,000 per year, about twice what a private utility or utilities could be expected to pay at that time. And they rightly believed that the City always fared better than a private water provider in water rights cases, based on experience in the Blue River and Homestake cases. Above all else, the City Council valued local control of utility rates and the transparency of a City-owned utility as opposed to the potential secrecy of private utilities.

One of the members of the Citizens Committee on Finances said it best. "Colorado Springs has prospered for many years while having ownership of the department," said Mrs. Oren V. Shaw. "We have a voice through the City Council when we want a rate or service change and I don't think it was in the minds of the members of the (Finance) committee to sell it, and I feel it would be a disaster to do so."

At least one more reason surfaced as to why citizens greatly valued local ownership and control of their utilities: the ability to adapt to changing conditions in ways that private industry simply could or would not. Local ownership encourages nimbleness to adapt to challenges, and challenges there would be.

Natural Gas Crisis Erupts

By the time the City Council voted to retain citizen ownership, the nation already had plenty of experience with federal regulation of the natural gas industry. And disaster was just a few short years away. In a massive case of unintended consequences, the federal government had engaged for decades in regulation of natural gas prices in hopes of controlling the cost of natural gas — thus warm homes — for consumers. Yet by controlling what gas producers could charge for their commodity, the federal government effectively made gas exploration and production cost-prohibitive for private industry. The result was an artificial shortage of natural gas in 1973, amid a national economic recession just months before the Arab-Israeli War and the OPEC Oil Embargo of 1973. This became the start of a perfect storm.

The City Council was forced to make a tough



PROPANE AIR PLANT

The propane air plant dates back to the natural gas crisis in the early 1970s. Today, the plant operates on the coldest days of the year and saves CSU and customers money.

choice between ensuring enough natural gas to keep existing homes warm versus permitting construction of new homes that would need scarce natural gas. The council reluctantly imposed a moratorium on new natural gas permits for developers until a propane air plant could be constructed, and propane supplies obtained. The controversial moratorium greatly affected homebuilding and tourism industries. Several local developers claimed it caused them to go out of business, but the propane air plant, complete with propane supplies, was ready for service for the 1974-1975 heating season. Ultimately the federal government removed wellhead price controls and ended the gas supply shortage.

Today, the propane air plant is a peaking plant that operates on the coldest days of the year. The propane air plant can run for 24 hours on a cold winter day of 13 degrees below zero. This plant currently saves customers about \$2.5 million a year.

Focus Moves to Electricity

The natural gas crisis drove improvements in our energy production. The moratorium sparked increased interest in electric hot water heaters and all-electric kitchens. Based on increasing demand projections, the Electric Department reviewed the generating capacity of the existing power plants and the statewide power pool and strengthened the system.

In 1974, Unit 7 was added at the Martin Drake Power Plant, designed and built to run on coal with a natural gas backup. It added 142 megawatts, increasing our community's total generation capacity by more than one-third. Private companies might have made choices that locked their plants into the cheapest fuel source at the time of construction. Yet in putting our customers



The Martin Drake Power Plant is Colorado Springs' oldest fossil fuel plant still in operation.



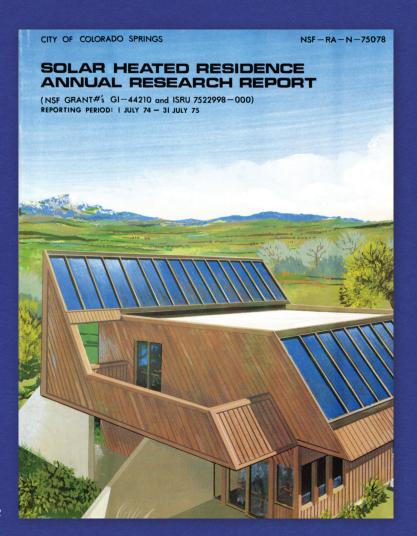
The Ray Nixon Power Plant near Fountain was built initially to burn coal, and gas-fired combustion turbines have been added.

first, we chose a plant that burns multiple fuel sources, a wise choice we would make again.

Six years later, our next power plant came online — the 223-megawatt, coal-fired Ray Nixon Power Plant 17 miles south of Colorado Springs. The decision to build Nixon was well-founded: Two independent studies by consultants projected that Colorado Springs would need additional generation capacity by 1980, citing among other factors the natural gas shortage.

But the federal government's move to deregulate natural gas triggered increased drilling activity and an ample supply of natural gas from new and deeper wells. The expected surge in construction of all-electric homes failed to materialize, which left Colorado Springs with surplus generation capacity for a time.

This boded well for the rest of Colorado, which could not generate enough electricity for its needs. Colorado Springs contracted with what







Ground was broken in 1974 for the Phoenix Solar House, commissioned by Mayor Andrew Marshall. The house was completed in 1975 and spurred interest in alternative energy sources.

was then Public Service Company of Colorado to sell Nixon's excess output on a decreasing scale over a seven-year period, effectively employing other parts of Colorado in paying for our future generation capacity. Today, Colorado Springs utilizes the full capacity of the Nixon plant, including that of Units 2 and 3, each 36.5-megawatt, natural gas-fired combustion turbines, added in 1999.

Energy-saving Innovation

Colorado Springs didn't just make investments to generate profit — it made investments that few private energy companies would make in efforts to conserve energy. Just one example: In the immediate aftermath of the natural gas moratorium, Mayor Andrew Marshall urged the nonprofit Phoenix of Colorado Springs to build a demonstration solar home to generate interest in alternative sources of energy. The experimental home was based on solar "heat," rather than solar electricity. What looked like modern electricity-producing panels on the roof actually were flat plate, fixed solar energy collectors that effectively replaced boilers, using the sun to heat water that circulated to the underground storage tank. The house also featured a secondary heat pump. Backers were quoted in news reports as discussing the future use of photovoltaic cells to generate electricity, and "eutectic salts" as the storage for heat and cold, rather than water.

The construction and testing of the house was backed by the Southern Colorado Branch of the Professional Engineers of Colorado and the Colorado Springs Homebuilders Association. It was dedicated in 1974 and featured in the 1974 Parade of Homes; more than 20,000 people toured the house during the first few months.

Ultimately the solar home won recognition in the 1976 edition of Better Homes and Gardens Building Ideas Book and earned the interest of the National Science Foundation, NATO and the Department of Energy.

For a time, the City owned the solar house, and the Department of Utilities provided data collection and analysis of utility consumption. Kaman Sciences ultimately bought the home to continue research, and today, it is privately owned. Inspirations and lessons learned from this solar home, and others nationwide, live on in alternative energy uses commonly found in today's homes.

Water Always the Biggest Challenge

Some of our biggest challenges were, and probably always will be, in our water service. The success our community has experienced came through strategic efforts conducted in parallel — not one water project at a time.

As mentioned previously, the Blue River System was constructed starting in 1951 and became operational in 1953. The Blue essentially doubled the water supply previously available through our local system, including Pikes Peak. Then came Homestake, with partner Aurora, the greatest, single construction project at that point in the City's history. Homestake was completed in 1967 and came to supply more than 70 percent of our community's water.

Meanwhile, construction of the Fryingpan-Arkansas Water Project began in 1964 and wrapped up in 1981.

As the Fry-Ark project was completing construction, Colorado Springs invested in the purchase of the majority interest in the Twin Lakes Reservoir and Colorado Canal Companies and purchased storage in Turquoise Reservoir,







Gary Bostrom

WATER PIONEERS CREDITED WITH INNOVATIVE MODEL

Imagine spending money to build reservoirs, pump stations and pipelines to bring water from the mountains for your citizens, only to see some of that water go down the drain. That's what Colorado Springs faced until the 1980s, when two water pioneers, Harold Miskel and Gary Bostrom, found a better way.

Miskel and Bostrom came up with a way to recapture and reuse our water. Now, when we use, treat and release our "trans-mountain" water to Fountain Creek, we get credit for that water and bring its equivalent to our community via the new Southern Delivery System. The people downstream still get the same amount of water they would anyway.

The exchange rights that Miskel and Bostrom led us to earn in court have more than doubled the benefit of our trans-mountain water. That's great value for our customers and better for the environment because it allows us to fully reuse our supply.

Miskel and Bostrom both retired from CSU, and Bostrom passed away in 2017. We, and the rest of Colorado, owe both men a tremendous debt for a great idea.

securing both storage and supply to take our community well into the future.

The importance of Pueblo Reservoir to our system became even more significant because it permits us to fully reuse trans-mountain water brought to Colorado Springs. In the 1980s, a new, innovative approach to moving water was decreed with both our Arkansas and Local exchange decrees. The exchange rights allow Colorado Springs to trade "reusable water" — including transferred agricultural rights and the transmountain water that it uses, treats and releases to Fountain Creek — for water that would have been released to downstream agricultural uses.

The traded water can be stored in local reservoirs and in Pueblo Reservoir for subsequent use and reuse. The exchange ruling allowed Colorado Springs to more than double the potential benefit of its trans-mountain water. Our exchange rights are critically important to our current and future water supply, including the water conveyed in the Southern Delivery System.

Homestake II is a Setback, But We Learn

The project planned after Homestake, in parallel with the Fry-Ark, was known as Homestake II — and it was a case of one generation trying to build for the next, but not being able to make it happen as planned.

Even before the Homestake project was finished in 1981, Colorado Springs and Aurora made it known they planned to build an addition — Homestake II. The cities followed the commonly accepted process, over the years to come, to protect their future project. One key step was to participate in the legislation that established the Holy Cross Wilderness Area in 1980, agreeing to build Homestake II's pipeline underground, rather than at the surface, in

exchange for permission from federal authorities to build and operate their project in the wilderness area.

But by the time the U.S. Forest Service began the Environmental Impact Statement (EIS) process required under the National Environmental Policy Act, opposition had formed. Included were the Sierra Club, National Audubon Society, American Wilderness Alliance, Colorado Open Space Council, The Wilderness Society, and Colorado Mountain Club. But it was a new grassroots environmental group called the Holy Cross Wilderness Defense Fund, and its influence on the Eagle County Commissioners, that proved to be the most formidable opponent of Homestake II.

Environmental groups focused on the impacts that construction and water diversion might have on wetlands within the wilderness area. Local business interests expressed a familiar concern about Homestake II's future impact on Eagle County's economy, supported largely by tourism.

The Homestake partners secured the necessary federal environmental permits with the Forest Service and the U.S. Army Corps of Engineers approving project plans in the early 1980s. But the Defense Fund filed a federal lawsuit claiming a violation of the Clean Water Act by the Corps of Engineers. Colorado Springs and Aurora chose to join the federal government as defendants, and both sides issued conflicting reports about the wetlands issue. Before long, the Defense Fund announced that its ecologist had found two species of rare plants within the wilderness area — and that led environmentalists to invoke not just the Clean Water Act but also the Endangered Species Act. However, it was not these issues with federal law and environmental

protection that ultimately dealt the fatal blow for Homestake II — it was Eagle County's refusal to permit the project under its newly minted 1041 land use permit authority.

Eagle County first denied the project a 1041 permit in 1988, and it would take years for the appeals and legal wrangling to play out with the same result. Homestake II was the first major conflict in the state involving 1041 powers, but it certainly has not been the last.

Colorado Springs and Aurora still have a need for this water. The Homestake partners forged an alliance with West Slope water users to build a project in a way that satisfies both sides of the divide. This alliance is memorialized in the Eagle River Memorandum of Understanding. The project is moving forward, a tribute to partnership and perseverance.

Colorado Springs Utilities Emerges

Adaptability has always been a hallmark of citizen ownership — in seeking multiple water sources and in balancing fuel portfolios, for example. Our adaptability is perhaps best demonstrated in the maturing of CSU from a collection of City departments into a four-service utilities enterprise.

