

Acknowledgements: This project was partially funded by a State Historical Fund grant from the Colorado Historical Society. Additional support came from the City of Boulder Public Works Department and the Center for Western Lands of the University of Colorado at Denver.

Our thanks to Carol Ellinghouse, Jim Snow, Everett Long, Sarah Binford Avery, Lara Ramsey, Dan Buckner, Delani Wheeler, Wendy Hall, Estella Cole, Tim Hunsdorfer, Boyd Sheets, and the water users of Silver Lake Ditch, who have long appreciated their role as custodians of a Colorado cultural tradition, and have taken great care to record that tradition for themselves and for historians. Errors, opinions, and interpretations are the author's alone, and not those of the Colorado Historical Society, the City of Boulder, or the Silver Lake Ditch Company.

© 2000 University of Colorado at Denver

cover: admiring the view from Silver Lake Ditch at Dakota Ridge, c. 1890s.

This booklet is dedicated to Everett Long, for his many years of caring for Silver Lake Ditch, and his many years of explaining it, which is part of the same job.



Boulder Valley Ditches:
Silver Lake Ditch
A History and Guide

This booklet is one of three: Anderson Ditch
 Farmers Ditch
 Silver Lake Ditch

Michael Holleran

The first half of this booklet appears in identical form in all three; the second half in this one alone.



Farmers Ditch north of the city, 1999

Irrigation in Boulder

“In the many ... irrigating channels which traverse the city in so many quarters Boulder has what seems like a veritable treasure of municipal decorations, ... all retaining their essential elements unspoiled and ready to shed beauty all about them if only given a proper setting.”

-- Frederick Law Olmsted, Jr., 1910

Within the city of Boulder, Colorado, in addition to two year-round creeks and a handful of intermittent ones, there are twenty-three other waterways that flow half the year. These are irrigation ditches, bringing water through the city on its way to fields, pastures, orchards and gardens. The 30 miles of ditches make up most of the system of watercourses in Boulder.

The ditches are old. Raising food in this semi-arid region required irrigation, so Boulder’s first ditch was dug in the city’s first year, and most were finished by the 1870s. Cottonwoods and willows have grown over more than a century and the ditches now seem more natural than artificial. The rest of the city has grown around them, sometimes forming itself around the ditches, sometimes ignoring and swallowing them.

In 1859, two of Boulder’s first residents, Marinus Smith & William Pell, sold a load of hay to miners in Black Hawk for \$400, an amount of money that could then buy a house. Boulder pioneers didn’t always know where to find gold, but they knew how to make hay. Smith and Pell dug Boulder’s first irrigation ditch - now known as Smith-Goss Ditch - in 1859. It still runs under the Arapahoe Avenue sidewalk and appears briefly in front of the old Lincoln School, now Naropa University. Less than a year later, water began flowing through the more ambitious Anderson Ditch, another project of Marinus Smith, together with Jonah Anderson and others on the south side of the creek.

Pioneers could find irrigation precedents in the Hispanic systems of southern Colorado, pueblo systems before that in New Mexico, and Mormon irrigation in Utah. The most direct ancestors of Boulder ditches were probably mining districts in California; hydraulic mining techniques were brought back east to Colorado goldfields and then down to the plains. Several of Boulder’s pioneer ditch-builders - Frederick Kohler, Marinus Smith, and Henry and Luther Wellman - had prospected in California before coming to Colorado. From mining camps also came the basic concept behind Colorado water rights: like a vein of ore, whoever used it first gained a right to it. “First in time, first in right” - history is at the very foundation of Colorado water law.

Ditches did not just serve farmland; they were also Boulder’s first domestic water system. *Laterals* - little side ditches - carried water to every house in many neighborhoods: from Anderson Ditch to Highland Lawn, from Farmers Ditch to downtown, and later from Silver Lake Ditch to Mapleton Avenue and North Boulder. In 1872, the Boulder Aqueduct Company was organized to distribute Farmers Ditch water through wooden pipes; it is not clear whether the company ever delivered any water. The aqueduct company was superseded a few years later by a municipal system, but the street laterals continued alongside it for decades.

The street laterals were formalized in 1883 with cobblestone channels, two feet wide and eight inches deep. Little stone bridges crossed the little stone ditches. Twenty-five years later, a real estate promoter touted Boulder for its “streams of clear, cold water coursing through the



Downtown Boulder street lateral, c. 1896

streets in stone gutters.” One Boulder resident remembered from her turn-of-the-century childhood that “there was always a little ditch water running up and down the streets, you know. It was a lot of fun to make dams and put boats on them and so forth. I don’t know now where all that water came from, but it ran down every street that I can remember - had a little ditch running down the side of it and it was so much fun to play in.”

Households needed water all the time, so in early years the ditches ran year-round, except a brief spring shut-off for cleaning and an occasional winter cold spell when the channels froze solid. At those times, Mapleton Hill children used Farmers Ditch for ice skating. During cold months, the laterals froze first, and then some Boulderites had to carry household water from the main ditches.

