

Fort Collins, Colorado

JOSH AMES DITCH
CULTURAL RESOURCE ANALYSIS OF THE
HEADGATES, DIVERSION STRUCTURE &
SEGMENTS WEST OF COLLEGE AVE.
(T7N-R69W, Sections 2 & 3)



prepared for
US Army Corps of Engineers
Colorado State Historic Preservation Office
City of Fort Collins

completed by
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25 June 2013
(USACE File #NWO-2013-1109-DEN)
(CO OAHP Sites 5LR.1829.4 & 5LR.1829.5)

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25 June 2013

Matthew Montgomery
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Denver Regulatory Office
9307 S. Wadsworth Blvd.
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Project: Josh Ames Ditch Headgate & Segment
Fort Collins, Larimer County, CO
Cultural Resources Analysis

Dear Mr. Montgomery,

Tatanka Historical Associates has completed its documentation and analysis of the Josh Ames Ditch, as described below, within the defined Area of Potential Effect for this project. This work involved visiting the resource to complete field documentation, completing the necessary archival research, and preparing the written materials included with this report.

Because the length of the ditch west of College Ave. is separated physically into two disconnected segments, these were documented as two interrelated but separate resources. Inventory forms utilizing distinct site numbers were prepared for each segment, along with their associated structures. This project report, however, jointly covers both of these segments of the ditch.

Please let me know if any additional information will be required following USACE and SHPO review.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. D. Sladek'.

Ron D. Sladek
President

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INTRODUCTION

This project originated in April 2013, when the City of Fort Collins engaged Tatanka Historical Associates Inc. to complete Section 106 (National Historic Preservation Act) documentation and analysis on two segments of the historic Josh Ames Ditch.

The two segments of the ditch are located north of the Cache la Poudre River in and close to the City of Fort Collins. At this time, the city's Natural Areas Program is planning an ecological restoration project for the North Shields Ponds Natural Area. This may involve removal of the Josh Ames Ditch diversion dam and headgate located along the river in Section 3, Township 7 North-Range 69 West. Because the ditch is considered a tributary to the Cache la Poudre River, alterations to the resource will require approval of a Section 404 (Clean Water Act) permit from the US Army Corps of Engineers (USACE).

This report and the accompanying site forms and photographs fulfill the submittal requirements of USACE and the Colorado State Historic Preservation Office (SHPO). The City of Fort Collins provided funding for the project, and is separately handling submittal of the Section 404 permit application.

PROJECT AREA

This study involves two separate but previously connected segments of the Josh Ames Ditch. Both were included for completeness of documentation and analysis of the historically interconnected ditch resources located along its upper reach west of College Ave. The Josh Ames Ditch is found on the high plains of northeastern Colorado, along the Cache la Poudre River corridor where it passes through and close to the City of Fort Collins. Both segments (5LR.1829.4 & 5LR.1829.5) included in this study are located within publicly-owned lands along the river corridor. While the eastern segment passes through acreage used as natural areas and a park owned by the City of Fort Collins, the western segment runs through lands owned by Larimer County. Only part of this western segment is accessible to the public.

The Poudre River Trail, along with other public trails that run along the north side of the river, provide views of the ditch segments and related features. Surrounding acreage is primarily occupied by the river, ponds, an abandoned meander, fields of prairie grass, and mature trees and shrubs. Developed properties that hold buildings are located along Shields St. and College Ave., although these are mostly out of view of the historic resources. Due to these characteristics, rural buffers surround the ditch segments in all directions.

1966 Diversion Dam, Headgate & Pipeline (5LR.1829.4) – This segment of the Josh Ames Ditch is located at an elevation of 4,990' above sea level on land that is owned by Larimer County. It is situated in the SE¼ of the NE¼ of Section 3, Township 7 North, Range 69 West. This corresponds to the northwest quadrant of the intersection of the Cache la Poudre River and N. Shields St. in Larimer County, Colorado (just outside of the Fort Collins municipal boundaries). The northeast corner of this triangular parcel holds a commercial building and parking lot used by Larimer County Emergency Services at 1303 N. Shields St. Due to the dense vegetation that occupies the western area of the property, the building is not within sight of the diversion dam and headgate.

The entire segment, including the buried pipeline, is approximately 400 meters (one-quarter mile) long, and runs from the diversion dam on the west to Shields St. on the east. (*see Figures 1 & 2*) Defined laterally by a buffer of 30 meters (measured from the segment's center line), the segment includes the diversion dam, headgate structure, and the buried pipeline. These boundaries form the Area of Potential Effect (APE). The area within this APE is 2.96 acres.

The diversion dam and headgate are situated within the main channel and adjacent to the north bank of the Cache la Poudre River. At the base of the headgate is the opening to the pipeline. Although these structures are in good condition, the headgate is no longer operable and the pipeline no longer carries water from the river to the meander and original headgate downstream (5LR.1829.5).

Spanning the width of the river from bank to bank, the diversion dam consists of a low concrete wall with a flat top and sides. The river's flow pools upstream of the low dam wall and then pours over the top, a drop of only a few feet into the rock-filled bed below. The dam diverts the pooled water toward the headgate structure along the river's north bank.

The headgate is a large three-sided concrete block-like structure that is similar in construction to a bridge abutment and rises about twelve feet above the riverbed. The face of this structure sits parallel to the river, with wingwalls angling back into the riverbank to the east and west. Behind this, the concretework retains the raised riverbank, which rises to the top of the structure. The top of the headgate is accessible on foot from the North Shields Ponds trail. Inscribed into the flat upper surface of the concrete are the year 1966 and the letters FFL. The meaning of this acronym is currently unknown.

About four feet into the river in front of the headgate's face is a tall narrow concrete wall that rises from the north end of the diversion dam. This is connected to the main headgate wall by a wood and metal platform at the top. The platform provides access to two headgate controls located there. One of these gates controlled river flow between the main headgate structure and the wall that projects upward from the diversion dam. Aligned with the diversion dam, this gate increased pooling in front of the main headgate and pipeline

opening, passing excess water back into the river channel. The other gate controlled the flow of water into the corrugated metal pipeline. The shared opening to these gates is protected by a grizzly, or trash grate, formed by at least seven short metal pipes that are mounted horizontally across the water.

