

THE FLOWING CITY DITCH END OF AN ERA IN LITTLETON

Colorado is celebrating the anniversary of Statehood in 2026. While 1876 was a big year, events a decade earlier may have had more significance for Colorado's place in the Union. In May of 1867 an irrigation ditch first delivered water from the South Platte River to what city booster William Byers, editor of the *Rocky Mountain News* admitted was a "treeless, grassless and bushless" collection of log cabins and tents in Denver City. The Ditch water made it possible to grow field crops and irrigate apple orchards in Arapahoe County as well. In the even smaller collection of farmhouses and barns in today's Littleton, an enterprising engineer, that same year, opened a water powered mill to grind the grain which he knew those irrigated fields would produce. Irrigated agriculture proved the skeptics wrong who called the region, "The Great American Desert." With Ditch water, in the late Pioneer period in Colorado, the Platte River Valley above Denver was truly the region's bread basket. Denver blossomed with street trees, lawns and gardens into what its promoters would truly call, "The Queen City of the Plains"

Seven of the ten oldest irrigation ditches on the entire South Platte River originated south of Denver, watering field crops. Richard Little's Rough and Ready Mill prospered as his community's economic engine and social magnet. In 1872 he filed a plat of part of his homestead laying out the Town of Littleton. The plat included the site of the his Mill. For 92 years the mill stood like a sentinel reminding the Littleton community of its agrarian history until it burned down in 1959.

The historic City Ditch, on the other hand, survived into the 21st century with water flowing openly in the same ditch which Richard Little surveyed in the early 1860's. The first ditch of its kind in Colorado, the ditch which demonstrated that the desert could bloom, has continued to flow in Littleton, for all to see, for 159 years. It flows exactly as designed and constructed at the time of the Colorado Gold Rush. It will continue that function in its 160th year in 2027 but it will no longer be visible. It will be buried in a pipeline underground and with very small exceptions, no visible evidence that it ever existed. There is more to the story.

To return to the history, not all those hardy pioneers who crossed the prairie in 1859-60 were gold seekers. Among them were farmers and ranchers seeking free land and a new start. There were also townsite promoters who saw the opportunity to sell building sites to entrepreneurs who wanted to start businesses which supplied the gold seekers and miners. A good many of the estimated 100,000 people who crossed the barren prairies gave up and went back east when they saw the collection of log cabins and tents called Denver City. This was truly the "Great American Desert" they had been warned about. Early explorers declared that the land could not support a civilization because sufficient crops could not be grown to feed either livestock or people.

A collection of farsighted leaders declared that all the land needed was irrigation water for agriculture to thrive and for Denver to grow trees and lawns and gardens, just like back home. A corporation, "The Capitol Hydraulic Company", was formed and in 1860 workmen started digging an irrigation ditch. It was designed to take water from the South Platte River and deliver it by gravity to both sides of every street in Denver, 26 miles away. Water could also be sold to farmers and ranchers irrigating farmland in the Valley along the route. Digging stopped in 1862 because Eastern financiers were more drawn to supplying capital for the Civil War. In 1864, work was restarted and the first water was finally delivered to thirsty Denver properties in 1867.

And the promoters were right, all the land needed was irrigation water and the Capitol Hydraulic Ditch proved that. It was later called the Big Ditch and still later Smith's Ditch and still later the City Ditch because the City of Denver owned and operated it for over 100 years. It was the first of what led to more than 250 irrigation ditches off the South Platte River in northeast Colorado by the 1880's. But first it turned Denver green and fulfilled the pledge to make Denver the "Queen City of the Plains." From a population of 4,759 people in 1870, Denver mushroomed to 35,629 in 1880, 106,713 in 1890 and 133,859 in 1900. The Platte River Valley in what is today's south Denver, Englewood and Littleton became the pioneer breadbasket of Colorado. Richard Little, that City's namesake, had gambled that irrigation water could produce bounteous crops needing milling. He was so optimistic that he had opened a water powered grain mill in 1867, the same year that the Ditch water first flowed to Denver. The mill proved to be a huge success. After the coming of the railroads in 1872, the mill allowed Valley farmers to grow wheat for shipping flour in barrels not only to Denver and the goldfields of Colorado but nationwide.

So what is the big deal with the City Ditch today? The answer is that with very minor exceptions, the visible Ditch in Arapahoe County with water flowing in it, which can be seen in Littleton today, will soon be gone. There will still be water flowing but it will be underground, in a pipeline, with little evidence of the Ditch's existence above ground. The three exceptions will be water flumes, two in Littleton and one in Englewood. Water flumes are like bridges across gulches or streams which carry ditch water. Because a ditch is flowing by gravity following the contour of the land at a very precise downhill gradient, when it comes to a depression, it needs to cross it while maintaining that correct grade. Hence, a flume is a bridge for flowing water. The three surviving flumes were constructed in 1945 as replacements for older flumes which were likely wooden. The two flumes in Littleton will never again carry water, The flume in Englewood has been covered and while it will continue to carry water, the flowing water will not be visible,

The City Ditch today is effectively two different sections of the same historic Ditch and each serves slightly different purposes than the original Ditch. In Arapahoe County, the physical City Ditch has been owned by the City of Englewood since 1970. The legal right to take water from the South Platte River and put it into the City Ditch still belongs to the City and County of Denver. That water right is very valuable because it is the senior right on the entire South Platte River. Englewood has contractually traded water

rights it owns to Denver for Denver's use elsewhere and Englewood uses the City Ditch to convey the water it owns to its water treatment plant and to Englewood water customers.