For review, our water and wastewater services have always been a part of the City. However, gas and electric began as a collection of upstart small businesses that provided spotty service and no control for local citizens. That's why they voted to take over those increasingly essential services in 1924. Over the generations, our citizens supported creation of the City Department of Utilities under the control of the city manager, who worked for the mayor and City Council. That system worked for decades. Then the growing complexity of the utilities business,



Former directors Jim Phillips, Ray Nixon and Phil Tollefson.

A TRADITION OF LEADERSHIP AND EXCELLENCE

Only a handful of people have captained Colorado Springs Utilities over the years. Most served with the title "Director" or "Executive Director." Those include Ray Nixon, who led the operation from 1956 to 1973, and for whom the Ray Nixon Power Plant is named; Jim Phillips, who was director from 1973 to 1992 and for whom the J.D. Phillips Water Reclamation Facility is named; and Phil Tollefson, appointed director of utilities in 1992 by a city manager under a previous form of government, and then was appointed chief executive officer of Colorado Springs Utilities by the City Council in 1993. The current City Council recently voted to rename the Mesa Water Treatment Plant in Tollefson's honor. Mesa opened in 1942 as our first water treatment plant, and it is now undergoing a significant upgrade.

combined with certain legislative changes, required further separation of utilities from other city functions, such as police and fire protection, streets, drainage, and parks and recreation.

Even before passage of the so-called Taxpayer Bill of Rights (TABOR) at the state and local level in the early 1990s, the City maintained firewalls of sorts in the accounting for City functions vs. utilities functions. While citizens paid through their property and sales tax for general City services, they paid through utilities rates for water, wastewater, gas and electric services. Such separation was necessary and appropriate even before the passage of TABOR because it afforded citizens the information needed to self-regulate their utilities business. And clear financial information was rightly what our citizens expected — transparency.

In the years after TABOR was enacted, the City Council formalized the accounting and other separations between the City and the Department of Utilities, opening the door to a new form of governance: all four utilities, under the leadership of a utilities expert, hired and governed directly by the City Council and answerable to citizens. That would require a question on the ballot to change the City Charter.

The move to put the question on the ballot was led by the Council itself — particularly Councilman Randy Purvis — but the proposal earned the support of much of the community's leadership.

"The proposed change, which would amend our City Charter, is sensible," the Gazette Telegraph editorial said on April 3, 1993. "The utilities system ... has a more tangible effect on the daily lives of more people than probably any other local government service. By its nature, the utilities department is involved in such sensitive matters

as the condemnation of land, the acquisition of water rights and the issuance of debt for capital improvements. It's only reasonable to vest direct authority for so extensive an operation in the City Council, to represent the interests of utilities consumers."

The voting majority made their wishes clear. Citizens gave their elected leaders the right to hire and direct the utilities chief, and effectively created Colorado Springs Utilities as an independent enterprise. The City Council looked to Phil Tollefson — whom the city manager appointed as director a year before when James D. Phillips retired — and affirmed Tollefson as the first chief executive officer.

The Best of Both Worlds

Tollefson had been with the Department of Utilities for 11 years, most recently serving as Manager of Water Resources and Planning. When he took the helm as CEO, CSU was facing several challenges that ultimately signaled the need for a course correction.

Among them, CSU sought to install a highvoltage electric transmission line through the new Briargate subdivision in 1990. Area residents opposed the above-ground transmission line, saying it would decrease property values and endanger their health. Many advocated for the transmission line being placed underground, a more expensive alternative. Although CSU had received little public input after its initial outreach on the Briargate powerline, it later found through an opinion poll that two-thirds of its customers were willing to pay extra on their electric rates to get buried transmission lines. In the end, part of the Briargate line was buried, and another section was built above ground for technical reasons.

The need for public involvement in utilities projects was emphasized again a few months later when CSU sought to build a water treatment plant at the mouth of Cheyenne Canyon to meet federal requirements under new laws to provide 22,000 residents on the southwest side with filtered drinking water.

Cheyenne Canyon area residents protested and succeeded in pushing forward an alternative plan, seven miles of pipeline to send raw water from Cheyenne Creek north to the Mesa Water Treatment Plant and finished water back south to the southwest side. The Southwest Pipeline was completed in 1997 in conjunction with the Colorado Department of Transportation project to widen Interstate Highway 25 to three lanes. However, opposition from West Side residents and the perception that the public was not appropriately involved caused the controversy to linger.

Public unease about the Briargate and Cheyenne Canyon issues, along with the ongoing Homestake II water effort, caused Tollefson to lead the organization on several key initiatives. Among them was embracing a new approach to communicating and interacting with citizenowners to gain "informed public consent" for CSU projects and activities. What CSU learned and put into practice based on the training of Hans and Annemarie Bleiker changed the organization and deepened its participatory connections to our community.

Tollefson also instituted an enhanced communication program that included customer polling and educational advertising. When some of that polling showed that nearly half of customers weren't aware that they owned their utilities provider, Tollefson set about to differentiate the identity of CSU.



Crews work to place a high-voltage electric transmission line underground in the Briargate area in the 1990s after learning that citizen-owners preferred underground lines when possible.

"We knew from customer research that we needed to reinforce the idea that our customers own us and give them a sense of pride about that," Tollefson said in a 2017 interview. "Accordingly, it would be up to us to give them something to be proud of."

Colorado Springs Utilities had morphed from a City Department of Utilities — all government — to a citizen-owned and operated enterprise that employs best practices from private industry. As the symbol of that pride and community connections, Colorado Springs Utilities chose a logo and a slogan that says it all:



It's how we're all connected



President Nixon established the Environmental Protection Agency in 1970.



Nixon proposed the Safe Drinking Water Act, and President Ford signed it into law in 1974.

PROTECTING THE ENVIRONMENT INCREASES COMPLEXITY OF UTILITIES BUSINESS

One of our key values is environmental stewardship. We work hard every day to minimize our impacts on the natural world that makes Colorado so beautiful. Our commitment was shaped by environmental awareness that emerged in the 1970s and resulted in establishment of the Environmental Protection Agency to protect human health and the environment. Laws that followed made the utilities business more challenging yet are greatly improving our air and water quality. They include:

The Clean Water Act, as amended in 1972, is the principal law protecting the nation's surface waters from pollution.

The Safe Drinking Water Act, arriving two years later, is the key federal law protecting drinking water supplies from harmful contaminants. First enacted in 1974 and substantively amended in 1986 and 1996, the act led to standards and treatment requirements for public water supplies.

The Clean Air Act, as amended in 1970, 1977 and 1990, permits the Environmental Protection Agency to set standards for air quality and affects clean air standards for power plants.



"I am a firm believer in the people. If given the truth, they can be depended upon to meet any national crisis. The great point is to bring them the real facts." — Abraham Lincoln

The J.D. Phillips Water Reclamation Plant was initially opposed by neighbors, who were concerned about odors. CSU shared the plans for a fully covered, odor-controlled facility, and neighbors agreed. The plant was dedicated in 2007.

Population 360,890 - 416,427

Chapter Six

CHALLENGES OF A NEW CENTURY

As Colorado Springs Utilities approached the 21st century, it was strongly built on a firm foundation: more than 100 years of performance, with utilities professionals at its helm and under the guidance of citizen-owners committed to planning for the future.

It was a good thing: We had a lot of work to do in all four services. Some of our work came in responding to unexpected crises, like the grasshopper plague and the oil embargo of their times.

Other accomplishments stemmed from our orderly planning and execution, such as our power plants. Some of our most important accomplishments came at the confluence of planning and crisis. And our performance at those moments made all the difference.

Adapting to Unexpected Events

The 1999 spring rains caused record flooding throughout Colorado Springs and much of southern and eastern Colorado. While no deaths were officially recorded from those floods, at least \$30 million in damages occurred in El Paso County. When the City lost roads and bridges, CSU lost its own infrastructure, including wastewater lines that run over and under creeks. The result was a wastewater discharge of more than 70 million gallons into Fountain Creek.

Though the Arkansas River is no stranger

to major floods such as those in 1922, 1935 and 1965, the 1999 flood created the backdrop for a larger story in our history.

Over the next several years after this flood, CSU suffered dozens of unplanned discharges from its sanitary sewer system — the worst during 2005 related to manhole vandalism and a flash flood. Ultimately, CSU was fined \$110,000 by the Colorado Department of Public Health and Environment and required to pay a \$35,000 court judgment in a Sierra Club lawsuit.

Starting with the 1999 floods, CSU took many steps to inspect, repair, replace, reinforce and protect its wastewater system: A huge diversion pond was built along Fountain Creek, at a cost of \$10 million, designed to capture wastewater overflows. The program includes an aggressive maintenance plan that proactively cleans more than one-third of the system annually, and monitors pipe condition using closed-circuit TV cameras. An education program for restaurants and other businesses aims to prevent grease blockages. And during and after storms, crews are on alert to patrol and inspect sanitary sewer creek crossings.

CSU has spent, or has committed to spend, more than \$300 million through 2035 on wastewater collection system maintenance and improvements. These efforts have been, and will continue to be, important to show CSU's



Flooding in 1999 along Fountain Creek damaged CSU infrastructure, including electrical lines. Crews had to brave floodwaters to restore power.

due diligence and concern for our downstream neighbors.

CSU Firefighters Help Defend Community

Another natural disaster tested CSU — and the entire community — to its limits and beyond. The Waldo Canyon Fire started on Saturday, June 23, 2012 at the popular hiking area up Ute Pass. Over the next weeks, workers battled first to shut off gas and electric service to protect firefighters and then to restore service to homes that weren't destroyed.

Perhaps CSU's most memorable contribution was that of our Catamount Wildland Fire Team — our employees who normally serve in a variety of professional roles throughout the organization but train as wildland firefighters to protect our facilities and community. A key focus is to defend the watersheds from wildfires that could affect the runoff collected for drinking water.

Members of the Wildland Team are widely credited with using their bulldozers to cut and

maintain a 60-foot-wide fire barrier line that saved the Cedar Heights neighborhood and with protecting numerous other facilities, including Cedar Heights Pump Stations 2 and 3 and their communication tower, Wilson Pump Station and tank, and the Upper Woodmen Pump Station and tank. Ultimately, when the fire entered the City on June 26, our Wildland Team protected lives and defended homes and other structures in the Mountain Shadows neighborhood alongside the Colorado Springs Fire Department and other fire services. In all, 26 of our Wildland Team members fought the Waldo Canyon Fire and remain assigned to restoration efforts today.

By the time it was over, the Waldo Canyon Fire took two lives, destroyed the hiking area and 18,000 acres, forced the evacuation of 32,000 residents, and destroyed 346 homes.

The skill and passion of our employees were tested again a short year later as they fought the Black Forest Fire, which destroyed 500 homes and took the lives of two people. The Wildland Fire Team has grown to nearly 50 members and continues to train and prepare to defend our

CSU infrastructure and our community.

Another emergency — a fire at the Martin Drake Power Plant in May 2014 — required its own share of due diligence in the form of hard work from employees and investment by citizen-owners. May 5, 2014, started like so many other days with Drake producing one-third of our community's energy needs. But the fire that started at 9:40 a.m. took Units 5, 6 and 7 out of service in a matter of moments — the first time in modern history that Drake was fully out of service. The fire was out within a few hours, but more than 22,000 customers were without power for 35 to 40 minutes until power could be rerouted from other plants and sources.