Ditch technology

The **headgate** controls the amount of water entering the ditch, protects it from floods, and removes as much as possible of the creek’s sediment and debris. The first headgates were built of wood; all of Boulder’s

ditches now have concrete and steel headgates, some of them built early in the twentieth century.



White Rock Ditch headgate and diversion dam, on whose design Frederick Law Olmsted, Jr. consulted. Photo 1921

Diversion dams are little dams (not big dams for storage; those came later) that in times of low flow direct the stream toward the headgate. While these are now engineered structures designed to survive most floods, early diversion dams were often made of brush and stone and rebuilt every year or so.

Ditching - digging the channel - was usually done by a team of oxen using either “ditchers” or ordinary plows. Grade could be regulated with levels attached to the plows. Ditch builders aimed for a drop of one inch per 20 feet; they measured distance by the turns of wagon wheel. Little ditches might be dug by farmers; big ones (such as Boulder’s White Rock Ditch) were sometimes built by railroad contractors, because the large labor force required and some of the engineering was similar.

Flood irrigation of pastures was first controlled by shoveling earth to open one channel and close another. Later wooden boxes controlled the flow to each lateral. Starting in the 1920s, these boxes were in turn superseded with concrete boxes and steel gates. On the laterals, irrigators used movable canvas “tappoons” to block the lateral where water was wanted on the field (until recent years this system could be seen watering the CU campus).

Measurement was a part of the system that grew in importance. Ditch flow was first measured in “miner’s inches”; a term that attested to the Gold Rush origins of Colorado irrigation practice. Ralph Parshall, a professor at Colorado State, in 1937 invented the *Parshall flume*, a standardized sheet-metal channel in which flow can be measured accurately. Near the head of each ditch, and sometimes at other important division points, instruments provide a continuous record of flow, inside a small *recording house* (often a round sheetmetal silo about as tall as a person).



The Parshall flume and recording house for Silver Lake Ditch, 1999

Storage: Ditches often delivered water to small-scale farm ponds. Sometimes they filled larger reservoirs on the plains for later redistribution. Eventually some relied on high-watershed storage such as Silver Lake, to release water into the creek above the ditch.

Ditches as amenities

“When Boulder is visited by an eastern stranger who has an eye for beauty,” wrote one such easterner, “and some acquaintance with the use to which water is put in the gardens and cities of older countries he cannot fail to be strikingly impressed with the neglect of what seems to him an extraordinary opportunity for civic beauty.” That “east ern stranger” was Frederick Law Olmsted, Jr., Professor of Landscape Architecture at Harvard University and one of the founders of the profession of city planning. In 1910, at the invitation of a group of Boulder citizens, Olmsted prepared a pamphlet of suggestions for the city’s “improvement.” In addition to proposing the greenway ultimately realized decades later as the Boulder Creek Path, he suggested a promenade along Whiterock (then called Beasley) Ditch through the center of town, and a parkway following it beyond Folsom, then the eastern edge of Boulder. He also proposed a park and trail along Farmer’s Ditch below Red Rocks Park:

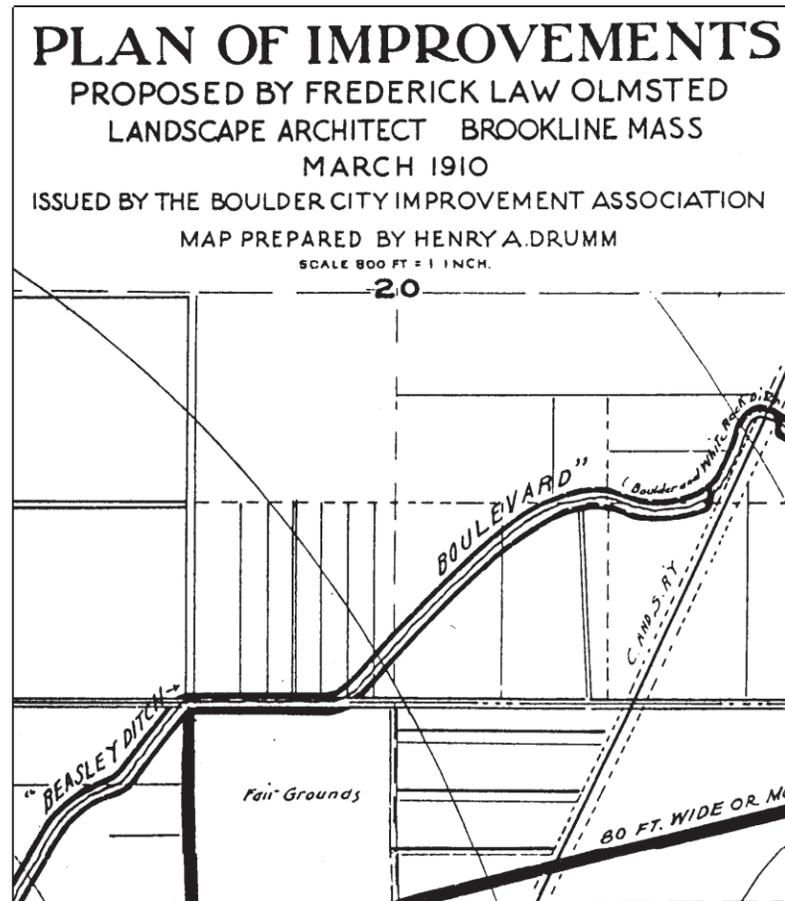
Given sunshine and breeze and the wonderful plunging view across the valley to rugged mountains bathed in sunlight; given shade from the direct glare of the sun and sky, easily to be obtained by planting; the one thing wanted to complete the situation is water, and the quiet flowing canal on its way to irrigate the fields beyond the city gives the very note that is needed. To be sure its banks are here shabby and neglected, the vegetation is weedy and an appearance of squalor is more or less in evidence, so that a superficial observer might turn away without feeling the least interest in the ditch. But all the essential elements of the most beautiful scenes of Italy are here, waiting only a little patient, skillful care to unite them into a little picture of paradise.