The metal gate frameworks rise up the concrete walls and project several feet above the structure. At the top of these frameworks are the mechanical controls for the two gates. While the control wheel is missing from the gate that ran water through the structure and back into the river, its vertical rod (now bent) and gate remain in place. The control wheel, vertical rod and gate for the pipeline are still present. However, this gate is fixed into an open position and still water fills the opening even though no water flows through the pipe. Armco, prior to 1948 known as the American Rolling Mill Company, manufactured the metal parts for the gate mechanisms. This acronym is stamped on the metalwork and confirms that these features were installed after that year and not before.

The pipeline extends underground from the headgate toward the east in the direction of Shields St., a distance of about one-quarter mile. Out of use and unmaintained for four decades, the pipeline no longer emerges from the ground, nor does it transport water anywhere. It remains buried and truncated somewhere beneath the field south of the Larimer County Emergency Services facility. An exposed large diameter concrete pipe that runs underneath Shields St. between the Emergency Services facility and the Creekside Garden Center (1224 N. Shields St.) marks where the watercourse used to flow under the street and into the meander when it was in use decades ago.

1867 Headgate & Segment (5LR.1829.5) – This segment of the Josh Ames Ditch is located at an elevation of 4,980' above sea level on land that is owned by the City of Fort Collins. It is situated in the NW¼ of the SE¼, the SW¼ of the SE¼, and the SE¼ of the SE¼ of Section 2, Township 7 North, Range 69 West. This corresponds to the northwest quadrant of the intersection of the Cache la Poudre River and N. College Ave. in Fort Collins, Larimer County, Colorado.

The headgate and ditch segment run through the Salyer Natural Area, Legacy Park, and the River's Edge Natural Area, all owned and operated by the City of Fort Collins and accessible to the public. These areas are largely undeveloped except for unpaved parking areas and drives, minimally developed walking trails, and limited picnic grounds. Prairie grasses and mature trees occupy most of the acreage, with an abandoned river meander to the northwest and the Cache la Poudre River to the south. Farther to the north and east are commercial buildings and a small collection of houses. However, these are out of view from the headgate and most of ditch segment. In general, these characteristics provide the resource with a rural buffer of hundreds of yards in every direction.

The ditch segment is approximately 800 meters (one-half mile) long, and runs from the headgate along the river meander on the west to the Union Pacific railroad tracks west of College Ave. on the east. (*see Figures 3 & 4*) Defined

laterally by a buffer of 10 meters (measured from the segment's center line), the resource includes the headgate and ditch segment. These boundaries form the Area of Potential Effect (APE). The area within this APE is approximately 1.97 acres in size.

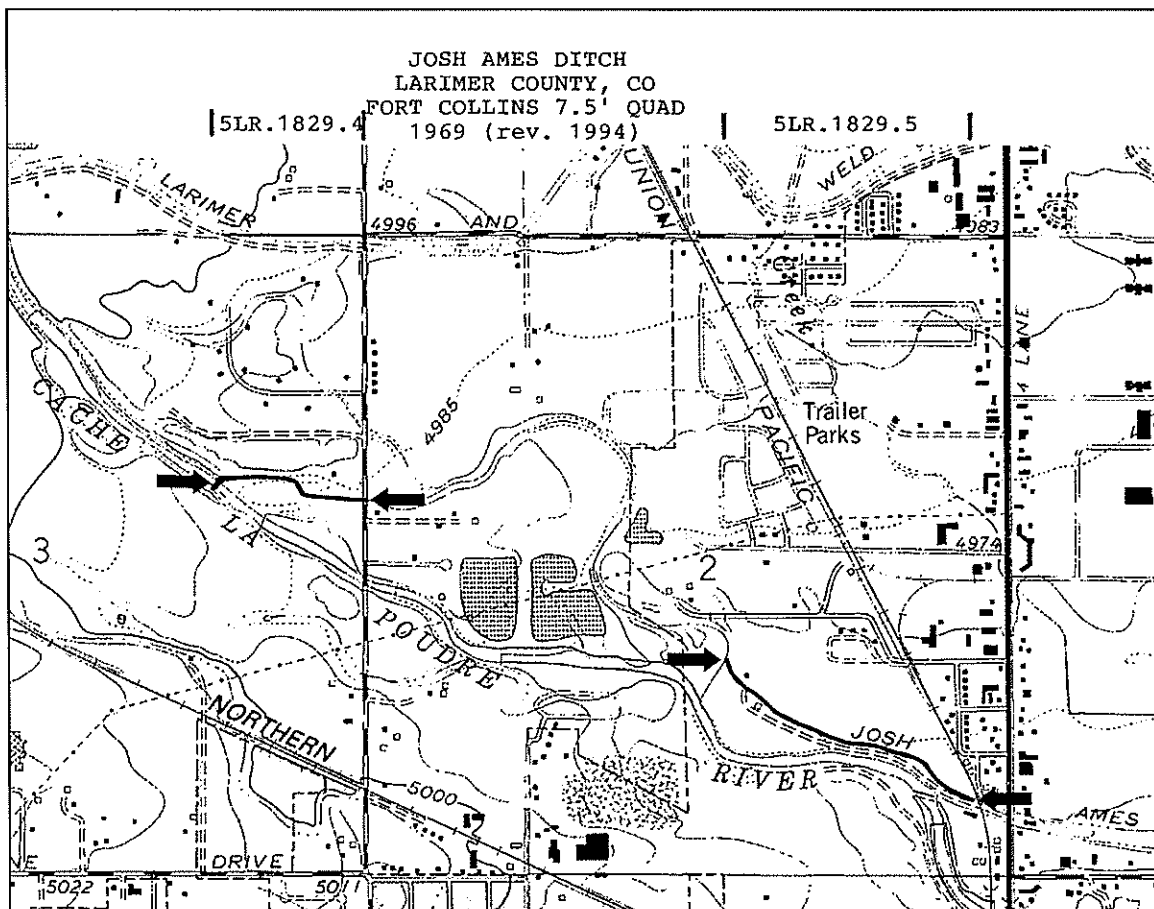
Situated along the east bank of an arcing abandoned meander, the headgate is located about 400' north of the Cache la Poudre River in the Salyer Natural Area. The meander contains water and its banks are thickly overgrown with vegetation. Largely hidden from view by this vegetation, the headgate sits abandoned and in deteriorated condition. The structure is partially collapsed and silted in, allowing water to flow through the headgate only during episodes of flooding.