Over the next weeks and months, employees worked diligently to return Drake to full operation. Our citizen-owners shouldered their share of the burden in the form of temporarily increased electric rates used to pay higher energy costs to burn more natural gas at the Front Range Power Plant. Repair costs were covered by insurance. In the end, repairs were completed ahead of schedule, with Unit 6 returned to operation after nine weeks; Unit 7 about 16 weeks after the fire; and Unit 5 returned to service 10 months after the fire.

Planning, Planning, Always Planning

Thankfully, everything in the utilities business isn't an emergency. What we hope to provide for our customers is long-range planning that involves them as citizen-owners. And we have a long tradition of just that.

Public involvement in planning was formalized in the '90s through development of what are now called integrated resource plans, such as the Integrated Electric Resource Plan and the Integrated Water Resource Plan. These living



Colorado Springs Utilities Catamount Wildland Fire Team helped fight the June 2012 Waldo Canyon Fire.



In May 2014, a fire at the Martin Drake Power Plant damaged several units and took the plant offline. Crews worked around the clock to restore it to full power.

plans are maintained continuously and formally updated every few years with thousands of hours of professional staff analysis and inclusive citizen engagement. Our process encompasses workshops, town hall meetings, City Council/Utilities Board review and, ultimately, adoption and implementation.

At the heart of this planning is the notion that citizen-owners not only need our four services, but also have preferences about how those services will be supplied — what kinds of fuel will be used to generate electricity, how we will protect our water resources and, ultimately, how much we are willing to pay in utility rates.

Integrated planning processes drove many of the improvements implemented in the 1990s and early 2000s. On the energy side, the focus was on increasing production to meet the needs of our growing community and keeping rates in line while reducing environmental impacts.

Our more traditional electrical plants saw improvements. Obsolete coal-burning generation Units 1 through 4 were retired and scrapped at Martin Drake. The Nixon plant added gas-fired

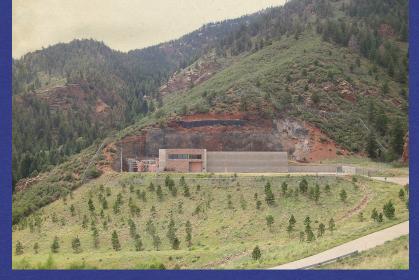
combustion turbines No. 2 and No. 3, and an all-new plant, Front Range Power Plant, was built in 2003, making it possible for Colorado Springs to generate more than 40 percent of its electrical need from natural gas.

Front Range is unusual in several ways: Operationally, it is a combined-cycle power plant that burns natural gas and employs both a gas and a steam turbine. Heat that's usually waste from the gas turbine is routed to the nearby steam turbine, so the two together produce up to 50 percent more electricity from the same fuel than a traditional simple-cycle plant.

The plant also was built in partnership with a private company, yet CSU wisely retained the first right to purchase the other half of the plant if the other entity chose to sell. We made that purchase in 2010, and now own all of the Front Range Power Plant and its generation capacity. Front Range can produce more than all our other power plants combined, yet that production must be weighed with the varying cost of natural gas.



The Front Range Power Plant operates on a combined-cycle system producing up to 50 percent more electricity than a traditional plant.







MODERN HYDRO PROJECTS

1997

Top – Located at the Air Force Academy, the Tesla Hydroelectric Plant uses water from Rampart Reservoir delivered through a 3-mile-long tunnel cut through solid granite.

2010

Center – The Cascade Hydroelectric Plant is the newest hydro in our system, located near Cascade in Ute Pass.

2018

Bottom – Currently under construction, the newest hydro unit in our area will use energy of water flowing through Pueblo Dam near the Southern Delivery System pipeline.

Hydro: Back to the Beginning

While coal and natural gas remain critically important to our energy portfolio for the foreseeable future, hydropower — one of our first sources of energy — is again becoming an important energy source. Building on the foundation of the Manitou and Ruxton hydroelectric plants, the Tesla Hydroelectric Plant opened in 1997. Located on the Air Force Academy, it is one of Colorado's most modern hydroelectric plants. Water to drive this unit comes from Rampart Reservoir through a completely underground 1,000-foot shaft and 3-mile-long tunnel bored through solid granite. The concrete powerhouse was finished with stone to match the appearance of the Ruxton Hydroelectric Plant.

The Cascade Hydroelectric Plant, completed in 2010, is our most recent hydroelectric unit. In contrast to the Ruxton and Manitou plants, Cascade's generating unit is housed in a green steel building made to blend with the surrounding forest. The Cascade plant relies on a

familiar water line: The Old North Slope line. In fact, after the water passes through the Cascade unit, it's piped to Manitou Springs to turn Manitou Unit 3.

Finally, a plant under construction at Pueblo Reservoir will generate electricity using the energy of water flowing through Pueblo Dam near the Southern Delivery System pipeline. Colorado Springs Utilities is a member of the Southeastern Colorado Water Conservancy District, which is building the plant.

For 10 years, power generated at the plant will be supplied to Fort Carson to meet its Net Zero renewable goals. Colorado Springs will serve as the conduit using a purchased power agreement. After 10 years, Fountain will buy the power for at least another 20 years. The \$19 million cost to build the hydro plant will be paid by revenue from power sales.

Solar Energy Taps Power of the Sun

The energy of water is not the only renewable energy we are developing. In the 1970s,

This solar array was built at the Air Force Academy through a partnership with CSU. It is one of the largest solar arrays in Colorado.



photovoltaic systems were just a dream but now they are a reality. Our first formal solar program started in 2006 with rebates offered for customerowned photovoltaic systems. This program supports the intent of Amendment 37, a state law that requires utilities to increase their renewable energy supply, now known as the Colorado Renewable Energy Standard. Four years later, we adopted our Energy Vision, which requires us to provide 20 percent of our total electric energy through renewable sources by 2020. This Energy Vision goes above and beyond the 10 percent mandate for municipal utilities under the state standard.

Also, in 2010, CSU partnered with the Air Force Academy to select SunPower Corporation to design, build, own and operate a 6.0-megawatt solar array on the academy grounds just west of I-25. The \$18.5 million cost of the project — one of the largest solar arrays at the time in Colorado — was borne by the Academy.

We entered a new solar phase in 2011, launching one of the first Community Solar Garden pilot programs in the nation. The centrally located solar photovoltaic systems provide electricity to participating subscribers. The first solar garden, at Venetucci Farm in Security, started with 278 residential and educational customers and has grown to include four solar gardens with 435 participants. Our second community solar program, completed in 2015, currently includes 21 residential and four business subscribers.

Our next commitment is on our own property. CSU dedicated a large solar array on about 156 acres of our Clear Spring Ranch property near Fountain. Relying on another innovative partnership, CSU entered into a 25-year contract with NextEra Energy Resources to design, build and operate the array. The

Clear Spring Ranch array features about 42,000 solar panels capable of powering 3,000 average homes. CSU will pay \$37 million for the energy produced by the array, which helps to diversify our community's energy supply, provides long-term compliance with the Colorado Renewable Energy Standard and moves us significantly closer to our own Energy Vision.

Coal Remains Important to Energy Portfolio

Improvements over the last few decades at Colorado Springs Utilities' coal-fired power plants, Drake and Nixon, dramatically reduced emissions. With the improvements CSU made most recently to comply with Colorado's Regional Haze rule, emission levels will drop even further.

Scrubber systems aimed at reducing nitrogen oxide (NO_x) and sulfur dioxide (SO_2) emissions were successfully installed at the Drake and Nixon power plants to meet the 2017 Regional Haze compliance deadline. One element of CSU's overall emissions reduction plan is the NeuStream® scrubber developed by local company Neumann System Group (NSG). CSU used the NeuStream system for its ability to be installed on Drake's size-constrained site. A total of six projects aimed at emission reduction were completed \$15 million under the program budget.

Water Service Planning Continues

In water service, our legacy of planning and public engagement continues to pay dividends for customers. Our wastewater system planning is one area in which public engagement is particularly important. In the



The Pine Valley Water Treatment Plant, foreground, and the McCullough Water Treatment Plant are located at the Air Force Academy. McCullough is named for Jack McCullough, Water Department director in the 1970s, who helped acquire the Twin Lakes and Fryingpan-Arkansas supplies. The Pine Valley Water Treatment Plant was constructed in 1969. Expansions completed in 1987 and 1998 raised its capacity to 92 million gallons a day. McCullough Water Treatment plant has an additional capacity of 70 million gallons a day.

early 2000s, concepts for what was then dubbed the Northern Reclamation Facility were shopped around the community. The need was to build a wastewater facility on the northern end of town to supplement the aging wastewater plant on Las Vegas Street.

Ultimately a site was chosen adjacent to Pikeview Reservoir, south of Garden of the Gods Road. Initially, nearby neighborhoods raised red flags about the wastewater facility. But when more complete designs were shared with neighbors — showing enclosed, covered facilities designed not to emit odors — tensions in the neighborhoods eased. In the end, with the assistance of the project team, neighbors even weighed in on the color of the building and the appearance of fencing and gates, "to be attractive and secure, not like a prison," one neighborhood leader said. The facility was named for longtime CSU Director J.D. Phillips upon dedication in 2007.

Another key product of our planning is the McCullough Water Treatment Plant, completed in 1996, and nearly doubling our community's capacity to treat drinking water. McCullough was built to serve our community's growing northern and eastern areas. McCullough joined the Pine Valley Water Treatment Plant as part of the Northfield System, which dates to the acquisition of the Northfield Water Company in 1949.

Improvements in wastewater continued at the Las Vegas Street Water Resource Recovery Facility in 2011 with the installation of the more environmentally friendly, ultraviolet light disinfection. The previous system used chlorination and sodium thiosulfate to dechlorinate wastewater effluent. As of this writing, improvements are underway at the plant to facilitate biological removal of nitrogen and phosphorous to comply with state regulations.

When Planning and Crisis Come Together

Planning for new water supplies has always been a part of our culture at CSU. As we approached a new century, the need to build another raw water delivery system was not a surprise; it was envisioned and discussed at some length for decades after construction of the Homestake system. But the timing and urgency were driven by something we didn't expect — the historic drought of the early 2000s. There was one other challenge we didn't expect — initial opposition from our partners in the Fry-Ark project — yet we managed to leverage this into a better project for ourselves, our three partner communities and all of Colorado.

In our continuing search for reliable water supplies, we might have become lost if we hadn't learned from previous attempts. Our loss on the Homestake II project caused us to shift priorities and refocus our attention on developing a delivery system to make use of the supplies we had already secured. Numerous ideas were considered, including a western delivery

system. In 1990, to help secure our options, we proposed to build the Elephant Rock Reservoir on the main stem of the Arkansas River three miles north of Buena Vista, or the Mount Princeton Alternative, which would have been a smaller on-channel reservoir on the river 10 miles north of Buena Vista.

Also necessary for the western delivery system were pump stations, pipelines and, possibly, another reservoir closer to town. Simultaneously, other options, including a direct reuse system and a delivery system from the south, were being considered and developed for evaluation and comparison.

The opposition to the western delivery system was familiar: Members of the environmental and recreational communities argued that the reservoir and diversion facilities would damage a reach of the Arkansas River renowned for rafting, kayaking and fishing, as well as other recreational opportunities. Hand-painted signs stating "Don't Let Colorado Springs Drown This Valley" were erected in the Chaffee County pastures adjacent to Colorado Highway 24 near the proposed Elephant Rock Reservoir site. Construction of



ELEPHANT ROCK RESERVOIR

It's important to note that we didn't "lose" the option to build Elephant Rock Reservoir. We kept that option alive — but only technically — for a number of years, until the Southern Delivery System was essentially built. In 2016, Colorado Springs Utilities staff joined in a "ceremonial shredding" of the documents.

