

## **Like a duck to water, city always looking for more**

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When Gen. William Palmer laid out a new town in the shadow of Pikes Peak in 1871, he probably never imagined it would grow to nearly 380,000 residents, the second-largest city in the state.

If he had, he might have built it somewhere else.

Colorado Springs averages just 17.4 inches of precipitation a year - less than half that in Palmer's native Philadelphia. The city has no Delaware River, like Palmer's hometown; or a South Platte River, like Denver; or an Arkansas River, like Pueblo.

To keep up with population growth, Colorado Springs has extended straws in practically every direction, from the high peaks of the Sawatch Mountains to the arid southeastern plains, a water system spread out across hundreds of miles.

The Southern Delivery System may be the last straw. The exact route of the \$1.1 billion pipeline - from either Pueblo Reservoir or the Arkansas River in Fremont County - is undecided, but it seems likely the Department of Public Utilities will begin construction this year.

It will bring 78 million gallons of water a day to a new reservoir east of Colorado Springs, which officials say will provide enough to meet demand here through 2046. It will be the most expensive project Utilities has ever done.

Even the economic slowdown - and the impact it could have on population projections for Colorado Springs - won't slow the pipeline.

Some officials, including City Council members, have suggested the pipeline could be delayed until development regains momentum as a way to ease the impact on customers who just saw a 41 percent hike in water rates.

Utilities officials say the pipeline is about redundancy as much as it is about development. Colorado Springs' water system is vulnerable to disruptions that have occurred before - a fire at a pumping station, a lightning strike on a pipeline, drought.

The Homestake Pipeline, which carries 60 percent of the city's water, is nearly 50 years old and will soon need major work.

Throughout the history of the city's water system, officials have always built for the next population boom with this philosophy: Get what you can, when you can, and worry about who is going to drink it later.

## **Citizens demand relief**

In Colorado Springs' early days, the grasshoppers often descended with little warning, devouring a season's worth of crops in minutes.

Annoyance turned to hysteria when, at least twice in the 1870s, the insects rendered unusable the El Paso Canal, which Palmer built to divert water from Fountain Creek.

Citizens demanded action and, in 1878, approved a municipal water system. Planners soon looked west to Pikes Peak to fulfill city needs.

In 1891, the city paid \$70,000 for land on the south slope of Pikes Peak and built a dam on Lake Moraine. The city built Bohemer Reservoir in 1894, Bighorn and Wilson reservoirs in 1896. Water flowed through tunnels and into Ruxton Creek in a system that, in 1901, The Gazette called "the finest gravity water system in the world."

But jaws dropped at the cost of bringing water to town. Several taxpayers sued the city in 1902 to stop the purchase of 400 acres on the south slope for \$69,000.

The city won, and eventually it built seven reservoirs on the south slope.

Still, there was constant fear of shortage. A 1916 report said the city had only 10 months of water in storage in the event of a drought. The report noted that residents used 186 gallons of water a day. That's twice the per-capita use today.

So the city kept building dams. Crystal and South Catamount reservoirs were built for \$2 million on the north slope of the peak, with the help of New Deal money.

## **Eyes turn to the west**

In 1948, the city was booming, thanks to postwar expansion of military facilities. But every drop of water was being squeezed from Pikes Peak snowmelt. So Colorado Springs decided to build a tunnel under Hoosier Pass, between Park and Summit counties, to import water from the Blue River.

Between 80 and 90 percent of Colorado's snow falls west of the Continental Divide, but 80 to 90 percent of the population lives east of it.

The U.S. Bureau of Reclamation had proved three years earlier, with the completion of the Big Thompson project in northern Colorado, that water could be diverted under the divide to the Front Range. The so-called water buffaloes - utility officials always searching for new sources of water - were swarming over the high country.

Denver had beaten Colorado Springs to building reservoirs along the South Platte River in Park County, including Elevenmile in 1932, which is more than twice as far from Denver as from Colorado Springs. Denver and several other cities were vying for shares of the Blue, and officials here hoped that spending \$60,000 to begin work would bolster their case.

As usually happens in water disputes, it took a judge to sort it out, and Colorado Springs was eventually awarded a share of the Blue's water.

The city built three tunnels, 70 miles of pipeline and two reservoirs - drowning the old mining town of Montgomery, just south of Hoosier Pass - at a cost of at least \$17 million. Water began flowing in 1953.

### **Promising creek**

John. P. Elliott was a brawny man with big dreams.

A Denver engineer, he spent years packing through Colorado's backcountry, mapping drainages, creeks and good spots for reservoirs. One day, during the early 1950s in the Sawatch Mountains near Mount of the Holy Cross, he happened upon Homestake Creek, named for an old mining camp, in a valley ringed by snowcapped peaks.

Why couldn't this water be diverted to the parched and growing Front Range, instead of letting it flow into the Colorado River to quench the thirst of Los Angeles? He bought the water rights to Homestake Creek and, in 1956, shopped his idea to Denver and other cities.

He was shocked by the lack of interest and, discouraged, approached Colorado Springs. It took only a few minutes to sell them on the idea.