About four feet in height and approximately twenty feet long (with its wingwalls), the headgate is constructed of both board-formed concrete and concrete blocks assembled with mortar. Mounted atop the headgate structure is a vertical metal ratchet bar and mechanism used to raise and lower the gate. The entire headgate, including its concrete block wingwalls, is collapsing and in poor condition. The metal gate does not appear to be present at the site, but may be buried or obscured by soils and debris. At this time, as much as half of the concrete structure has collapsed or is obscured by soil and vegetation.

Extending from the headgate toward the southeast in the direction of College Ave., the earthen ditch is about one-half mile in length. It appears to have originally been about twelve feet wide at the top and perhaps four to six feet deep. Out of use and unmaintained for over four decades, the segment is severely eroded. The length of the ditch through the Salyer Natural Area has almost completely filled with soil and vegetation, and is largely undistinguishable to the untrained eye. Much of the section through Legacy Park has disappeared entirely. As it continues through the River's Edge Natural Area, the course of the ditch is marked by a shallow swale and tree line, along which the city has recently placed a western buck fence.

Where it is distinguishable, the ditch's route is marked by the shallow swale covered with prairie grasses and filled with a profusion of shrubs and trees. At its eastern end, the ditch segment no longer makes it to College Ave. Instead, it terminates just west of the north-south Union Pacific railroad tracks. From that point to College Ave., a distance of perhaps 100 yards, the ditch's original course has been obliterated by development in recent decades.

Figure 1
Locations of Segments



1966 Diversion Dam, Headgate & Pipeline (5LR.1829.4)

T7N-R69W, Sec. 3

1867 Headgate and Ditch (5LR.1829.5)

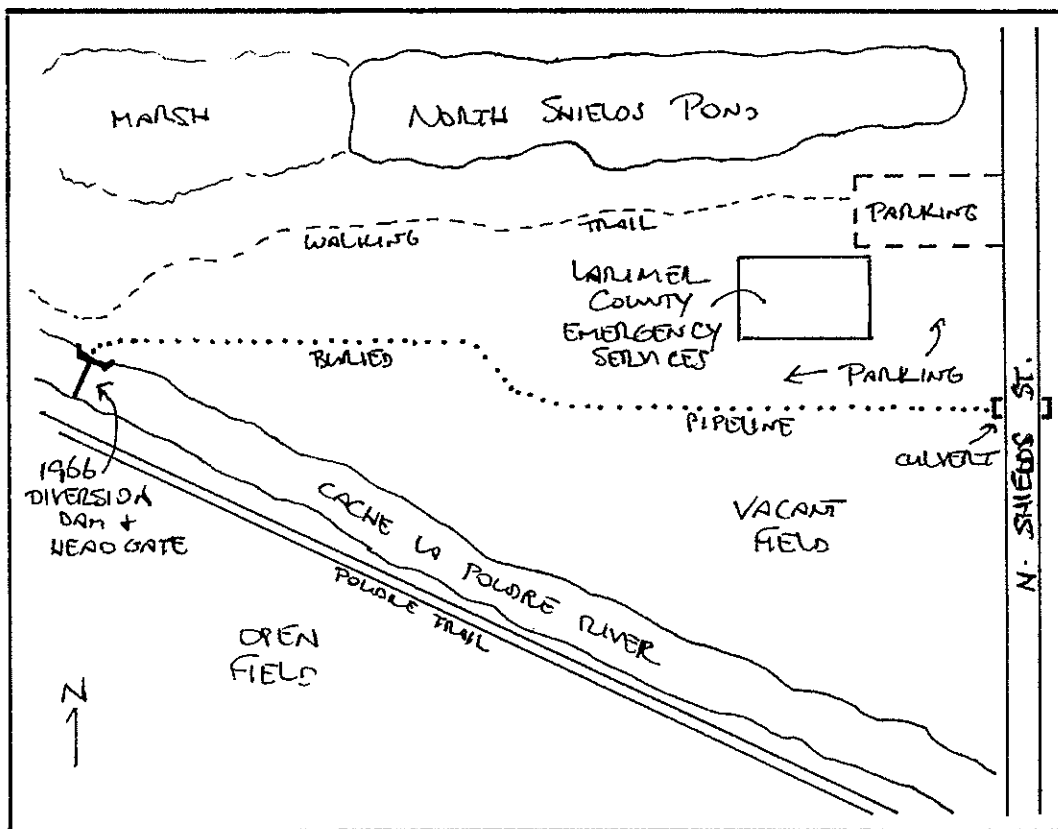
T7N-R69W, Sec. 2

USGS Fort Collins 7.5' Topographic Quadrangle

1969 (revised 1994)