Elephant Rock Dam would have required both the relocation of Colorado Highway 24 and the Denver and Rio Grande Western Railroad, owned at the time by the Southern Pacific Railroad. Today we know both of those relocations could have been fatal flaws in their own rights.

1996 Water Resource Plan is Key

Fortunately, one of the byproducts of methodical planning often is an array of options. In the 1990s, our water resource planners conducted methodical analysis of community need, water rights, storage capacity, potential partners and likely opponents, along with many other variables.

Their efforts culminated in the 1996 Water Resource Plan, which elevated one idea: We needed to bring water that we own the right to use from Pueblo Reservoir to our community. Our community's investment in the Fry-Ark project would finally pay dividends. The Southern Delivery System ultimately would

become the most cost-effective, reliable and environmentally responsible project to store, transport and deliver water to Colorado Springs and our project partners.

Buying Time Before Building the Big Project

For some time after 1996, Colorado Springs Utilities continued picking the low-hanging fruit. The Water Resource Plan wasn't only about building a big project — it focused heavily on other goals: water conservation, improving the efficiency and effectiveness of our existing system, and further development of our nonpotable water system. Work to achieve those goals went forth with vigor, particularly when the spring of 2002 produced the beginning of a historic drought and the worst water conditions in the City's recorded history.

Water planners saw the signs of trouble coming for several years — less than average snowfalls in the mountains, more than average



The Otero Pump Station drives water to Colorado Springs and Aurora as part of the Homestake System.



TWIN ROCKS PUMP STATION

Twin Rocks Pump Station was completed in 2002. Technically, the pump station is interesting because it pumps water from Homestake Reservoir downhill to Rampart Reservoir, rather than relying on gravity to move water there. It also offers flexibility to move water between the Homestake and Blue River pipelines to mitigate outages on either system.

Yet what makes Twin Rocks most intriguing is more obvious: Twin Rocks looks like a huge mountain chalet-style barn. That appearance is no accident. When CSU began discussions with Divide's residents about building the pump station, neighbors didn't want an industrial-looking facility. So CSU and neighbors designed a pump station that blends with the countryside. Legend has it that motorists stop by to ask what kind of huge animals live in that barn.

"transit loss" or less snowmelt reaching reservoirs and the City. In 2002 the overall yield to the water system was only 56 percent of normal. Couple that with extremely hot, dry conditions in town that resulted in higher water use to keep grass and landscapes alive, and the perfect storm arose. In 2003, storage dropped to 42 percent of capacity — a critical low not experienced in the modern life of our community.

It was a frightening time — one can never see the end of a drought when it starts — and we could have been lost without our planning, staff innovations and the sacrifices of our citizenowners. Among key steps: The Utilities Board instituted watering day restrictions, first voluntary and then mandatory, that ultimately limited watering lawns to two days per week. They

instituted tiered water rates so that those using more water paid more per unit of water than those using less. And water conservation became a focus of all communication and education with our residential and commercial customers.

Those were the steps we could take in a matter of months. We had already identified the need to buy more time to build a large water project, so we pushed forward with plans to construct the Twin Rocks Pump Station, and finished several smaller projects to improve the yield of our existing system. Simultaneously, it was vital to tread lightly into familiar territory: taking the Southern Delivery System off the pages of the 1996 Water Resource Plan and turning it into a reality.



"Our ability to handle life's challenges is a measure of our strength of character."

— Author Les Brown

Then-Mayor Lionel Rivera, right, shares his vision for the future with CEO Jerry Forte as the two led the celebration marking the start of construction on the Southern Delivery System in 2011. Rivera played a key role in the negotiations that led to permitting and construction of SDS.

Population 360,890 – 456,568

Chapter Seven

COLLABORATIVE LEADERSHIP FOR THE NEW AGE By Margaret Radford

"People do not decide to become extraordinary. They decide to accomplish extraordinary things."
— Edmund Hillary, with Tenzing Norgay, was first to reach the summit of Mount Everest

The story of Colorado Springs Utilities is one of innovation that meets changing demands. Adding services for a growing population. Generating power from new fuels. Finding new sources of water and methods of treatment. We're constantly adapting. And our approach to leadership is no exception.

Our community-owned, citizen-governed, four-service utility entered the 21st century with its first Chief Executive Officer — Phillip Tollefson — and, as of this writing, is led by its second CEO, Jerry Forte. Engineers by profession, both men built high-performing teams of utilities professionals. Yet the recipe for a successful Colorado Springs Utilities calls for another essential ingredient: the leadership and partnership provided to staff by the citizen-owners directly and through elected members of the Utilities Board.

Tollefson is well known as the architect of the name Colorado Springs Utilities, the logo and brand we know today, and for formalizing our corporate values. Numerous large projects were completed during his tenure, such as the Front Range Power Plant. Many other projects were planned. Apart from bricks and mortar, Tollefson masterminded and began implementing our intense citizen involvement in planning and governance. Yet in facing one of his last challenges with CSU, Tollefson found considerations he wasn't ready for, at least not without help.

Lessons Translate into Diplomacy and Partnership

As soon as the drought of 2002 was recognized, and Colorado Springs Utilities openly discussed building a pipeline that would connect to Pueblo Dam, the opposition started in earnest. And it came from some likely and unlikely sources: our fellow participants in the Fry-Ark project and other regional projects, and Pueblo's newspaper, the Pueblo Chieftain. The fog of misinformation spread by The Chieftain — "Springs is stealing our water," and "this will dry up the farmers in the lower Arkansas valley" — were met with the lessons of current and past projects: facts, diplomacy and partnership.

Misinformation Muddies the Waters

In the summer of 2002, former council/board members recall that misinformation was winning the day in Pueblo. "The Water Wars," as they were called at the time, were easy to oversimplify. On one side was Pueblo, which was already receiving its full share of water at Pueblo Dam. On the other was Colorado Springs, which was receiving only a small allocation of its water.

Over the generations since President Kennedy spoke passionately about Pueblo Dam and regional cooperation, many in the region had forgotten the facts: As regional partners, Pueblo and Colorado Springs collaborated in the Fry-Ark and other endeavors; Colorado Springs and Pueblo owned their own, individual water rights in Pueblo Reservoir and could not "steal" one another's water; and farmers in the valley held their own water shares for irrigation of their crops and were collaborating with cities in an elaborate, statewide water management process that worked for the benefit of all.

Elected Leaders, Staff Foster Agreements

It took elected leaders to build, or rebuild, the regional partnerships. In a chance meeting at the Colorado Municipal League meeting in Vail, and a more planned gathering at the National League of Cities meeting in Washington, D.C., members of the Pueblo and Colorado Springs city councils began a dialogue about mutual need. That dialogue among elected leaders set a tone of cooperation among the various staffs and led to the 2003 signing of the symbolic Arkansas River Water Preservation Principles and two more binding intergovernmental agreements

between Colorado Springs, Pueblo, the Pueblo Board of Water Works, the Southeastern Colorado Water Conservancy District, and the cities of Fountain and Aurora.

In these agreements, the signatories got what they needed: Pueblo obtained the promise that water transported in the Southern Delivery System would not be conveyed out of the Arkansas River basin and the signatories would all work together to manage river flows to ensure Pueblo had its river scenery and recreation. Colorado Springs, meanwhile, gained what it needed most: regional support — including Pueblo's — for SDS in the next phase for the federal permitting process.

At the time Tollefson retired, he left a Utilities Board that directly negotiated for SDS with other elected officials and community leaders in the region and in Washington. "I have never seen board members so active and so committed," Tollefson commented. Those board members chose the next CEO in 2006.

As is often the case in leadership, Jerry Forte could not have known what lay ahead when the Utilities Board appointed him CEO. The challenges ahead would be many, some of epic proportions.

For a Colorado Springs native son to take over leading an organization he grew up with might have been enough for any professional engineer. If his only goal was to move up from chief operating officer, a position he held for four years, and to continue to lead approximately 1,800 employees dedicated to providing 500,000 citizen-owners with four utilities services, that might have been enough. It would be a worthy pursuit to manage an annual budget of more than \$1 billion, to streamline many operations, save customers money and improve employee safety and efficiency.

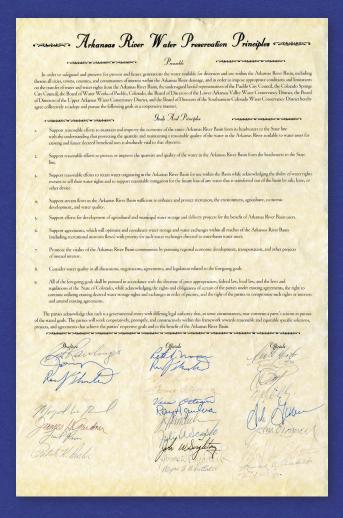
Yet when Forte became CEO, he knew just keeping the ship headed in the right direction wasn't going to be enough. The J.D. Phillips Wastewater Reclamation Facility needed to be completed and opened. More than \$2.4 billion in capital improvements were required across the four services. And no one had ever attempted to do that much work in a 10-year period. New federal regulations were on the horizon, and we would need to innovate once again.

Southern Delivery System Ranks as a Priority

Potentially most daunting of all, SDS planning and construction was not yet completed. Forte chose CSU attorney John Fredell to create and lead a team of employees and contractors to finally deliver the project.

But before moving one shovel of dirt, two significant regulatory hurdles remained: Colorado Springs needed to go through the federal Environmental Impact Statement process to earn a Record of Decision, and it had to earn the Pueblo County 1041 permit like the one that had eluded us before in Eagle County. Looking back, the six-year federal review process and the two-year 1041 process were whirlwinds of public input meetings; multiple, exhaustive scientific and environmental studies; and many detailed public reports to set the record straight.

While the federal review process was rigorous and time-intensive, it was the Pueblo County 1041 permit that some detractors doubted would ever be granted. Ultimately, Pueblo County and Colorado Springs agreed to 30 conditions, including fair and equitable treatment of landowners, mitigation of



LEADERS DRAFT PRINCIPLES ON DINNER NAPKINS

The Arkansas River Water Preservation Principles set a tone of cooperation and led to the signing of more binding agreements. The first draft was written on dinner napkins in Washington, D.C., by Councilwomen Margaret Radford and Sallie Clark, with Pueblo Councilmen Ted Lopez and Randy Thurston.



CEO Jerry Forte participates in the groundbreaking for the Edward W. Bailey Water Treatment Plant.

FORTE LEAVES CSU WELL-POSITIONED FOR THE FUTURE

For Jerry Forte, 16 years of CSU leadership with 12 at the helm, passed by quickly. Time flies by when you're busy. Building a major water delivery system. Planning the future of the City's oldest power plant. Working with the Utilities Board as the City changes to an executive mayor system.

"It's been a privilege to serve my hometown, work with such a dedicated Utilities Board, and lead a workforce that always goes the extra mile," said Forte when he announced his May 2018 retirement. "Our future is bright."

Forte grew up in the Divine Redeemer neighborhood of Colorado Springs and graduated from Palmer High School. He served as utilities manager for Johnson Controls at the Los Alamos National Laboratory in New Mexico until he came to CSU as chief operating officer in 2002. Forte was named to succeed retiring CEO Phil Tollefson in 2006.

His commitment to utilities safety, leadership development and strategic planning has resulted in the utility's close connection with the community, strong financial condition and excellent service reliability.

"Jerry's contributions will last for decades, and he will be sorely missed," said Board Chair Tom Strand.

What Forte says he will remember most is the commitment of our employees. "Every time I went into the field, every time I talk with one of our employees, I am so energized. I am reminded of why we do what we do — because almost 500,000 people count on us daily to do amazing work. It's what our employees do every day. All of them are heroes in my eyes."

construction impacts on roadways and private property, continuation of the Arkansas River and Pueblo flow management programs, and mitigation of impacts on Fountain Creek.