Olmsted devoted several pages to ditches throughout Boulder. They clearly charmed him.

If the inherent beauty of the water of the irrigating channels were supplemented by such treatment of their immediate borders as would remove the unpleasant associations that now in many places attach to them, such treatments as would bring out and enhance the natural associations of refreshment and abundance that are inseparable from them and would re-enforce their intrinsic charm, these channels alone would serve to make Boulder a place of high civic beauty.

Olmsted collaborated on the design of one ditch headgate in Boulder -

Whiterock Ditch, whose Olmsted-designed headgate still operates in Central Park (photo page 4). His advice on the design is a remarkable early statement of the philosophy that would later become 20th-century architectural Modernism: “The entire construction should be kept very simple and straightforward, with no applied ornaments or unnecessary complications of form. Any distinctive quality in appearance should be sought by making the work thoroughly substantial and durable and by avoiding awkward and ugly lines rather than by making a special effort at beauty or ornamentation for its own sake.”



Safety and the battle against ditches

In the last hundred and forty years at least fourteen people have drowned in Boulder ditches, mostly very small children (in recent decades for which figures are available, about three times as many have died in Boulder Creek). These tragedies have become less frequent in the past fifty years, even with the growth of population and of the mileage of ditches within the expanding city limits. Boulder’s ditches have become safer. Some of that is because ditch companies have installed improvements such as safety grates. Urban growth has also probably helped solve the problem: as streets became busier, parents were less likely to let small children play outside unsupervised. Ditches remain potentially dangerous, and small children should be supervised near them.

Accidents produced several efforts to eliminate Boulder’s ditches by putting them underground. The first of these movements originated after two drownings in 1929. Alarmed Boulder citizens called for piping or covering all the ditches, but the cost of this solution would have been enormous. Fencing the ditches was rejected as a safety hazard in itself; children who managed to get into the ditch could not be easily discovered or rescued. Ditch companies did begin installing safety grates, and cooperated with the city in keeping them clear of debris.

Community concern was prompted again in the early 1950s when one drowning was followed by three close calls. A citizen initiative in 1951 would have required ditch companies to cover or fence all ditches within the city at their own expense within 60 days.

This initiative was opposed by some people who valued the open water, such as Mrs. Harry Ohling, who wrote to the *Daily Camera* that “it will break my heart if the ditch company is forced to cover the stream that flows through my property. I have beautified the banks” near Walnut Street. “The ditch and the garden I have developed around it is enjoyed by all of my tenants.” There was also a great deal of opposition from those who felt the proposal was unreasonable or unworkable. The referendum failed 1606 to 907 at the polls. The same day the ditch companies pledged “to work toward a fair and safe solution” to ditch safety problems.

The new approach, during these postwar years of rapid development, was to get developers to foot the bill by undergrounding the ditch through their subdivisions. A siphon built in 1953 carried the Farmers Ditch under North Boulder Park; the Hudson Construction Company was able to build 16 houses on lots where the ditch once ran. The siphon itself claimed a life when an excavation collapsed during construction. More Boulder ditches were undergrounded at Table Mesa in the late 1950s, and Wonderland Hills in North Boulder in the 1970s.

The city no longer encourages covering ditches. The Boulder Valley Comprehensive plan calls for keeping the historic ditch system as part of the valley’s agricultural heritage and as neighborhood amenities, and managing them safely.



Anderson Extension Ditch (top) on its way into pipe (middle) under Martin Acres neighborhood (bottom), 1958



Silver Lake Reservoir

Silver Lake Ditch was the last ditch built in the Boulder Valley, and it differed from the others in several respects. By 1888, Boulder Creek’s flow was spoken for except in times of high water, so this ditch was the first to rely primarily on a reservoir - Silver Lake - to store high-water flows for use later in the irrigating season. Silver Lake Ditch diverts its water far enough upstream that it must be brought along the canyon wall, and thus it uses unusually dramatic engineering to get the water to where it is used. And finally, Silver Lake Ditch, unlike Boulder’s other ditches, started out as a for-profit company (though it has since become, like the others, a non-profit managed by its users).