An open ditch is not the ideal method to supply drinking water for human consumption. It is open to the atmosphere and subject to pollution from trash, yard debris, street runoff, animal waste and other potential contaminants. The Englewood Utilities Department has been systematically replacing short sections of the open Ditch in Littleton with a pipeline for several years. The reason the flowing City Ditch is disappearing is that Englewood will virtually complete piping the remaining open sections of the Ditch in late 2026 or early 2027. Clean, high quality water will thereafter be conveyed directly from Chatfield Reservoir to Englewood's water treatment plant in an enclosed pipeline without exposure to the atmosphere.

Interestingly, there will continue to be irrigation water customers on the City Ditch in Littleton. They are technically Denver Water irrigation water customers receiving that water directly from the South Platte River via the original City Ditch which is now owned by Englewood and which will be buried in the ground. Just as customers used water from that same Ditch to irrigate wheat fields and hay meadows 150 years ago, today, as the Ditch passes through Littleton, it irrigates lawns and greenery at the Denver Seminary, St. Mary's Church, Hudson Gardens and Events Center, the Littleton Cemetery and Geneva Park. The Ditch will continue to do what it was designed to do.

The City Ditch in Denver is also an interesting story. We all know water is an increasingly scarce commodity in the drought stricken, climate changing West. Today Denver Water actually serves more customers but with only slightly more water from the South Platte River than a decade ago. It does that through aggressive conservation measures. One of the oldest is the recognition that open irrigation ditches are a very inefficient way to deliver water to irrigation customers, like parks. Some of the ditch water soaks into the ground before it reaches the customer. That is good for watering stately cottonwood trees along the bank, but bad if it means less water to actual customers. If other methods of delivering irrigation water are available, the ditch can be shut down. That was the case when potable water companies began furnishing water to Denver customers in the 1870's. By the 1890's, the little lateral ditches on the both sides of the streets, which had effectively watered the original trees, became a source of complaints to City Hall. "They make the "up to date Denver" look like a cowtown and smell bad," people said. So, those lateral ditches were filled in. By the 1900's the City Ditch in Denver was cut back to watering just three large customers: Washington Park, the Denver Country Club and City Park. Eventually the Ditch itself connecting those three, while still very much operational, was piped.

The more recent change in Denver Water's aggressive conservation efforts is recognition that significant amounts of waste water released from the Metro Wastewater Treatment Plant, called Metro Water Recovery, belongs to Denver and not downstream irrigators. That water can be treated to a high standard, pumped back uphill and sold to industrial users or for irrigating park lands. That in turn frees up more

water for treatment and sale to households without putting any more demands on the South Platte River. What that means for the City Ditch in Denver is that the Ditch still flows, mostly in a pipeline, but the flowing water does not come directly out of the Platte River, as it still does in Littleton and Englewood, but from the Metro Wastewater Treatment Plant. The physical reality is that water to irrigate the two Parks and Golf Course appears to come out of what looks like a culvert on the north side of Louisiana Avenue or the south boundary of Washington Park. It flows into a Ditch which is, in fact, the original 1867 City Ditch in the Park. The Ditch releases some water to Grasmere Lake, winds down the west side of the Park adjacent to Downing Street and releases water to Smith Lake. The water then goes into an underground pipe flowing toward the Denver Country Club. After depositing some water in the DCC Lakes the Ditch flows, still in a pipeline, to the Ferril and Duck Lakes in City Park. The short section of the open City Ditch in Washington Park is the only location in Denver where flowing water can be seen in the original Ditch. Water has flowed there, filling Smith Lake, since 1867. The Ditch in Washington Park is on the National Register of Historic Places.

So, should we lament the loss of visible water flowing in an old irrigation ditch in Littleton? Probably not, because Englewood's drinking water will taste notably better. But on the other hand, we should pause for a moment and reflect that the City Ditch was the first of its kind in Colorado. It was a gamble, like Denver itself was a gamble, in 1860. There were no railroads serving Denver, no steamboats on the Platte delivering trade goods, there was just 500 miles of prairie and a 10 day stagecoach ride from civilization to get back east. Far sighted leaders said irrigation water was all that was needed to make the desert bloom. The City Ditch water proved them right. Our predecessors were hardy folk and the gambles paid off big time.

We might also pause and reflect that the City Ditch and irrigation water in general are the underlying stories of the American West. The City Ditch made it possible for early Denver to grow and prosper and showed the way to all the great cities and agricultural areas of the American West. They all rely on rivers today. Take away the water and The West is still the Great American Desert. Cities like Phoenix, Las Vegas, even Los Angeles rely on the Colorado River for power generation, food supply and their very existence. Even Denver gets nearly 40% of its water from the Colorado River Basin. We should all be aware where our water comes from and use it wisely. Maybe if we study the historic City Ditch it can help us learn to husband this limited resource for the benefit of all.

Larry Borger
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City Ditch Flume over Lee Gulch in Ridgewood Park in Littleton. After 2026, this flume will never carry Ditch water again.



City Ditch Flume over Slaughterhouse Gulch in Slaughterhouse Gulch Park in Littleton. This Flume will never carry Ditch water again.



City Ditch Flume over Big Dry Creek in Belleview Park in Englewood. This Flume will continue to carry Ditch water but the Flume is covered and flowing water is not visible.