One of the most important factors in our success with the 1041 permit came in 2007. Colorado Springs and its SDS partners, the City of Fountain and Security Water District, gained another critical partner: The Pueblo West Metropolitan District representing 35,000 Pueblo County residents, more than 20 percent of the county's population.

Pueblo West's need to have a second pipeline to back up its lone aging pipeline gave Pueblo County elected leaders at least a reason, and political cover, to permit SDS to move forward. And for Pueblo West, timing really was everything; they needed their new SDS-constructed pipeline in 2015 and 2016 before SDS itself was fully complete.

CSU Weathers Great Recession

Few, if any, Colorado projects experienced the regulatory rigor that SDS received. History will record that the first date set for completion of SDS was 2006: It's fortunate that the drought eased a bit and our customers conserved water. Given regulatory hurdles, 2006 was not achievable.

The revised completion date was set at 2016. Colorado Springs earned its federal Record of Decision and its Pueblo County 1041 permit in 2009. With seven years before 2016, CSU had time for appropriate study, to earn environmental permits, to acquire right of way, and to plan and execute an efficient and innovative construction process.

But what no one was expecting came in 2008 — the beginning of the Great Recession. Colorado Springs was swept into the financial crisis along with the rest of the nation. Growth



PUEBLO WEST GETS WATER

Pueblo West Metropolitan District needed to turn on its new water pipeline early to serve its 35,000 residents because its only other water pipeline failed in 2015. Pueblo West paid for its new pipeline as a Southern Delivery System partner.



The Southern Delivery System, completed in 2016, includes about 50 miles of raw and finished water pipeline, three pump stations and the Edward W. Bailey Water Treatment Plant.









THE SOUTHERN DELIVERY SYSTEM

Top Left – A construction crew installs a 66-inch section of SDS pipeline.

Top Right – Crews work on the 10-million-gallon water tank and the process building at the Edward W. Bailey Water Treatment Plant.

Middle Left – SDS protected Fountain Creek and I-25 by boring 90 feet underground. Workers position carts full of material for the crane to lift out of the tunnelling pit.

Middle Right – Workers connect the SDS raw water pipeline to the 10-million-gallon water tank at Bailey.

Lower Right – Community members sign the commemorative pipe at the celebration of construction beginning at Pueblo Dam in 2011. The pipe, signed by hundreds, is on display at Bailey.



essentially came to a standstill and, nationwide, credit became difficult to obtain. Forte responded to the crisis responsibly by reducing expenses across the organization. Through a well-planned approach and over several years, CSU reduced, through attrition, the number of employee positions by 250. Through increased efficiencies and the use of new technologies and processes, employee productivity increased by 20 percent. This conservative financial approach helped Colorado Springs Utilities maintain its AA bond rating, enabling it to move forward with the SDS project as scheduled.

Even amid the recession, ground for SDS was symbolically broken with a regional celebration at Pueblo Reservoir in 2011. The 50 miles of raw water and finished water pipelines were completed in 2015, and the three pump stations were finished in 2016, along with the Edward W. Bailey Water Treatment Plant. Bailey served as the Water Resources Department director and retired in 1998. On April 27, 2016, Phase I of the Southern Delivery System was turned on.

As of this writing, the newly named Gary M. Bostrom raw water reservoir and the Williams Creek return flow reservoir will be constructed as part of SDS Phase 2, when community need calls for them. The Bailey plant can be expanded onsite to treat up to 130 million gallons of water per day based on future customer demand.

The largest water delivery project in the region's history, the Southern Delivery System, was delivered on time and at least \$160 million under budget; as of this writing, the current cost of completion is \$825 million.

As if Completing SDS Wasn't Enough

During his tenure, Forte has managed the largest 10-year capital improvement program

(\$2.4 billion) in Colorado Springs Utilities history while maintaining competitive customer rates and strong organizational and financial metrics. He also developed award-winning leadership programs and directed enterprise-wide resource planning efforts to ensure the continuation of superior energy reliability, adequate water supply, safe wastewater system practices and environmental compliance of all utility systems. Forte has continued to focus on key goals: reliable service, low rates, and customer and employee satisfaction.

Those are just some of the metrics that CEOs of major utilities measure themselves against. Yet perhaps Forte's most significant accomplishment consists of helping the Utilities Board usher in a new era of citizen-owner governance. Under Tollefson's leadership the organization took steps to involve the public in long-range utilities planning and investment; history gave Forte an opportunity to embrace Utilities Board leadership like never before.

That opportunity arose from two developments. The voter-approved change to the strong mayor system of government in late 2010 and a community movement for members of the Utilities Board to be more deeply aware and involved with CSU than ever before.

The move to the strong mayor system created an executive branch mayor, apart from City Council, to direct the part of the City funded by taxes. The mayor now directs the chief of staff, the city clerk and city attorney, effectively relieving City Council of those responsibilities. From the general fund, the council retains legislative authority over the budget and direct oversight over the office of the city auditor. Time that council members no longer spend directing the general City permits them to focus directly on CSU in their roles as Utilities Board members.

COLORADO SPRINGS CITY COUNCIL, UTILITIES BOARD IMPLEMENT SEPARATE LEADERSHIP ROLES

Colorado Springs City Council members serve as the Utilities Board, governing the management and operations of Colorado Springs Utilities through established written policies. Reporting directly to the Board is the chief executive officer, who oversees staff in the operation of the four utility services.

The Council/Board is made up of three at-large seats and six district seats. The City Council holds rate-making authority under state law, ensuring that these decisions are made at the local level with citizen involvement. The mayor of Colorado Springs serves as an ex officio member of the Utilities Board.

Board and Council leadership are separate: Members choose two people as president and president pro tem of the Council, respectively, and two others to serve as chair and vice chair of the Utilities Board. This division of labor permits greater focus for the leadership of each organization. Board members also serve on committees focused on specific business functions: Finance, Personnel, Program Management (large project) Review, and Strategic Planning.



Utilities Board Chair Tom Strand; member Bill Murray; member David Geislinger; Council President Pro Tem Jill Gaebler; Council President Richard Skorman; member Yolanda Avila; member Merv Bennett; member Don Knight; and Board Vice Chair Andy Pico. Mayor John Suthers, ex officio member, not pictured.



Members of the Utilities Board receive a briefing from a construction staff member while visiting a water main replacement project.



Jerry Forte introduces Ed Bailey at the plant dedication.



Ed Bailey and his wife, Thelda, take in the celebration.



The Edward W. Bailey Water Treatment Plant during construction 2015.

NEWEST TREATMENT PLANT HONORS ED BAILEY

The treatment plant built as part of the Southern Delivery System is named in honor of Edward W. Bailey, who served our community as Water Department director and water resources director for more than three decades. Bailey started with the organization in 1964 and retired in 1998.

"Ed Bailey and countless others have worked diligently behind the scenes to make sure that our citizens, past, present and future, have water for generations," said CEO Jerry Forte at the plant's dedication.

Bailey played vital roles in many water projects, including construction of the Homestake Project, which supplies up to 70 percent of Colorado Springs' water; construction of Rampart Reservoir, Pine Valley Water Treatment Plant, Stanley Tunnel and the Fountain Valley and McCullough water treatment plants; and expanding of water supply, delivery, storage, treatment and distribution facilities to accommodate a population that grew from 80,000 people to nearly 450,000.

The 82,0000-square-foot plant uses advanced techniques, including ozone and biological filtration, to treat water piped from Pueblo Reservoir. The 100-acre facility houses a 10-million-gallon raw water storage tank, a 7-million-gallon treated water storage tank and a finished water pump station.

That lines up with this moment in the life of Colorado Springs Utilities, as the growing complexity of the business requires more knowledge and involvement than ever before. Deeper involvement of the publicly elected Utilities Board also answers a question first posed by Tollefson during a period of rightful introspection in the early 2000s: "What is a municipal utility in the context of Colorado Springs and how would it be best governed?"

Governance Remains Strong

The Utilities Board itself addressed that question several times since the turn of the 21st century by directing its Utilities Policy Advisory Committee to research various governance models for publicly-owned utilities. Over the years, the UPAC determined that CSU is relatively unusual among large, publicly-owned utilities in that an elected body governs it. Interestingly, a public opinion poll conducted in 2016 found that at least 68 percent of voters prefer to keep it that way — with either City Council continuing in that role or with a separately elected Utilities Board.

Moreover, the candidates who championed most for continued citizen-owner governance through elected leaders won City Council/ Utilities Board seats in recent elections. In June 2016, after one and a half years of study, a report from a consultant, and three scientifically conducted public opinion polls, the City Council voted to keep governance of CSU in the hands of elected leaders.

"Everybody's said nothing's broken now," Board Member Andy Pico stated. "Five or 10 years from now might be the good time to change. But this isn't the time." However, the Utilities Board decided it was time for deeper awareness and involvement in the operation of CSU, to be achieved through several key steps.

First, Board leadership was separated from that of Council. As of this writing, the Utilities Board chair and vice chair are elected by Board members, as before, but they are distinct from the Council president and president pro tem. In the past form of government, the leadership of the Council also served as leadership of the Utilities Board. The decision to elect separate leadership was aimed at permitting leadership of City Council and Utilities Board to concentrate on municipal government and utilities issues, respectively.

The Utilities Board also has established four working committees to provide transparency and accountability: Strategic Planning, Personnel, Finance and Program Management Review.

All meet regularly with Forte and various staff members for briefings and progress updates.

"This is a partnership," Forte said about the staff's relationship with Utilities Board. "The Board provides direction and represents our customers as their constituents, and they are deeply and appropriately involved in our business. They are passionately committed to our utilities operation. They are giving their whole hearts."



"Water is the driving force of all nature."

— Leonardo da Vinci

The North Outlet Works built as part of the Southern Delivery System features a fixed cone valve that permits the Bureau of Reclamation to precisely measure how much of the Arkansas River is flowing through the structure at any given time. It supplements the square gates originally built in the dam.



Jan Martin adds a brick to the ceremonial wall at the construction kickoff of the SDS pump stations.

Summit Brick of Pueblo made the bricks chosen for the facades of the pump stations.

From Century to Century, Colorado Springs Utilities Continues its Mission

By former Utilities Board member Jan Martin

You've read about our glorious history. Let me assure you, we have an exciting present and future.

We are one of only a few cities across the country who own and manage all four major utility services: water, wastewater, electric and gas. Based on history and current events, our citizens value owning our utilities. The inherent transparency and control of our own destiny is why our system works so well.

Others envy our local involvement and control. At this writing, the cities of Pueblo and Boulder are exploring options to change their electric service. Pueblo is in the early stages of considering a new private provider or a municipal service. In Boulder, voters chose in 2017 to move in the direction of municipalization, subject to a final vote.

Most worthy of admiration are our employees. I have never worked with a more dedicated, hardworking, passionate group of people in my career. They are truly public servants who take pride in their work, serving our community, and I hope they know this story is their story.

Together, over the generations, we have built a billion-dollar-a-year, fourservice utility, wholly owned by its customers. When I served on the Utilities Board



Construction crews
under contract to
CSU complete a water
main repacement on
Rockrimmon Boulevard
to enhance the reliability
of water service.

from 2007–2015, I was often reminded of my grandfather, Harry MacDonald, who served in the Colorado State Senate from 1941-1951. Those were the years leading up to Colorado Springs, Denver and Aurora building the Blue River and Homestake projects. Then during my service, my board colleagues and I partnered with our staff to secure the necessary permits and build the Southern Delivery System. Over the generations, it has been the courage of elected leaders and the expertise of utilities staff that serve as the cornerstone of CSU's success. I am proud and honored to have played my part.