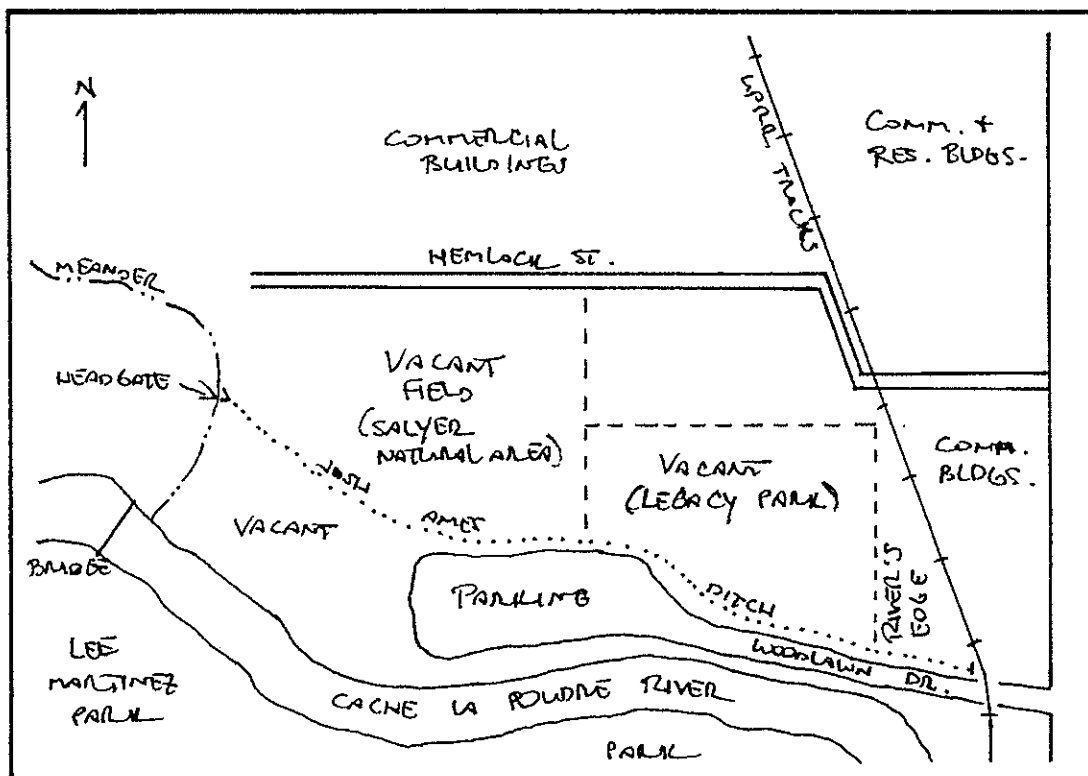
not to scale

Figure 2
Resource Diagram



1966 Diversion Dam, Headgate & Pipeline (5LR.1829.4)

Figure 3
Resource Diagram



1867 Headgate and Ditch Segment (5LR.1829.5)

RESEARCH DESIGN & METHODS

Analysis of the Josh Ames Ditch segments commenced with site visits that were completed in April and May 2013. Ron Sladek of Tatanka Historical Associates Inc. visited the resource to document the ditch segments, the entire length of the ditch, the surroundings, and to assess the resource's physical integrity in relation to National Register eligibility. Staff from the City of Fort Collins, Natural Areas Department, joined Mr. Sladek during the first day of fieldwork. Photographs and field notes were collected. The site visits were followed by preliminary online research to collect information that might be available regarding the Josh Ames Ditch's background and physical features, specifically in preparation for completing the necessary archival research and site forms.

The next step was to complete a file search to locate previous documentation of the ditch in archives held by the City of Fort Collins and History Colorado. This included checking the Colorado Office of Archaeology & Historic Preservation's (OAHP) Compass database on 17 April 2013. This search confirmed that a small number of projects (5LR.1829.1 to 5LR.1829.3) had been completed along the ditch between 1994 and 2010. In 1994, the City had the upstream diversion dam and headgate west of Shields St. documented during its Agricultural Resources Survey. Between 2000 and 2010, two additional studies included segments of the ditch that are located east of College Ave.

Archival research was then completed to locate detailed information about the Josh Ames Ditch and its history of development and use. The ditch company ceased operations in the early 1970s and none of its records were found in any single location. Instead, the ditch's story had to be pieced together from a variety of archives and documents. This resulted in the location of numerous published and unpublished materials. A number of documents were located through careful searching in the archives of the Larimer County Clerk & Recorder. Others were found in the archives of the Museum of Discovery in Fort Collins. The Larimer County Road & Bridge Department, State Engineer's Office, and State Archives also proved to be good sources of information.

By the time the research phase came to an end, an adequate number of relevant documents had been located among these sources. Pieced together, these form a substantial body of information about the history and development of the Josh Ames Ditch. The one area of inquiry that remains lacking to a certain degree revolves around the 1966 construction of the upstream diversion dam, headgate and pipeline. No primary records of this construction project appear to survive from either the ditch company or the county.

Finally, the data collected through the fieldwork and research was assembled into this project report and the accompanying site forms. All of the documentation for the project is on file in the offices of Tatanka Historical Associates in Fort Collins, Colorado.

HISTORIC CONTEXT

The history of the Josh Ames Ditch is directly tied to Colorado's 19th century settlement by American pioneers and expansion of the both the farm economy and agricultural industry between the late 1800s and mid-1900s. These broad trends were substantially aided by the development of irrigation systems large and small that over time reached across the state's semi-arid northeastern plains like a network of blood vessels. The ditches conveyed the most precious commodity in a dry environment: water that acted as the lifeblood of settlement and development.

During the 1860s, the Colorado frontier experienced an influx of Anglo-Americans drawn west by reports of a gold strike and vast tracts of land to be homesteaded. While most Gold Rush arrivals sought their fortune among the alpine mining camps, others saw opportunity in the river valleys below. As the years passed and mining proved to be a difficult way to make a living, an increasing number of pioneers resettled on lands adjacent to the rivers that emerged from the Rocky Mountains north and west of the settlement of Denver. There they found rich soils but little precipitation in the dry climate. Determined to build thriving farms, some began to construct small irrigation ditches to bring water to their crop fields. Many of these efforts proved successful, launching an age of irrigation that has continued through the present time.

Modest pioneer ditches, those that brought water to the lowlands along the rivers, were excavated by hand and horse along the Cache la Poudre River, along with many other rivers and streams. Many of these individually owned and developed farm ditches traveled short distances to water nearby fields for the small-scale production of food crops and hay for livestock. Some were eventually extended, receiving improvements that allowed them to irrigate larger areas. Mutual ditches operated as non-profit enterprises developed for the benefit of their common owners. Throughout the 1860s and 1870s, many but not all of northeastern Colorado's irrigation ditches remained modest in length but provided an ever-growing population of pioneer farmers with much needed water for their fields and livestock.

Between 1860 and 1890, it is estimated that the number of irrigated acres in Colorado rose from 35,000 to more than one million. By 1900, Colorado had more acreage under irrigation than any other state in the nation. Fifty years later, the state held around 17,000 miles of irrigation ditches and canals. (Holleran, 2005) Colorado irrigation systems of the late nineteenth and early twentieth centuries came to be viewed as profit-making opportunities in much the same way as railroads, electrical grids, and oilfields.