“Maxwell & Oliver’s Ditch”

Silver Lake Ditch was organized by James P. Maxwell and George Oliver. In its early years it was called “Maxwell and Oliver’s Ditch,” and later “Maxwell’s Ditch” after Oliver sold out to his partner. Both Maxwell and Oliver owned land north of Boulder and above Farmer’s Ditch. Maxwell had an intimate familiarity with Boulder Canyon from building a toll road there and from surveying the first municipal water system, which took its water from Boulder Creek along a route near

where Silver Lake Ditch would later run. He was as familiar as anyone with Colorado water law and water supply: when Boulder valley water rights were adjudicated in 1882, most of the ditch companies hired Maxwell as an expert witness, and in the same year that he and Oliver built the Silver Lake Ditch, he was appointed State Engineer - the office whose main function is to regulate water rights. And he understood Boulder's prospects for growth, both urban and agricultural, as a real estate investor, and as Mayor from 1878 to 1880. No one could see better than J. P. Maxwell the potential for one more ditch in the right place.

Construction commenced February 27, 1888. Twelve years later the ditch was enlarged, more than doubling its capacity from 20 to 45 cubic feet per second.

Maxwell's survey field book from constructing the ditch is preserved at the CU Archives. Its brief notations record conditions at various points as construction progressed: "good"; "bad"; "flume/ some blasting."

Bringing water along the canyon walls required five wooden flumes, totalling 1300 feet long, some of this length supported on trestles and some of it pinned to cliffs on the sides of the canyon. A tiny stretch of



Wooden flume in Boulder Canyon

wood-and-sheetmetal flume (not the original) is still visible from the Boulder Creek Path, immediately after the headgate. The flumes brought the ditch to the rock formation known as the Elephant Buttes, where to avoid an even more difficult flume, Maxwell and Oliver cut a tunnel 185 feet long through the rock.

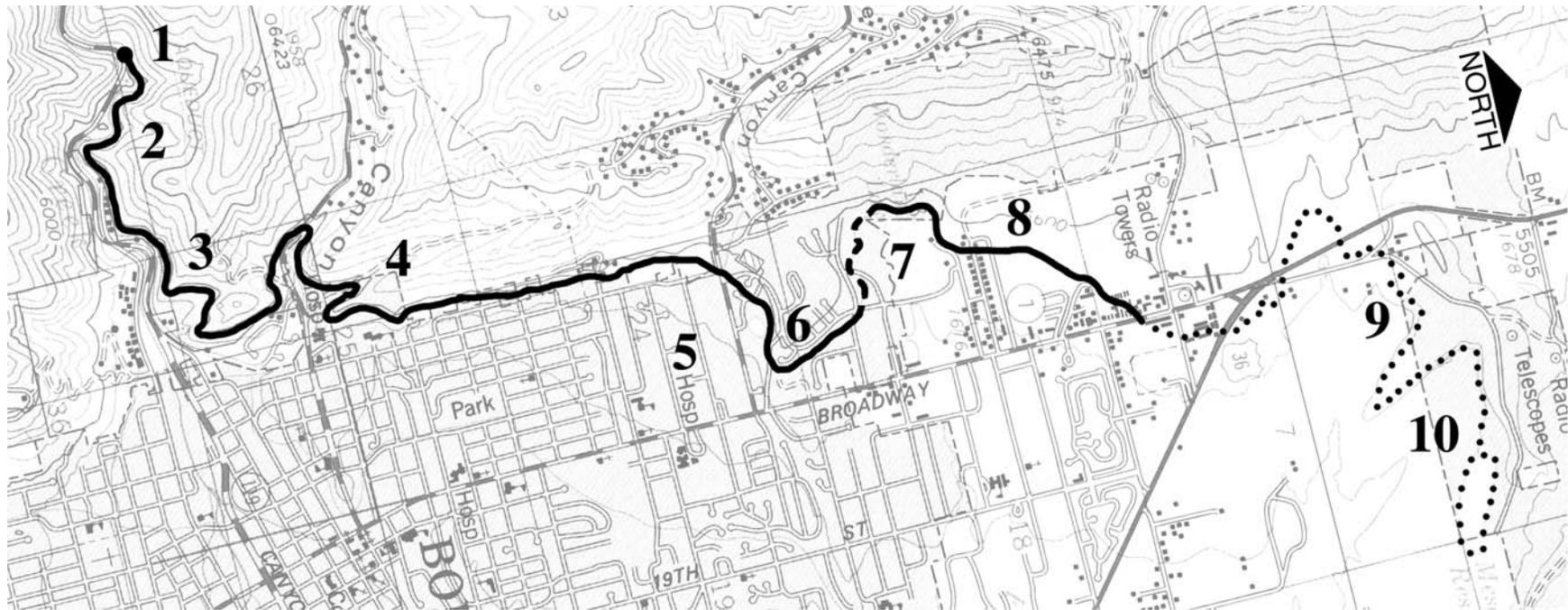
Silver Lake Ditch was laid out to irrigate 1006 acres, 200 of it Maxwell's. The water rights, unlike those on other ditches, were not owned by the water users but by the ditch company. Maxwell and Oliver contracted to supply water in perpetuity, but tied their contracts to the land so that as the area urbanized and was taken out of irrigation, control of the water would revert to the company. The original contracts promised .18 second-feet of continuous flow for every ten-acre tract. "Experience proved," wrote Everett Long, "that there was not enough water available to fulfill these contracts completely."