Most exciting, we are moving forward. At this writing, CSU is planning for the retirement of the Martin Drake Power Plant and all of the implications, including replacement power and distribution changes. We are planning to enlarge our solar energy portfolio. We've just launched a massive update for our Mesa Water Treatment Plant — soon to be rededicated to honor former CEO Phil Tollefson. We've installed new valves for the pipelines that come from our Pine Valley and McCullough treatment plants. We are replacing or adding protection for miles of water distribution pipelines. On the wastewater side, we've just completed projects to protect our infrastructure along Sand Creek and Monument Creek. And in gas, we're constantly upgrading our distribution lines all over the community. There's so much to do, and we're doing it with your support!

On a final note, my friend and colleague, Jerry Forte, is only the second person to carry the title CEO of Colorado Springs Utilities. One of our own, Jerry grew up in Colorado Springs and worked much of his career serving our citizen-owners. He will long be remembered for his adept leadership in all four services and, particularly, overseeing the completion of the Southern Delivery System. Jerry has announced his retirement. Jerry, thank you for your years of service, and I'm proud to have served with you.

OUR FOUR UTILITY SERVICES

Electric System

The electric system serves Colorado Springs, Manitou Springs, portions of Fountain, and delivers special contract power to the U.S. Air Force Academy, Peterson Air Force Base and Fort Carson. With 221,000 customers, the electric service territory is 475 square miles and covers more than 90 percent of El Paso County. Seventy-five percent of the electric system is underground, and total generation capacity from six facilities fueled by a mix of coal, natural gas, renewables, and hydro is 1,091 megawatts in winter and 1,072 megawatts in summer.

Gas System

The natural gas system encompasses an even larger service territory than the electric system, 527 square miles, and approximately 2,500 miles of gas distribution mains. The system includes five gate stations and the propane air plant, which is used to supplement purchased gas.

Water System

Colorado Springs Utilities operates 67 distinct watersheds in 11 counties in Colorado, and owns over 16,000 acres of watershed land, serving more than 458,000 people through 140,000 metered accounts. There are six active water treatment plants with a total treatment capacity of 324 million gallons a day. The new Southern Delivery System treatment plant, dedicated in April 2016, was named for Edward W. Bailey and added 50 million gallons a day of treatment capacity to the system.

Wastewater System

The wastewater system covers a service area of 195 square miles, generally the City limits of Colorado Springs, and has 1,678 miles of wastewater pipe. The combined permitted treatment capacity of our two wastewater treatment plants is 95 million gallons a day. Colorado Springs Utilities also provides bulk wastewater service for the City of Manitou Springs and Stratmoor Hills.

ACKNOWLEDGMENTS

- Margaret Radford for her assistance with concepts and the writing
- Wendy Miller for her constant support, particularly for labors of love such as this book
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- Thane LaBarre and Scotty Stephens for keeping the Ray Nixon revolver under lock and key
- Lisa Barbato for her assistance with wastewater content
- Gary Bostrom and Tyler Allison for walking the El Paso Canal with me

SOURCES OF INFORMATION AND/OR PHOTOGRAPHS

Colorado Springs Pioneers Museum
Denver Public Library, Western History Collection
Hart Research Library at History Colorado
Pikes Peak Library District
John Wark
Wings Over the Rockies Air & Space Museum

Willigs Over the Rockies All & Space Museum

WRITTEN WORKS

City of Colorado Springs Department of Public Utilities, An Informal History, (1872-1969)

City of Colorado Springs Department of Public Utilities Gas and Electric Divisions Corporate History, 1879-1939

City of Mountains: Denver and the Mountain West, Eric Terje Busch, University of Texas at Austin

Colorado Springs Electric Generating Capability 1925 to 2017

The Colorado Springs Municipal Water System Emphasizing the Saga of the Blue River Project, Frederick T. "Rick" Henry, 1990

Colorado Springs Water Supply System brochure, 1970

The History Outline of the Colorado Springs Water System, 1977

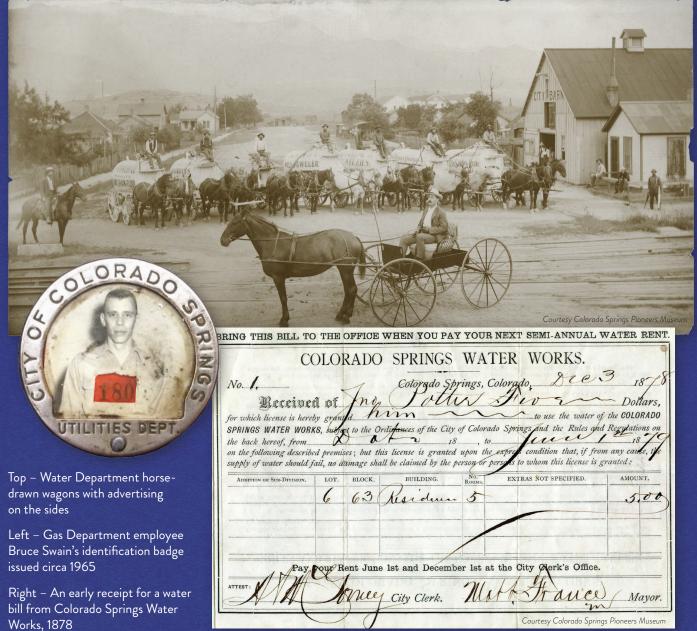
Holy Cross Wilderness Area and Homestake II: Case History, Conflict Analysis and Intractability, Mark Woods, 1994

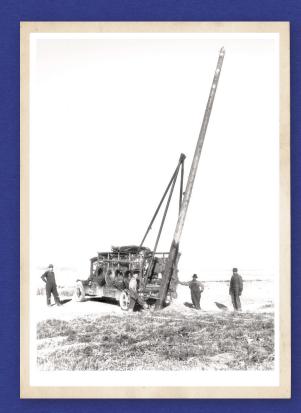
Hoover the Fishing President, Hal Elliot Wert

Waldo Canyon Fire Executive Summary

The 1900 City of Colorado Springs Annual Report

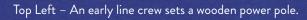
IMAGES FROM OUR HISTORY









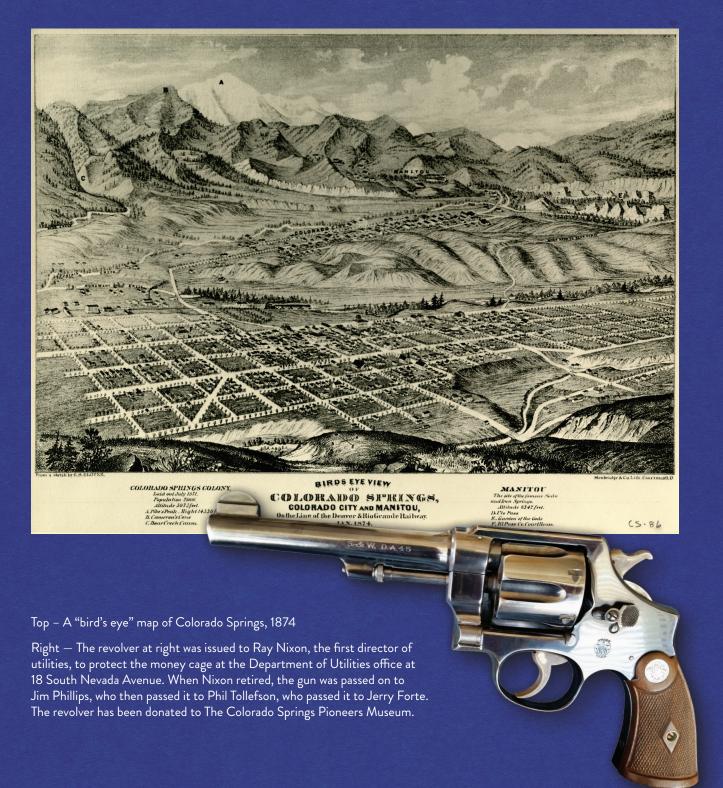


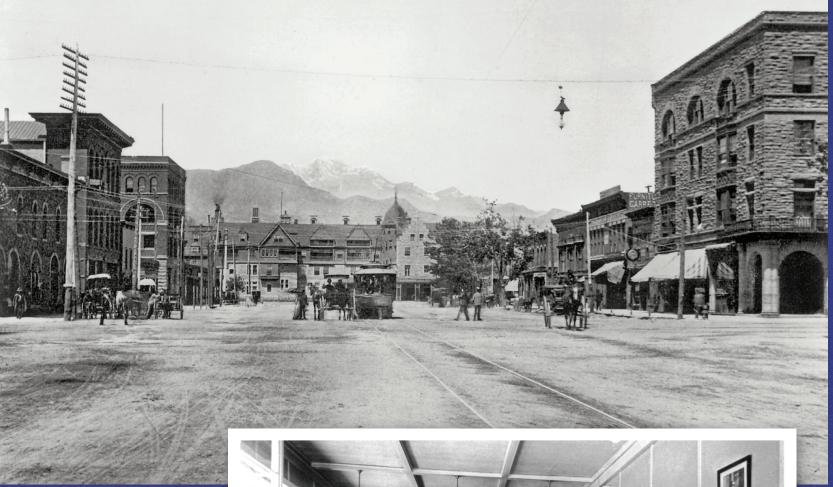
Top Right - Crews install pipeline looking toward Cheyenne Mountain.

Bottom Left - Colorado Springs Water Department wagon

Bottom Right – The Blue River pipeline from Hoosier Tunnel to Quandary Tunnel, 1955







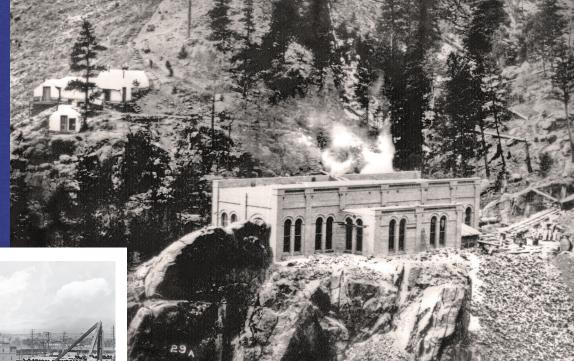
Top – One of the first five arc lights operated on Pikes Peak Avenue. This view looks toward the original Antlers Hotel. Circa 1880s

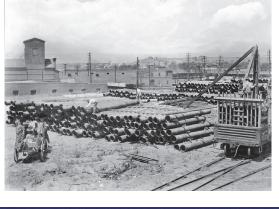
Right – The 1920s era
Colorado Springs Light, Heat
& Power Company office
featured a cashier's cage,
of course. It also offered
appliances to encourage
electric use, such as lamps,
sewing machines, fans,
kitchen appliances, toasters,
coffee percolators, pots and
pans, and light bulbs.



Top – Skaguay Hydroelectric Plant was built to power the mines and mills of the Cripple Creek district. This plant operated until 1965 when it was abandoned after two miles of pipeline were plugged with silt from a major flood. Circa 1900

Below – Old Gas Works 1903





Right – A City of Colorado Springs Water Works Extension Bond 1921

Far Right – The 1898 Interior of the Lake Moraine Hydroelectric Plant





FACILITIES AND THEIR NAMESAKES

To provide the most reliable service to customers, Colorado Springs Utilities employees work at dozens of plants, offices, stations and other locations throughout our community. A small number are named in honor of an individual for noteworthy contributions.