The history of the Josh Ames Ditch begins shortly after the Civil War, when pioneer Josh Ames launched the construction of a ditch along the north side of the Cache la Poudre River that would provide irrigation water for his crop fields

about two miles downstream. Joshua Beardsley Ames was born on 23 March 1839 in the area of Clintonville, New York, close to Lake Champlain. By 1850, the family was living on a farm in the same vicinity, specifically in Chesterfield, Essex County.

In the spring of 1862, Joshua and his younger brother Orvand set out for the western frontier with the goal of reaching the Colorado Territory that summer. Their journey coincided with the Civil War, a time when many young men of their generation were volunteering for service rather than heading west to start a new life. Why they decided to head west and not participate in the war is no longer known. The brothers traveled with Andrew Ames, possibly an older cousin, who had already been to Colorado and had returned east to retrieve his mother and sisters. In Kansas, the Ames party met up with the family of John G. Coy, who had left Missouri hoping to reach California. However, the Coys experienced delays in their crossing of the plains that forced them to shorten their journey and also head to Colorado.

Together, the Ames and Coy families made their way to the South Platte River and then followed the Cache la Poudre River upstream to the area of present-day Fort Collins. At that time there was still no fort and the only town in the vicinity was the small village of Laporte, located close to the foothills. Several miles below Laporte they claimed adjacent homestead parcels in the open countryside north of the Cache la Poudre. Today this area is just east of downtown Fort Collins in the vicinity of Lemay Ave., from the river north to Vine Dr. The Coy family settled the acreage now occupied by the Link-N-Greens Golf Course (SE¼ of Section 12, T7N-R69W). Joshua Ames located his homestead in the adjacent section to the east and northeast across today's Lemay Ave. (E½ NW¼; SW¼ NW¼; and the NE¼ SW¼ of Section 7, T7N-R68W).

Ames filed a preemption claim in October 1864 and then obtained the patent to the 160-acre parcel in December 1870. His lands were located just east, south and southeast of today's Andersonville neighborhood. This includes the western grounds of the Downtown Fort Collins Airpark, which started to be developed in the mid-1960s, including the area surrounding the intersection of Link Ln. and Lincoln Ave. In addition to the Coy family to the southwest, Ames' neighbors included an immigrant pioneer from Norway by the name of Peter Anderson. Anderson farmed extensive acreage to the north across Vine Dr., along with land southeast of Vine Dr. and Lemay Ave. In addition to farming, Anderson went on to become a Fort Collins banker, merchant, city alderman and president of the Chamber of Commerce. The small community of Andersonville near his farm and the sugar factory was later named in his honor.

In 1866, Joshua returned briefly to the Midwest to marry Eliza Lorain Angier. She was born in 1842 in Lakeport, New York, a village along the south shore of Oneida Lake northeast of Syracuse. The couple married in Clayton, Iowa and

went on to have four children, the first three of them born in Colorado. They settled on Joshua's farm near Fort Collins and remained there into the 1870s. During the early 1870s, Joshua transferred ownership of half the acreage to his wife.

The first irrigation ditch along the Cache la Poudre River was constructed in 1860 near the town of Bellvue. Pioneers eager to irrigate their crops launched additional projects along the length of the river over the following years. Most of these early ditches stayed in the bottomlands and were modest in construction and length due to the labor-intensive work involved. In 1867, Joshua Ames established a new ditch that would irrigate his fields. He partnered with his neighbor Peter Anderson, and the two men excavated a 1.75-mile ditch that brought water from the Cache la Poudre River to their farms. The ditch diverted the water through a headgate located along a meander north of the river and then headed east through the open fields until it terminated in Dry Creek at today's intersection of Lemay Ave. and Vine Dr. From there, Dry Creek and a system of lateral ditches carried the irrigation water to their fields.

Joshua and Eliza sold their agricultural lands in the mid-1870s, with different parcels going to Orvand Ames, John Coy and Alfred Howes. In 1878, the last of the acreage was sold and Joshua and Eliza moved to Storm Lake, Buena Vista County, Iowa. There he became a clothing merchant and they continued to raise their four children. Sometime between 1885 and 1900, they relocated to Kenosha, Wisconsin. Still working as a clothing dealer, Joshua had reached his early sixties. The couple made their last move between 1905 and 1910 to San Juan Batista, San Benito County, California, just east of Monterey Bay. Joshua operated his own chicken farm there for a short time. He died on 31 May 1911 and was buried in the San Juan Batista Cemetery.

In 1882, four years after Joshua and Eliza Ames left Fort Collins for Iowa, the ditches throughout Water District No. 3 were adjudicated by the District Court of Larimer County to firmly establish the priorities and appropriation of water rights from the Cache la Poudre River. During this period, the Josh Ames Ditch (also referred to as Ditch No. 17) was owned by Peter Anderson, Alexander Barry, Charles G. Buckingham and Robert Howes. The adjudication decree described it as used for "the irrigation of lands and domestic purposes taking its supply of water from the Cache la Poudre River with headgate in a slough of said river on the north side thereof about one half mile above the crossing of the Colorado Central Rail Road in the S.E. ¼ of section 2." Holding priority number twenty-five along the river, the ditch had a floor four feet in width and was capable of carrying 2,155 cubic feet of flowing water per minute, an appropriation of 35.91 cubic feet per second. Priority number twenty-five was listed as dating from 1 October 1867, the date that construction was started by Ames and Anderson.

The Josh Ames Ditch continued to operate throughout the 1880s and 1890s, largely under the same ownership as described in the 1882 adjudication. Its sole purpose during this period was to provide irrigation water to the farms of Josh

Ames and Peter Anderson, and to those who acquired the former Ames acreage. In June 1899, Peter Anderson, Alexander Barry and J. H. C. Walker filed articles of incorporation for the Josh Ames Irrigation Ditch Company, and the ditch entered a new period of its history. With capital stock of \$40,000, the new firm took possession of the ditch and its water rights. The articles of incorporation declared the company to be a profit-making enterprise engaged in the sale of irrigation water along with related activities such as the acquisition and sale of water rights, ditches and real estate. Four hundred shares were issued, each with a par value of \$100.