Silver Lake Reservoir

James P. Maxwell, surveying for the government in 1874, discovered the Arapaho Glacier and the chain of natural lakes fed by its meltwater, just below the continental divide. Among them was Silver Lake. He and Oliver built a low earthen dam in 1887 to increase the lake's capacity, and filed for rights to the additional runoff it captured. In 1890 they built a dam at Island Lake, just upstream. The two reservoirs were decreed at 1078 acre-feet in capacity; in 1925, the State Engineer ordered a re-survey which reduced the storage right to 951 acre-feet.

By mid- to late June in a typical year, the direct flow of Boulder Creek falls low enough that all of it is required for more senior rights (which nowadays include in-stream flow rights for the stream itself). When the District Water Commissioner notified Silver Lake Ditch each year that it could no longer call on the stream's flow, then stored water was released from the reservoir into North Boulder Creek, flowed over Boulder Falls and into the main creek, and then a corresponding amount of water could be diverted through the ditch headgate. For the past forty years or so, the city has whenever possible traded water with Silver Lake Ditch so that water in Silver Lake and Island Reservoirs can remain there for municipal use late in the season. The city puts part of its share of Colorado-Big Thompson water (diverted from the western slope outside of Rocky Mountain National Park) into Boulder Creek east of town to supply irrigators there so that Silver Lake Ditch can continue drawing

Where you can see Silver Lake Ditch



1. Headgate at Boulder Creek, visible from the creek path.

2. Pipe flumes along the canyon wall, installed in the early 1950's to replace the original wooden flumes. The ditch - it doesn't look like a ditch here - disappears into a tunnel blasted in 1888.

3. At Red Rocks, the ditch passes through another little tunnel,

blasted in the early 1930's to replace an old wooden flume.

4. The Dakota Ridge trail, runs along the ditch for a while. When Silver Lake Ditch was built, a lateral here allowed Mapleton Hill to have its first maples.

5. Juniper, Kalmia, and Linden, Avenues still have street laterals, as much of Boulder once did.

6. Maxwell Lake was part of J.P. Maxwells ranch. He and George Oliver built Silver Lake Ditch.

7. Wonderland Lake (originally Mesa Park Reservoir) was built in 1905 to hold water from Silver Lake Ditch.

8. The ditch runs through Foothills Community Park.

9. North of Lee Hill Road, Silver Lake Ditch is dry. Its channel is clearly visible for two miles, mostly through Open Space.

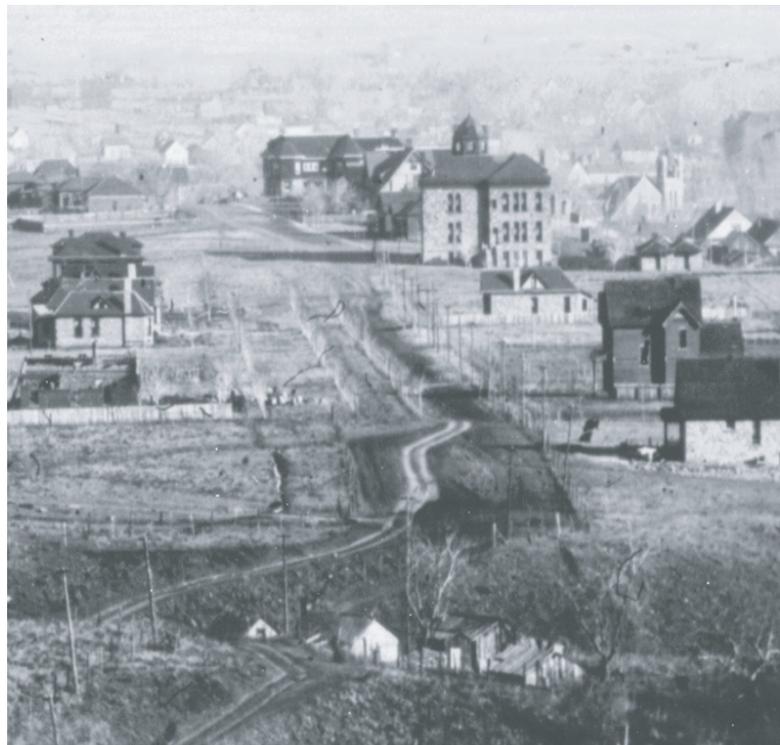
10. Mesa Reservoir was the terminus of Silver Lake Ditch. From the 1930's to the 1970's it was a favorite fishing and picnic spot, first as Degge's Far Lake and then as the Hank Roberts Lake State Recreation Area.

directly from the creek.