Edward W. Bailey Water Treatment Plant



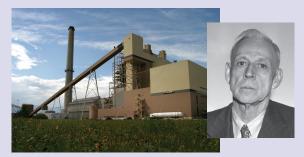
Gary M. Bostrom Reservoir (site of future construction)



Jack McCullough Water Treatment Plant



George Birdsall Power Plant



Martin Drake Power Plant



Ray D. Nixon Power Plant

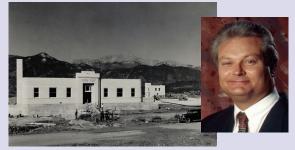




J.D. Phillips Water Reclamation Plant



John Pinkerton Service Center



Phillip H. Tollefson Water Treatment Plant

CSU uses the Pinello Ranch property, once owned by the Pinello family, for its water rights. CSU recently constructed 9.5 acres of wetlands as wildlife habitat associated with construction of the Southern Delivery System.



Nikola Tesla Hydroelectric Plant



Leon Young Service Center

Appendix E

The Mayor and Members of the City Council Date unknown



COLORADO SPRINGS CITY COUNCILS

1872

William B. Young, President Trustees: General R.A. Cameron Edward Copley

Matt France
John Potter

1873

Matt France, President

Trustees: C.T. Barton W.H. Macomber A.H. Weir James T. Wilson

1874

James T. Wilson, President Trustees: Henry McAllister, Jr. James H.B. McFerran

F.H. Sutherland C.H. White

1875

Henry McAllister, Jr., President

Trustees: G.S. Barnes N. Hodgman G.H. Stewart H.A. True L. Whipple C.H. White

1876

William Wagner, Mayor Aldermen:

C.T. Barton W.B. Brown N.W. Culver J.D. Rogers

1877

William Wagner, Mayor Aldermen: O.T. Barker W.C. Bradbury L. Morley J.D. Rogers

1878

Matt France, Mayor Aldermen: Giles Crissey Mathew Kennedy

Mathew Kennedy Charles Walker J.H. Woodgate

1879

Matt France, Mayor

Aldermen:
B.F. Crowell
H.F. Humphrey
Mathew Kennedy
John Lennox
R.C. Lyon
D.W. Robbins
J.D. Rogers

L.E. Sherman

1880

John H. Bacon, Mayor Aldermen: Ainsworth Brown B.F. Crowell E.W. Giddings J.F. Humphrey T.E. Johnson John Lennox J.D. Rogers Charles Walker

1881

Matt France, Mayor Aldermen: Ainsworth Brown E.W. Giddings John A. Himebaugh T.E. Johnson C.E. Noble Charles Walker J.E. Wheeler H.A. Wilson

1882

D.W. Robbins, Mayor Aldermen: R.W. Anderson Ainsworth Brown L.D. Coombs B. F. Crowell A.J. Downing John A. Himebaugh J.E. Wheeler H.A. Wilson

J.F. Humphrey, Mayor

Aldermen: R.W. Anderson Judson Bent Ainsworth Brown

Alvaro Hemenway Thomas Jones Thomas C. Parrish J.P. Ralston

1884

W.H. Roby

J.F. Humphrey, Mayor

Aldermen: Judson Bent A.G. Draper L.B. Farrar Alvaro Hemenway

Thomas Hughes
Thomas Jones
J.P. Ralston
William M. Strickler

1885

G. S. Barnes, Mayor Aldermen: C.E. Edwards L.B. Farrar Alvaro Hemenway

John A. Himebaugh Thomas Hughes L.C. Skinner

William M. Strickler W.F. Wilder

1886

F.E. Dow, Mayor Aldermen:

I. Bentley
Alvaro Hemenway
John A. Himebaugh
Thomas Hughes
A.L. Lawton
L.C. Skinner

J.W. Stillman

W.F. Wilder

1887

F.E. Dow, Mayor

Aldermen:
I. Bentley
C. Callaway
A. Hemenway
John A. Himebaugh
A.L. Lawton
L.C. Skinner
J.W. Stillman

1888

Aldermen:

William M. Stricker, Mayor

E.C. Bartlett
C. Callaway
John A. Himebaugh
A.L. Lawton
John Lennox
L.C. Skinner
H.H. Stevens
C.E. Stubbs

1889

J.W. Stillman, Mayor

Aldermen:
J.P. Barnes
W.R. Barnes
E.C. Bartlett
C.L. Gillingham
A.L. Lawton
A.M. Ripley
Ira G. Sprague
C.E. Stubbs

1890

J. W. Stillman, Mayor

Aldermen:
J.P. Barnes
E.C. Bartlett
L.A. Leech
H.C. McCreery
A.M. Ripley
W.R. Roby
F.L. Rouse
F.F. Rudy
Ira G. Sprague

1891

Ira G. Sprague, Mayor

Aldermen:
E.C. Bartlett
E.W. Davis
S. Dunbar
B.A.P. Eaton
Frank Finegan
R.B. Hosick
J.A. Leech
D.W. Robbins
W.R. Roby
F.L. Rouse

1892

Ira G. Sprague, Mayor

Aldermen:
E.W. Davis
S.J. Dunbar
B.A.P. Eaton
Frank Finegan
C.L. Gillingham
R.B. Hosick
C.C. Hoyt
J.A. Leech
D.W. Robbins
R.B. Taylor

1893

William M. Strickler, Mayor

Aldermen:
Edwin S. Bumstead
S.J. Dunbar
Frank Finegan
C.L. Gillingham
C.C. Holt
Thomas W. Huffman

J.A. Leech William H. Lloyd John R. Robinson R.B. Taylor

1894

William M. Strickler, Mayor

Aldermen:

Edwin S. Bumstead
S.J. Dunbar
Frank Finnegan
T.M. Huffman
Thomas Hughes
J.A. Leech
W.H. Lloyd
Wesley Nethers
J.C. Plumb
J.R. Robinson

1895

J.C. Plumb, Mayor Aldermen:

W.R. Barnes E. Barnett G.B. Bish S.J. Dunbar George F. Green Thomas Hughes J.A. Leech Wesley Nethers H.A. Wattson R.H. Woodland

1896

J.C. Plumb, Mayor

Aldermen:
E. Barnett
G.B. Bish
George F. Green
J.A. Leech
F.S. MacJohnstone
H.C. McCreery

H.C. McCreery W.H. McIntyre J.C. St. John H.A. Watson R.H. Woodland

M.B. Irvine, Mayor

Aldermen:

R.H. Ashworth Walter C. Frost

W.C. Jones

J.A. Leech

F.S. MacJohnstone W.H. McIntyre

DeLos Powell

V.E. Rouse

J.C. St. John

R.H. Woodland

1898

M.B. Irvine, Mayor

Aldermen:

R.H. Ashworth

William Banning

Walter C. Frost W.H. McIntvre

DeLos Powell

W.C. Rice

W.G. Rice

V.E. Rouse

J.C. St. John

R.H. Woodland

1899

J.R. Robinson, Mayor

Aldermen:

William Banning

E.W. Giddings

W.H. McIntyre

W.G. Rice

V.E. Rouse

George H. Sinton

E.D. Sommers

Henry A. Wattson

R.H. Woodland

J.C. St. John

1900

J.R. Robinson, Mayor

Aldermen:

William Banning

Francis Capell

E.R. Clark

H.S. Hawks

J.H. Madden

W.H. McIntyre George H. Sinton

E.D. Sommers

J.C. St. John

H.A. Wattson

1901

J.R. Robinson, Mayor

Aldermen:

R.H. Ashworth

William Banning

Francis Capell

E.R. Clark

H.S. Hawks

J.H. Madden

W.H. McIntyre

Albert Patton

W.C. Stark

J.C. St. John

1902

J.R. Robinson, Mayor

President Of the Council:

E.R. Clark

Aldermen:

R.H. Ashworth

W.M. Banning

Francis Capell

W.H. McIntyre

A.L. Patton

W.C. Stark

J.C. St. John

1903

Ira Harris, Mayor

Aldermen:

W.M. Banning

S.J. Dunbar

John Hill

A.M. Holden

A.L. Patton

L.C. Perkins

J.C. St. John

R.J. Verner

1905

Henry C. Hall, Mayor

Aldermen:

Carl Albin

E.W. Frost

A.M. Hill

A.M. Holden

E.B. Hosman

Thomas McCaffery

C.B. Seldomridge F.S. Tucker

1907

David N. Heizer, Mayor

Aldermen:

Carl Albin

C.T. Fertig

E.W. Frost

A.M. Hill John Hill

A.M. Holden

E.B. Hosman

W.T. Kasson

1909

W.H. Spurgeon, Mayor

Aldermen:

F.E. Dow

E.W. Frost

E.B. Hosman

Leonard Jackson

W.T. Kasson

A.B. Meservey

Adrian Ogle

O.W. Ward

1911

H.F. Avery, Mayor

City Council of Commissioners:

E.W. Frost

J.A. Himebaugh

A.J. Lawton

E.C.F. Whitaker

1913

Charles L. McKesson, Mayor

City Council of Commissioners:

J.J. Eubank

F.W. Frost

D.G. Johnson

A.J. Lawton

1915

Charles L. McKesson, Mayor

City Council of Commissioners:

W.A. Anderson

Perry Botts

J. J. Eubank

D.G. Johnson

1917

Charles E. Thomas, Mayor

City Council of Commissioners:

Perry Botts

Charles Chapman D.G. Johnson

Edgar Payton

1919

Charles E. Thomas, Mayor

City Council of Commissioners:

Perry Botts

Charles Chapman

D.G. Johnson Edgar Payton

Ira Harris,

Mayor and President Of Council

Councilmen:

George G. Birdsall

J.G. Dern

Martin Drake

Victor W. Hungerford

W.C. Jones

T.C. Kirkwood

A.L. Mowry

George M. Taylor

1923

Ira Harris,

Mayor and President Of Council

Councilmen:

George G. Birdsall

J.G. Dern

Martin Drake

Victor W. Hungerford

W.C. Jones

T.C. Kirkwood

A.L. Mowry

George M. Taylor

1925

Ira Harris.