The articles of incorporation were amended in 1904, raising the number of shares to four thousand and setting the par value of each at \$10. In 1913, the company amended the articles again, this time to reduce the capital stock to 2,885 shares valued at \$10 each. Although Peter Anderson remained involved with the ditch company into the early twentieth century, the president of the firm during these years was Franklin C. Avery and the secretary was Frank P. Stover, both prominent Fort Collins pioneers and businessmen.

In August 1912, the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company petitioned the district court in Fort Collins to change the water rights assigned to the Josh Ames Ditch. The two firms sought a reapportionment and change in the diversion point of its water. This would allow them to remove a defined amount of water from the river at their two headgates above the town of Laporte. By that time, the petitioning ditch companies had acquired more than one-quarter of the capital stock of the Josh Ames Irrigation Ditch Company (1,115 shares out of a total of 4,000). This, they claimed, entitled the two stockholders to 10.91 cubic feet of water per second from the ditch. No objections were raised and the court granted the request. The amount of water still available to the Josh Ames Ditch was reduced to 25 cubic feet per second to supply 710 acres of irrigated agricultural lands east and northeast of the town.

Two years later, in July 1914, the Water Supply & Storage Company filed a similar petition with the district court for a water transfer and change in diversion point. In this case, the company held 447 shares of the Josh Ames Ditch and wanted to divert this water directly from the river into its Larimer County Canal. The Water Supply Company owned approximately one-ninth of the Josh Ames Ditch's water, or close to four cubic feet per second. Different from the 1912 petition, this request was contested by the Fort Collins Milling & Elevator Company and by the New Cache la Poudre Irrigation Company. Both firms claimed that the change would deprive them of water that was secured by their own appropriations. The Water Supply & Storage Company responded to their objections by withdrawing the petition.

Another petition involving the Josh Ames Ditch came before the district court in late 1917. This case, The New Cache la Poudre Irrigating Company (plaintiff) vs. The Josh Ames Irrigating Ditch Company et al (defendants), was settled in early

January 1919. It was an attempt by the plaintiff to settle issues that remained unresolved from the 1912 case that reallocated water from the ditch to two other companies. In addition to the Josh Ames Ditch, the defendants included the New Mercer Ditch Company, Charles R. Evans (on behalf of the Water Supply & Storage Company), and John L. Armstrong (the water commissioner of Water District 3). The Larimer County Canal No. 2 Irrigating Company was no longer in the picture, as the New Mercer Ditch Company had apparently acquired its share of the water rights during the intervening years.

The court found that of the Josh Ames Ditch's original 35.91 cubic feet of water per second that was permitted for irrigation by the adjudication decree of 1882, only 25 cubic feet had been diverted into the ditch each irrigation season between 1890 and 1912. Because the ditch company had not used the remaining 10.91 cubic feet of water per second for more than twenty years, the court concluded that this water had been abandoned. The transfer of 10.91 cubic feet of water per second in 1912 to the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company was therefore more than should have been allowed.

In his 2 January 1919 decision, Judge Robert Strong found that the New Mercer Ditch Company should have been granted an allocation from the Josh Ames Ditch in 1912 based upon its reduced appropriation of just 25 cubic feet of water per second. In other words, rather than 10.91 cubic feet of water per second, the New Mercer Ditch Company should have been allocated 7.03 cubic feet per second. With this amount removed from the Josh Ames Ditch's re-adjudicated 25 cubic feet per second, the court ordered that from 1919 on its allocation would be reduced to 17.97 cubic feet of water per second. The New Mercer Ditch Company was also ordered to limit its diversion of Josh Ames Ditch water to 7.03 cubic feet per second from that time forward. The case was appealed to the Colorado Supreme Court, which in 1921 upheld the lower court's decision.

Despite the reduced flow of the ditch, the stockholders of the Josh Ames Irrigating Ditch Company met in Fort Collins in October 1919 and voted to extend the life of the corporation for another twenty years. Around that time, the ditch was still providing irrigation water for 480 acres of land. The president of the company during the 1910s and well into the 1920s was Charles R. Evans.

By the late 1910s, the natural flow of water into the meander that supplied the Josh Ames Ditch headgate was supplemented by the installation of a small cobblestone dam in the river near the natural diversion point west of the county road that later became Shields St. Water pooled by the dam was diverted into a narrow channel that ran east and into the meander. A short distance to the east, the meander passed under a bridge along the county road. These features were located along the north side of the river on the parcel where the Larimer County Emergency Services facility is now found at 1303 N. Shields St.

While the ditch company held many of its meetings in local attorneys' offices, during the 1920s at least some of these took place at the Great Western Sugar Company factory. This underscored the ditch company's relationship with the plant. Although little information remains about the exact nature of this business relationship, it is known that the ditch provided water to the factory for many years. This may have been used for the washing of beets after they arrived at the plant. Water was diverted from the ditch at a concrete junction box located across the county road (now Vine Dr.) north of the factory. From that point, it was transported to the plant through a buried 12" diameter pipeline that ran directly into the factory's eastern wing. Wastewater exited the south end of the building and then headed east along Lateral No. 3. Much of the ditch's flow was reportedly utilized by the sugar plant for many decades.

The articles of incorporation of the Josh Ames Irrigation Ditch Company were amended again in 1926. This time the firm declared itself to be a mutual ditch company, operating as a non-profit organization rather than a for-profit enterprise. It had essentially returned to its original purpose, that of providing irrigation water to its owners, although in this case they were its stockholders. In May 1942, the stockholders met again to extend the life of the corporation, this time perpetually. Its president around that time was S. F. Webster.

The Josh Ames Ditch continued to operate through the 1950s and into the 1960s. However, during this period events began to occur that would change the ditch's history and bring its period of use to a rapid conclusion. First, the Great Western Sugar Company factory in Fort Collins closed in 1960 and the process water from the Josh Ames Ditch was no longer needed. Then in 1966, work began on development of the Fort Collins Airpark in the fields southeast of the sugar plant that were irrigated by the ditch. Industrial-warehouse properties also began to be developed in this area, which included the lands that were homesteaded by Josh Ames a century earlier. Redevelopment of the crop fields into a city airport and industrial park quickly reduced the need for irrigation water from the ditch.