When Silver Lake Ditch runs on stored water, it is sectionalized. “The upstream half of the ditch gets its water in the daytime; the downstream half at night,” explains Everett Long. “We have a ditch rider who goes along at six o’clock in the morning opening the headgates on the upstream laterals, comes back at six o’clock in the evening and closes those same headgates so the water can go further north to the downstream laterals.”

Mapleton Hill

Before 1888, Mapleton Avenue was called Hill Street, and the hill it climbed was a dusty and uninhabited rise just outside of town. Silver Lake water changed that. J. P. Maxwell was Vice President of the



Mapleton Avenue from Silver Lake Ditch, 1895. Lateral is visible to left of roadway

Boulder Land & Improvement Company that laid out the fashionable Mapleton Hill neighborhood in July, 1888 (and himself laid out Maxwell’s Addition, which is the northern part of the neighborhood). One of the ditch’s first tasks was to water 1500 silver maple trees brought from Missouri and planted along Mapleton Avenue in April of 1889.

The Newlands neighborhood, which had been platted as large lots before Silver Lake Ditch was built, was replatted in 1891 as small town lots in anticipation of greater development. Most of the ditch’s users were in this neighborhood.

The District 6 Water Commissioner’s Report in 1890 gave a statistical picture of Silver Lake Ditch shortly after it was finished:

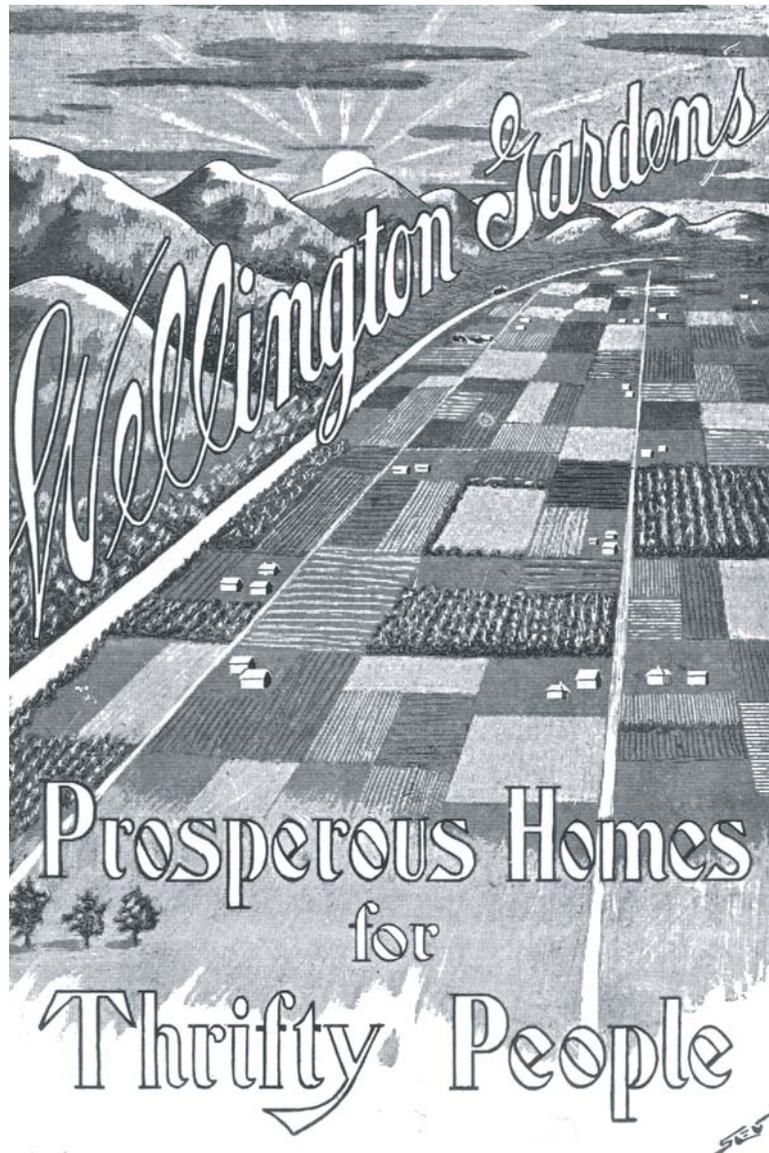
length in miles	6
number of days run	120
acres can irrigate	100
acres irrigated, alfalfa	20
acres irrigated, seeded grasses other than alfalfa	-
acres irrigated, natural grasses	80
acres irrigated, other crops	-

Boulder buys the lakes

Maxwell stocked Silver Lake with fish and made some efforts to develop the area as a resort. When Boulder began looking for additional water sources, Maxwell sold Silver Lake and Island Lake from the ditch company to the city in 1906 for \$46,000. The sale reserved storage rights for the ditch up to the total amount the reservoirs then held - the city bought them partly to control the site for potential enlargement, and has in fact enlarged the dams over the years.