Mayor and President Of Council

Councilmen:

George G. Birdsall

J.G. Dern

Martin Drake

Victor W. Hungerford

W.C. Jones

T.C. Kirkwood

A.L. Mowry

George M. Taylor

1927

Victor W. Hungerford,

Mayor and President Of Council

Councilmen:

Charles P. Bennett

George G. Birdsall

A.G. Crissey

Martin Drake

John W. Gilles

Douglas Jardine W.C. Jones

A.L. Mowry

1929

George G. Birdsall,

Mayor and President Of Council

Councilmen:

Charles P. Bennett

Edith C. Bramhall

A.G. Crissev

Martin Drake

John W. Gilles

Douglas Jardine

A.L. Mowry Ben H. Stewart

1931

George G. Birdsall,

Mayor and President Of Council

Councilmen:

Edith C. Bramhall

A.G. Crissey

John W. Gilles

Douglas Jardine

A.L. Mowry

M.M. Sinton

Ben H. Stewart

Frank F. Wulff

1933

George G. Birdsall,

Mayor and President Of Council

Councilmen:

Edith C. Bramhall

A.G. Crissey

A.L. Mowry

Henry C. Schmitt

M.M. Sinton

Ben H. Stewart

Daniel Thatcher

Frank F. Wulff

1935

George G. Birdsall,

Mayor and President Of Council

Councilmen:

A.G. Crissey

A.H. Jordan

C.A. Long

J.Z. McCullough

Henry C. Schmitt

M.M. Sinton

Ben H. Stewart

Frank F. Wulff

1937

George G. Birdsall,

Mayor and President Of Council

Councilmen:

W.W. Cowen

A.G. Crissey

Martin Drake

A.H. Jordan

C.A. Long

Henry C. Schmitt

H.G. Sinton

Ben H. Stewart

1939

George G. Birdsall,

Mayor and President Of Council

Councilmen:

W.W. Cowen

Martin Drake

R.J. Gilmore

William F. Holmgren

A.H. Jordan

C.A. Long

H.G. Sinton

Ben H. Stewart

1941

George G. Birdsall,

Mayor and President Of Council

Councilmen:

W.W. Cowen

Martin Drake

Ralph J. Gilmore

William F. Holmgren C.A. Long

H.G. Sinton

Robert L. Spurgeon

Ben H. Stewart

1943

Ralph J. Gilmore,

Mayor and President Of Council

Councilmen:

C. Harry Blunt

J. Russell DeFries

Martin Drake James N. McCullough

Ruth Banning Lewis

Clarence A. Long

Herbert G. Sinton

Robert L. Spurgeon

1945

Ralph J. Gilmore,

Mayor and President Of Council

Councilmen:

C. Harry Blunt

J. Russell DeFries

Martin Drake

James N. McCullough

Ruth Banning Lewis

Clarence A. Long

Herbert G. Sinton Robert L. Spurgeon

1946

Martin Drake,

Acting Mayor

Appointed Councilman:

Jasper D. Ackerman

1947

James N. McCullough,

Mayor and President Of Council

Councilmen:

Jasper D. Ackerman

W. Earl Bates

C. Harry Blunt

George L. Dern

Martin Drake Ruth Banning Lewis

Dr. Beryl Ritchey Merton M. Robbins

1948

Appointed Councilman:

Wilbur G. Hanes (replaced Dr. Beryl Ritchey)

1949 James N. McCullough,

Mayor and President Of Council

Councilmen:

Jasper D. Ackerman W. Earl Bates

C. Harry Blunt

Willis I. Deits

Martin Drake Eugene H. Martin

Theodore J. Middle Merton M. Robbins

C. Harry Blunt, Mayor and President Of Council

Councilmen:
W. Earl Bates
Roy A. Davis
William Henderson
Eugene H. Martin
Theodore J. Middle
Merton M. Robbins
Dr. E.L. Timmons
Carl Wangbert

1953

C. Harry Blunt,
Mayor and President Of Council
Councilmen:
Carl H. Decker
Harold Hawks
William C. Henderson
Eugene H. Martin
Theodore J. Middle
Fred W. Simpson, Jr.
Dr. E.L. Timmons
C.A. Wangbert

1955

C. Harry Blunt,
Mayor and President Of Council
Councilmen:
Carl H. Decker
Harold Hawks
William C. Henderson
Harold S. Heyse
Eugene Martin
Fred W. Simpson, Jr.
Dr. E.L. Timmons
C.A. Wangbert

1957

Fred W. Simpson, Jr.,
Mayor and President Of Council
Councilmen:
C. Harry Blunt
Carl H. Decker
Harold Hawks
William C. Henderson
Harold S. Heyse
Robert W. Johnson
Eugene Martin

Melvin H. Olsen

1959

William C. Henderson,
Mayor and President Of Council
Councilmen:
C. Harry Blunt
Carl H. Decker
Harold S. Heyse
Harry W. Hoth
Robert W. Johnson
Eugene Martin
Melvin H. Olsen
Hugh H. Weed, Jr.

1961

William C. Henderson,
Mayor and President Of Council
Councilmen:
Carl H. Decker
Harold Hawks
Harry W. Hoth
Robert W. Johnson
Eugene Martin
Melvin H. Olsen
William S. Roe
Hugh H. Weed, Jr.

1962

Appointed Councilman: Floyd K. Roberts (succeeded the late Eugene Martin)

1963

Harry W. Hoth,
Mayor and President Of Council
Councilmen:
W.H. Becker
Carl H. Decker
Harold Hawks
Betty F. Krouse
T. Eugene McCleary
Floyd K. Roberts
William S. Roe
Harry A. Scurr

1964

Appointed Councilmember: James K. Johnson (succeeded Floyd K. Roberts)

1965

Harry W. Hoth,
Mayor and President Of Council
Councilmen:
W.H. Becker
Carl H. Decker
James K. Johnson
Harold Hawks
Betty F. Krouse
Andrew Marshall, Jr.
T. Eugene McCleary
William S. Roe

1967

T. Eugene McCleary,
Mayor and President Of Council
Councilmen:
Karl F. Andrews
W.H. Becker
Harold Hawks
James K. Johnson
Betty F. Krouse
Andrew Marshall, Jr.
Lawrence D. Ochs
George Pfalmer

1969

Mayor and President Of Council Councilmen: Karl F. Andrews W.H. Becker James K. Johnson Betty F. Krouse Andrew Marshall, Jr. Lawrence D. Ochs Floyd W. Pettie George Pfalmer

T. Eugene McCleary,

1971

T. Eugene McCleary,
Mayor and President Of Council
Councilmen:
Karl F. Andrews
W.H. Becker
Richard E. Dodge
Betty F. Krouse
Andrew Marshall, Jr.
Lawrence D. Ochs
Floyd W. Pettie
George Pfalmer

1972

Appointed Councilmen: Louis A. Cortez (replaced George Pfalmer) Robert B. Kohler (replaced W. H. Becker)

1973

Andrew Marshall, Mayor
Councilmen:
Michael C. Bird
Louis Cortez
Dick Dodge
Betty F. Krouse
Larry Ochs
Fred A. Sondermann
Donald E. Willman
Leon Young

1975

Larry Ochs,
Mayor and President Of Council
Councilmen:
Michael Bird
Charles C. Brown
Louis Cortez
Dick Dodge
Robert M. Isaac
Andrew Marshall
Donald E. Willman
Leon Young

1976

Appointed Councilmembers: Margaret M. Vasquez (replaced Donald E. Willman) Bruce E. Shepard (replaced Andrew Marshall)

Larry Ochs, Mayor

Council: Michael Bird Charles C. Brown Dick Dodge George L. James Mary Kyer Robert M. Isaac Margaret M. Vasquez Leon Young

1979

Robert M. Isaac, Mayor Council: Thomas I. Anderson Michael Bird Eliseo C. Duran George James Mary Kyer Katherine H. Loo Peter M. Susemihl Leon Young, Vice Mayor

1980

Appointed Councilmember: Mary Vieth (replaced Katherine H. Loo)

1981

Robert M. Isaac, Mayor Council: Thomas I. Anderson Mary Kver Katherine H. Loo Ronny J. May David A. Sarton Peter M. Susemihl Mary Vieth Leon Young, Vice Mayor Appointed Councilman: Frank Parisi

(replaced Peter Susemihl)

1982

Appointed Councilman: Wilton W. (Buster) Cogswell III (replaced Thomas I. Anderson)

1983

Robert M. Isaac, Mayor

Council:

Wilton W. (Buster) Cogswell III

Katherine H. Loo Ronny J. May Frank J. Parisi David A. Sarton William W. Snyder Mary Vieth Leon Young, Vice Mayor

1985

Robert M. Isaac, Mayor Wilton W. (Buster) Cogswell III Mary Ellen McNally Frank J. Parisi Bruce Shepard William W. Snyder Mary Vieth Leon Young, Vice Mayor Appointed Councilmembers:

Quinten A. Kelso, Ph.D.

Mary Lou Makepeace

1987

Robert M. Isaac, Mayor Council: Wayne Fisher Mary Lou Makepeace Mary Ellen McNally Frank J. Parisi Randall W.B. Purvis Bruce Shepard Mary Vieth Leon Young, Vice Mayor

1989

Robert M. Isaac, Mayor Council: Wayne Fisher Mary Lou Makepeace Mary Ellen McNally Frank J. Parisi Randall W.B. Purvis Bruce Shepard Mary Vieth Leon Young, Vice Mayor

1991

Robert M. Isaac, Mayor Council: Lisa Are Cheryl D. Gillaspie John G. Hazlehurst Mary Lou Makepeace Randall W.B. Purvis Larry L. Small David S. White Leon Young, Vice Mayor

1993

Robert M. Isaac, Mayor Council: Lisa Are Jack Forrest Cheryl D. Gillaspie William F. Guman John G. Hazlehurst Mary Lou Makepeace Randall W.B. Purvis Leon Young, Vice Mayor

1995

Robert M. Isaac, Mayor Council: Lisa Are Jack Forrest Cheryl D. Gillaspie William F. Guman John G. Hazlehurst Mary Lou Makepeace Randall W.B. Purvis Leon Young, Vice Mayor

1996

Appointed Councilmember: Zelna Joseph (replaced Jack Forrest)

1997

Robert M. Isaac, Mayor, resigned Leon Young, Mayor (appointed through April 1997) Appointed Councilmember: Clarica M. Armstead

1997

Mary Lou Makepeace, Mayor Council: Lisa Are Linda Barley William F. Guman Dawson T. Hubert James A. Null Randall W.B. Purvis Lionel Rivera Leon Young, Vice Mayor

1999

Mary Lou Makepeace, Mayor Council: Linda Barlev Joanne Colt Ted Eastburn William F. Guman James A. Null Lionel Rivera Richard Skorman Leon Young, Vice Mayor

2000

Appointed Councilmember: Judy Noyes (replaced Joanne Colt)

2001

Mary Lou Makepeace, Mayor Council: Sallie Clark Ted Eastburn Judy Noyes James Null Lionel Rivera, Vice Mayor Margaret Radford Richard Skorman Charles Wingate

Lionel Rivera, Mayor

Council:

Tom Gallagher Jerry Heimlicher Scott Hente Randy Purvis Margaret Radford Richard Skorman Larry Small, Vice Mayor

Charles Wingate

2003

Appointed Councilmember: Darryl Glenn (replaced Charles Wingate)

2005

Lionel Rivera, Mayor Council: Tom Gallagher Darryl Glenn Jerry Heimlicher Scott Hente Randy Purvis Margaret Radford

Richard Skorman

Larry Small, Vice Mayor

2006

Appointed Councilmember: Bernie Herpin (replaced Richard Skorman)

2007

Lionel Rivera, Mayor

Council: Tom Gallagher Darryl Glenn

Jerry Heimlicher Scott Hente Jan Martin

Randy Purvis Margaret Radford Larry Small, Vice Mayor

2009

Lionel Rivera, Mayor Council: Tom Gallagher Darryl Glenn Jerry Heimlicher Scott Hente Bernie Herpin Jan Martin Randy Purvis Richard Skorman Larry Small, Vice Mayor

2009

Appointed Councilmembers: Sean Paige (replaced Jerry Heimlicher) Darryl Glenn (elected County Commissioner, resigned)

2011

Steve Bach, Mayor

Council:

Merv Bennett Lisa Czelatdko Angela Dougan Scott Hente, President

Bernie Herpin

Tim Leigh

Jan Martin, President Pro Tem

Val Snider Brandy Williams

2013

Steve Bach, Mayor

Council:

Mery Bennett, President Pro Tem

Helen Collins Jill Gaebler

Keith King, President

Don Knight Jan Martin Joel Miller Andy Pico

Val Snider

2014

Appointed Councilmembers: Larry Bagley (replaced Joel Miller)

2015

John Suthers, Mayor

Council:

Larry Bagley

Merv Bennett, President

Helen Collins

Jill Gaebler, President Pro Tem

Keith King Don Knight Bill Murray Andy Pico Tom Strand

2017

John Suthers, Mayor

Council: Yolanda Avila Mery Bennett

Jill Gaebler, President Pro Tem

David Geislinger Don Knight Bill Murray Andy Pico

Richard Skorman, President

Tom Strand