Despite the fact that the ditch's history of use was coming to a close, the Josh Ames Irrigation Ditch Company made one last improvement to its water diversion and delivery system during the years before its demise became fully apparent. For many years, possibly even centuries, prior to the 1860s, water from the Cache la Poudre River had flowed naturally out of the main channel and into the north meander that in 1867 started to supply the headgate of the Josh Ames Ditch. After leaving the river's main channel just west of Shields St., the river water flowed through and pooled in the triangular property now occupied by the Larimer County Emergency Services facility (1303 N. Shields St.). From there it continued east along the meander, passing under a small roadway bridge along County Road 35 (now Shields St.).

After passing under the road, the meander headed east through the parcel now occupied by the Creekside Garden Center (1224 N. Shields St.). The watercourse then arced through the countryside, curving to the northeast, east and then southeast. It passed the Josh Ames Ditch headgate, where some of the water was diverted for irrigation and the sugar factory. Finally, the meander traveled a short distance to the south where it met again with the river's main channel. As mentioned above, flow through the meander was first enhanced by the 1910s when a small cobblestone dam was placed in the river near the diversion point west of Shields St.

In 1952, the triangular parcel of land that held the beginning of the meander where it diverged from the main river channel was acquired by Larimer County. Over the following years, it appears that the county completed grading on the site to channel this first length of the meander and eliminate the pooling west of Shields St. This work may have been completed in conjunction with the ditch company. By 1960, the meander was channeled under Shields St. through two parallel pipes that were each 72" in diameter. These seem to have been installed as part of a road improvement project along Shields St. that also involved bridge replacement.

Six years later, in 1966, it appears that the Josh Ames Irrigation Ditch Company had a new diversion dam and headgate built near where the late 1910s cobblestone dam and diversion channel had been constructed to draw water into the meander. This may have been a response to low precipitation years in 1963, 1964 and 1966 that probably decreased flow through the meander to the original ditch headgate. In addition to the new concrete dam, which spanned the river channel, the 1966 project involved raising the north river bank and the construction of a tall headgate structure. These features reduced the potential for periodic flooding along the meander while siphoning much needed water through the headgate into a buried corrugated metal pipe. From the headgate, the pipe ran toward the east under the property now occupied by the Larimer County Emergency Services facility. The diverted river water then emerged from the pipe near the west side of Shields St., passed under the road, and continued east along the surface through the meander.

Following the dry years in the mid-1960s, the City of Fort Collins formed a Water Board that advised the council on water-related matters. This board studied the question of adequate water supplies for the growing city and determined that the municipality ought to be purchasing shares in area ditch companies. In June 1971, the City of Fort Collins acquired all of the water adjudicated under Priority No. 25, as amended and decreased to 17.97 cubic feet of water per second, from the Josh Ames Irrigation Ditch Company. The company's stockholders voted to approve the sale, which was of the raw water and not the ditch system itself. In exchange for the ditch company's water, the stockholders were provided with certificates giving them proportional use of treated city water. Each certificate also entitled the owner to fulfill future City of Fort Collins water requirements as

their lands were annexed. Company president Donald Pavel, one of the largest stockholders, made the arrangements with the city. The other directors at the time were Henry Schlagel, Samuel Webster, and Thomas Bassett.

Following the sale, the City of Fort Collins submitted an application to the water court for Division No. 1 stating that it intended to use the Josh Ames Ditch water to augment its municipal water supply. It accomplished this by conveying the water rights (along with rights to the Arthur, Larimer County No. 2 and New Mercer ditches) to the North Poudre Irrigation Company. This transfer covered a portion of the price for the city's acquisition of the Michigan Ditch and Joe Wright Reservoir, both of which remained important parts of the municipal water system into the twenty-first century.

In 1972, the Josh Ames Irrigation Ditch Company's remaining physical assets, excluding the water rights sold to the city the previous year, were transferred to trustee Henry Schlagel. The following year, in December 1973, the ditch system, together with its rights of way, easements, headgates and all other ditch structures were transferred again, this time from Schlagel to Donald Pavel. These transfers of the water rights and ditch system during the early 1970s effectively ended the useful life of the Josh Ames Ditch and its long history of irrigation came to an end.

RESULTS

The Josh Ames Ditch as a whole, and the two segments specified in this project, were evaluated in light of the resource's history and significance, viewed from the contextual background of the history of irrigation in Colorado during the period in which it was built and operated. Two published context documents guide analysis of the Josh Ames Ditch and these segments in particular. These are Michael Holleran's 2005 *Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado* and Joseph E. King's 1984 *Colorado Engineering Context*.

In addition to the contextual analysis, the resource was evaluated for architectural or engineering integrity and in relation to the following four National Register significance criteria:

- A Associated with events that have made a significant contribution to the broad patterns of our history;
- B Associated with the lives of significant persons in our past;
- C Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction;
- D Yielded, or may be likely to yield, information important in history or prehistory.

The Josh Ames Ditch was constructed in 1867, and over the following century continued to operate as an earthen irrigation ditch that took its water from a headgate along an active meander in the countryside just north of the Cache la Poudre River and west of College Ave. The ditch system drew water from the river by way of the natural meander that originated about 1.25 miles above the headgate. Downstream from the headgate, the ditch ran for 1.5 miles to its convergence with Dry Creek. From there, Dry Creek acted as the ditch as it transported the water another half mile or so to area crop fields. Excess water from the ditch system terminated in the Cache la Poudre River a short distance to the southeast. In addition to irrigating crop fields, from 1904 to 1960 the Josh Ames Ditch supplied process water to the Great Western Sugar Company's factory northeast of downtown.