The 1906 agreement anticipated “that a considerable portion” of the area served by Silver Lake Ditch “will become annexed to or a part of the City of Boulder, whereby water may be supplied from other sources.” As irrigation from the ditch decreased, a proportional amount of water rights and storage space in the reservoirs would become available to the city (direct-flow rights from Boulder Creek are not affected). Because Maxwell had tied water contracts to specific parcels of land, irrigators

did not have the option of transferring their rights to other landowners who might want to irrigate farther out as the city grew. Silver Lake and Island Reservoirs have since become essential cornerstones of the



1909 brochure: Wellington's underline is Silver Lake Ditch

municipal water supply system. "Unfortunately," explained Everett Long in 1948, "there was no provision made whereby the city should share in maintaining the ditch. As more land is abandoned the remaining water users still have to maintain a ditch that is just as expensive whether it serves 200 acres or 1000."

Wellington Gardens

After selling the reservoir and future water rights to the city, Maxwell sold the ongoing operation of the ditch to W. W. Degge for \$25,000 in 1907. Degge also bought land from Maxwell, and bought land or options on land from others north of the city. He intended to use Silver Lake Ditch as part of a larger project of agricultural and suburban development.

Shortly after Silver Lake Ditch was finished, the Maxwell family began constructing reservoirs to store water for irrigation at the north end of the ditch, and Degge proposed to expand this system. It included Mesa Park Reservoir (1905), now called Wonderland Lake, and Mesa Reservoir (1893), since taken out of service and remaining as a wetland in the Boulder Valley Ranch open space. Early in the twentieth century, Wonderland was known as "Degge's Lake" and Mesa as "Degge's Far Lake." Degge had been a newspaper publisher, and for his own projects acted as an accomplished publicist. Oil had been discovered in Boulder, and the oil booms in southern California and the little city of Houston, Texas, gave some idea of what that might mean. "Some day," wrote Degge, "the streets and alleys of a great city will run through this prosperous section and ... those who now till the soil will be greatly enriched by the onward march of progress." Boulder, he said, "will continue to grow and expand until land which now pays an enormous interest on the investment, while merely used as garden and truck farms, will be utilized later as building lots for the coming residence district of that city."

Boulder did not become another Houston, and Degge's suburban vision for North Boulder proved premature. Dudley Degge inherited the ditch from his father, and sold it in the 1930s to his son, W. W. ("Doug") Degge, Jr., who tried to make a living from operating the ditch.

In the early 1930s, when the Great Depression had put many hard-rock miners out of work, Dudley Degge hired one of them for \$400 to replace the wooden flume at Red Rocks by blasting a 100-foot long tunnel there.



Original flume at Red Rocks, replaced 1932 by present tunnel. William Henry Jackson photo

Users buy the ditch

By 1947, the other flumes and the earthen channel itself had deteriorated so that even though a great deal of water came in through the headgate, most of it went out somewhere before it reached the users. Everett Long describes what happened next: “In September of that year the users held a meeting one evening at Ernie Shephard’s Nursery out on west 8th Avenue, which is now Juniper, and talked about what they could do. They appointed a committee to talk to Doug Degge, and his father Dudley Degge still had an interest in it and participated in the discussions. The upshot of those meetings was that they offered to sell the ditch to the users for \$10,000 payable \$400 per year over 25 years without any interest. The committee then had a meeting of the users, and it was agreed that we would go ahead and take over the ditch, try to raise the money to pay for it, and more importantly, raise enough money to start repairing the ditch structures themselves. ... This we started out in the spring of ’48 by patching up the wooden flumes as best we could.”

The irrigators organized themselves as the Silver Lake Ditch Water Users Association, and over the next seven years these new owners



Destroyed flume from 1972, underneath the boulder culprit. Behind it is the pipe crushed in 1999.

replaced the remaining old flumes, some of them by blasting new open channels through the rocks, and others with the steel pipe that now hangs along Boulder Canyon’s north wall. In June 1956 a thunderstorm dropped so much water that drainage into the creek backed up against the pipe flume and ripped out some of the new pipe, which had to be replaced. Fourteen years later the same flume was destroyed again, this time by an enormous boulder that let go from above it, and another boulder took out the same piece of pipe in 1999. Each time the flume was repaired and replaced. One more rockslide destroyed the open channel downstream from the

Elephant Butte tunnel, and was repaired with the installation of a new culvert - by hand, since there is no vehicular access to this steep slope.

After the ditch’s deferred maintenance was put right in the 1950s, the water users’ association kept it up with an annual spring cleanup. “I would call a ditch party,” recalls Jack Cook, president of the ditch for fourteen years beginning in 1968, “and everyone who wanted to come and help came and we would clean out rocks, dirt, trash, et cetera. The ditch company would furnish lunch and we would make a day out of it. These parties were two-fold in result. We got the ditch clean and we got to visit with our neighbors some. Because of insurance problems, these parties were discontinued in the late ’70s, and we hired people to do the cleanup.”