Though the Blue River system was supposed to meet the city's needs through 1970, the 1954 announcement that the Air Force Academy would be located here caused a search for more water. The year before, the Twin Lakes Reservoir and Canal Co. had coldly rebuffed an offer of \$14 million for the Lake County reservoir.

The city of Aurora signed on as a partner, and so was launched the largest water project in Colorado Springs history.

It caused an outcry on the Western Slope, where local officials saw it as an illegal water grab. But, in 1961, the Colorado Supreme Court said there was nothing in the law that said water had to remain in the watershed where it originated.

The Homestake system, which began operating in 1967, funnels water five miles under the Continental Divide into Turquoise Reservoir near Leadville. It is pumped 750 feet through the Mosquito Mountains to Spinney Mountain Reservoir, then to another pump station near Divide, and into Rampart Reservoir and finally to faucets, a 120-mile journey.

It cost \$41 million, the most expensive project to date, but pennies compared with what was to come.

### **Tapping the Fryingpan**

Farmers in the lower Arkansas Valley, home to a thriving sugar-beet industry, had been trying to build a diversion through the Continental Divide since the 1920s. By the mid-1950s, it had taken the shape of a diversion from the Fryingpan River near Aspen, under the Continental Divide to Twin Lakes, terminating with the construction of the new Pueblo Reservoir. The U.S. Bureau of Reclamation agreed to build it.

Conservatives saw the idea as a multimillion-dollar giveaway to farmers who were already being paid not to grow crops. The Western Slope and California saw it as a threat to the Colorado River. Defeating it in Congress was an annual rite.

But when the project's focus was changed to municipal water, hydroelectric generation and recreation, much of the opposition vanished, and it passed Congress in 1962. It cost \$500 million, to be repaid by water users, including Colorado Springs, Fountain, Widefield, Security and Stratmoor Hills, who together pay 72 percent of the cost.

In 1972, Colorado Springs finally bought into Twin Lakes Reservoir for an initial price of \$13.5 million. Subsequent purchases give Colorado Springs a majority interest in the water.

Getting the water here was the problem. The Homestake Pipeline could handle only so much, so the Bureau of Reclamation conceived the Fountain Valley Authority pipeline from Pueblo Reservoir.

But pumping water 1,510 feet uphill turned out to be easier said than done.

The pipeline leaked. It froze. Pumps broke down. Birds pecked holes in the roofs of the five pumping stations.

The authority, formed by local governments to oversee the pipeline, told the bureau it did not want the pipeline until the problems were fixed.

"It has been one nightmare after another," authority President Jim Phillips told The Gazette in November 1984. "(The project) seems to be a lemon."

It came on line in 1985, two years late and \$12 million more than originally budgeted.

The total cost, including a treatment plant, was \$77 million. The pipeline is the main source of Fry-Ark water for Colorado Springs, providing 10 percent of the city's supply.

### **Search continues**

In the 1980s, local utility officials began scouring the state again, looking for more water.

Things had changed from the days of the Blue River and Homestake. Large swaths of the mountains were becoming wilderness areas, with strict limitations on development. The National Environmental Policy Act of 1969 created a new level of review for projects.

In 1986, Utilities bought majority interest in the Colorado Canal, Lake Henry and Meredith Reservoir in southeastern Colorado, waterways used by farmers until the collapse of the sugar-beet industry in the lower Arkansas Valley. This allowed Colorado Springs to "exchange" water by taking more water upstream into Homestake and releasing water from those reservoirs, so the overall quantity in the river is not diminished.

But Utilities also suffered a major check, when it tried to collaborate with Aurora on the ill-fated Homestake II Project. The cities proposed diverting water from a drainage in the Holy Cross Wilderness. In 1988, Eagle County denied a land-use permit, a decision later upheld by the Colorado Supreme Court.

Then came Elephant Rock. A 1989 Colorado Springs water study suggested a dam on the Arkansas River near Buena Vista as one possible source of water to supply an anticipated population of 449,686 by 2010.

But the idea of a lake didn't sit well in Chaffee County, where river rafting is a big part of the economy. When people learned Colorado Springs was considering it, the outcry forced Utilities to back off.

One or two signs opposing the project still line the highway in Chaffee County. Utilities officials sometimes borrow them for jokes at retirement parties.

### **Quenching future thirst**

Colorado Springs owns the rights to the water that will come up the Southern Delivery System, thanks to Fry-Ark and the other water it has acquired since looking west in the early 1900s.

Moving water 1,500 feet uphill is not the most efficient way of delivering water. When the pipeline reaches capacity, it will cost \$7.4 million a year to pump it from Pueblo Reservoir. But the pipeline was long ago identified as the best option for quenching Colorado Springs' future thirst.

It seems likely to be the last major water project for Colorado Springs. Most of the state's water is already overappropriated, and the age when cities can drown homes and valleys to build reservoirs in far-off communities without overwhelming opposition is over.

The cost of the projects have always been borne by residents. With an average monthly water bill of \$34.79 projected for this year, Colorado Springs residents pay higher water rates than many Front Range cities, though lower than Aurora or Lakewood. Rates are expected to keep rising during the coming years.

Officials say the future of Colorado Springs beyond 2046 will be built on water conservation, reuse and purchases from agricultural communities.