Replacing pipe flume 1999

Agreements with the city in 1955 and 1965

The 1906 agreement by which the ditch and the city share the use of Silver Lake Reservoir has been revised twice. The problem was that as the irrigated acreage got smaller, the ditch became increasingly unworkable. As explained by Everett Long: “if you are to decrease the amount of storage space proportionately, you run into the problem that it takes so much water to get the ditch soaked up, to take care of seepage and evaporation, and on a direct proportional diminution there would reach a point where there would be about enough water to wet the ditch but not enough ever to get to any of the users.” When the city sought to rebuild Silver Lake Dam in 1955, the Ditch Users Association negotiated an amendment to the old agreement so that when the irrigated area fell below 400 acres, the company’s storage space would fall by $1\frac{1}{2}$ acre-feet for every acre taken out of irrigation. “This means,” says Long, “that the last acre left on the ditch will have $201\frac{1}{2}$ acre feet of storage space to accommodate his needs. Of course, the burden of maintaining the ditch will be all his.” This agreement also began the city’s practice of supplying the ditch with water traded from sources other than Silver Lake.

The next revision came from a confrontation. The city in 1964 charged

that water was being transferred to previously unirrigated lands rather than to municipal use. The ditch’s board of directors refused to open its books, and the city sued. The ditch users eventually replaced the board with a new one that preferred negotiating rather than litigating, and the following year a revised contract set strict procedures for keeping track of abandonment of water use contracts and the respective reservoir rights of the city and the ditch. “This has been kept up since ’65,” said Everett Long twenty years later, “and our present relationship with the city is very congenial and cooperative.” But the lands irrigated by Silver Lake Ditch have fallen from their original 1006 acres to 500 at the time of the 1965 agreement, and less than 300 acres today.



Working on the ditch, 1999

The northern end of the ditch

During the Great Depression, Dudley Degge opened Mesa Reservoir to the public for swimming, boating, and fishing, and ice skating and ice boating in the winter. It was a popular Boulder outing spot from the 1930s to the 1970s. The Degges operated commercial fish farms both here and under Wonderland Lake, and kept Mesa Reservoir stocked with fish. The state took it over as a State Recreation Area in the 1960s and built outhouses and picnic tables; it was known as Hank Roberts Lake after the owner of a Boulder sporting goods store.

In the past generation, Silver Lake Ditch has changed most at its northern end. At the Wonderland Hills subdivision the ditch was piped, the last of the major undergroundings in Boulder and the only one on Silver Lake Ditch. The city of Boulder acquired Wonderland Lake as Open Space, found the dam to be unsafe and rebuilt it in the early 1980s. Mesa Reservoir was last filled in the late 1970s and has since dried up, and the last two miles of the ditch - past the Armory on North Broadway - have dried up with it.

As this history goes to press, the city Open Space Department is looking into running water once again to Mesa Reservoir. In the meantime, the remnant channel stands as an evocative reminder of a vanished landscape, and as a warning of what the rest of Silver Lake Ditch could look like if we do not secure its future.



Remnant channel in City Open Space

A guide for people who live along the ditch

Don't block ditch company access to the ditch. Ditch companies have a need and a right to access all along the ditch to maintain it, even in places such as backyards where construction over the years may have made access difficult.

Do consult the ditch company before placing any structure in, across, or next to the ditch. The company must review structures to be sure they won't block maintenance access; bridges and even crossings for electrical or irrigation lines must be reviewed to be sure they will not trap debris. Retaining walls must be reviewed to ensure that they will not present maintenance problems or disrupt flow. The ditch company has the right to remove unapproved structures, even if they have been in place several years. The company may charge a fee to offset future maintenance.

Do not dump anything in the ditch. It carries clean water for parks, for irrigating crops for human consumption, and even for drinking. No drainage should be directed into a ditch, except for clean ground runoff that has historically flowed into it. Rubbish and debris in the channel - even leaves or grass clippings - can clog the ditch and cause dangerous overflows.

Do not take water from the ditch. It belongs to shareholders in the ditch company, who have rights to specific amounts of water at specific times, and who pay for the ditch's upkeep. Water is extremely valuable in Colorado, and taking water to which you're not entitled is theft.

Do watch children and pets around the ditch. Flows may change dramatically in just a few hours; tonight's slow and safe-looking ditch may be full, fast, and hazardous tomorrow morning.

Do call with any problems or questions. For general questions call Joanna Tisdale (City of Boulder Water Resources Specialist) 303-441-3115. In an emergency dial **911**.

Illustration Credits

cover: Carnegie Branch Library for Local History, Boulder Historical Society collection

1: Michael Holleran

3: Carnegie Branch Library for Local History, Boulder Historical Society collection

4: Carnegie Branch Library for Local History, Boulder Historical Society collection

5: Michael Holleran

7: author's collection

9: Carnegie Branch Library for Local History

10: Carnegie Branch Library for Local History

11: Carnegie Branch Library for Local History, Boulder Historical Society collection

15: Carnegie Branch Library for Local History, Boulder Historical Society collection

17: Carnegie Branch Library for Local History

19: Carnegie Branch Library for Local History, Boulder Historical Society collection

20: Michael Holleran

21: Michael Holleran

22: Michael Holleran

23: Michael Holleran

Research assistants:

Debbie Fuller Penn, Manish Chalana

Associate Professor Michael Holleran
College of Architecture & Planning
University of Colorado, Denver, Colorado 80217
303-556-3688
michael.holleran@cudenver.edu