In 1966, the ditch company altered the meander at its natural diversion point west of Shields St. There it raised the riverbank and constructed a diversion dam, headgate and pipeline designed to stabilize and regulate flow into the meander. However, with the sugar factory no longer requiring water after 1960 and the crop fields east of Fort Collins coming under development starting in the mid-1960s, the ditch's effective life was coming to an end. During the early

1970s, the ditch company sold its water rights to the City of Fort Collins and the system itself was abandoned. Over the decades since that time, the 1966 headgate and pipeline at the meander diversion point were disconnected from the system, the 1867 headgate (rebuilt circa 1950-1970) became seriously deteriorated, the ditch eroded to a shallow swale filled with vegetation, and along several of its lengths it was completely erased from the landscape.

Several segments and features of the Josh Ames Ditch were documented and evaluated between 1994 and 2010. The Colorado SHPO lists these as 5LR.1829.1, 5LR.1829.2 and 5LR.1829.3. The 1994 documentation, completed for the City of Fort Collins, focused upon the diversion dam and headgate west of Shields St. This study (5LR.1829.1) found these features to be ineligible for National Register eligibility. It also mistakenly assumed that this was the location of the original ditch headgate, which was actually located along the meander 1.25 miles downstream.

The second and third studies (5LR.1829.2 & 5LR.1829.3) took place in 2000 and 2010, involving short segments of the Josh Ames Ditch that are located along and east of College Ave. While the 2000 evaluation concluded that the ditch was officially not eligible for the National Register of Historic Places, the evaluation completed in 2010 appears to have reversed this decision. In February of that year, a field determination was made that the ditch was not eligible. However that same month an official determination concluded that in fact it is eligible for National Register designation. Although no other information or rationale was provided by the state, this official determination was relied upon for the completion of this current 2013 study.

Throughout the period between 1867 and the mid-1960s, the Josh Ames Ditch served as a small but integral part of the irrigation system associated with agricultural lands east of the growing town of Fort Collins. It was started early in the pioneer era and contributed to the agricultural development of the arid plains east of the Rocky Mountains. In addition, after the Great Western Sugar Company plant opened in 1904 across the Cache la Poudre River northeast of downtown, the Josh Ames Ditch was recruited to transport water to the facility for manufacturing purposes. This was accomplished through the construction of a buried pipeline that ran south to the plant from the ditch's main course north of Vine Dr. In light of the ditch's long history of development and use, it is considered eligible for the National Register of Historic Places under Criterion A for its association with agriculture and agricultural industry in Fort Collins.

The period of significance for the Josh Ames Ditch runs from 1867, when the ditch was started, through 1963, which is the current fifty-year mark. The sugar plant ceased operations in 1960, after which the factory no longer needed the ditch. However it continued to serve the agricultural fields east of town for another decade. In 1966, work began on development of the Fort Collins Airpark in the crop fields that had been watered by the ditch for a century. This facility continued to expand throughout the late 1960s. That same year, the ditch

company constructed a diversion dam, headgate and pipeline that allowed it to control flow into the meander that led to its original headgate. By 1970, the ditch was abandoned as it was no longer needed for agriculture. During the early 1970s, the water rights were sold to the City of Fort Collins and then transferred to another ditch company through an arrangement that enhanced the city's municipal water supply.

While the historical significance of the Josh Ames Ditch has been officially recognized as substantial enough to merit National Register eligibility, the segments and features west of College Ave. now suffer from substantial problems related to physical integrity. Due to severe erosion, vegetative growth, the elimination of some lengths of the ditch, reconstruction of the 1867 headgate sometime between around 1950 and 1970, deterioration of that headgate, and disconnection of the 1966 diversion dam, headgate and pipeline from the ditch system, the two segments included in this study fail to support the eligibility of the ditch as a whole. In fact, today the entire length of the ditch has serious integrity issues, and the two segments that are currently under study are no exception.

The National Register Bulletin entitled *How to Apply the National Register Criteria for Evaluation* states that a resource's integrity has to be evaluated in light of whether it retains the ability to convey its significance. In other words, one has to not only understand the property's significance, but also which physical features are essential to conveying that significance. And while the significance of an irrigation ditch applies to the resource as a whole, integrity must be evaluated according to the segment that is currently under study. The question that has to be answered, then, is whether the segment supports the ditch's overall eligibility.

According to the *Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado* (Holleran, 2005), a historic ditch segment must retain at least several, and usually most, of the seven aspects of integrity that are defined by the National Register. The two segments of the Josh Ames Ditch that are currently under study clearly retain adequate degrees of their aspects of location, setting and materials. However the aspects of design, workmanship, feeling and association have all been diminished by four decades of abandonment, erosion, vegetative growth, disconnection, development and lack of maintenance.

The *Colorado Engineering Context* (King, 1984) also addresses the integrity of irrigation resources as it relates to significance. According to King, the physical condition of ditches "should be clearly evident, not filled-in or substantially modified." The *Colorado Plains Historic Context* (Mehls, 1984) discusses irrigation, but refers readers back to the Engineering Context for information on analyzing the integrity and significance of irrigation features.

According to these contexts and the assembled facts on the Josh Ames Ditch segments, it is evident that they do not support the ditch's overall eligibility.

RECOMMENDATIONS

Over the course of the past nineteen years, three previous projects analyzed segments of the Josh Ames Ditch and made determinations of eligibility about the resource as a whole. None of these did an adequate job of completing archival research and documenting the ditch's history of use and development. One of these prior projects included the western segment that is currently under study, mistakenly assuming that the 1966 headworks was the original ditch headgate. The most recent of these efforts, completed in 2010, seems to have resulted in an official determination that the ditch is eligible. However no rationale was provided to support this determination.

While it is true that the Josh Ames Ditch may have been eligible for the National Register under criterion A in the areas of agriculture and agricultural industry, today it exhibits substantial and varied integrity problems. These are discussed in detail above. It is highly recommended that the OAHP review the history and current condition of the ditch, which was not properly documented in the earlier studies, and reevaluate its determination of eligibility.

Aside from that point, the two segments that are currently under study do not support the eligibility of the ditch as a whole due to integrity problems of their own.

Current plans for the segments are limited to possible removal of the 1966 diversion dam, headgate and pipeline west of Shields St. as part of an ecological restoration project along the river. In light of the conclusions detailed in this cultural resource study, *there are no anticipated direct or indirect adverse impacts to NRHP eligible resources within the APE.* No further work is recommended.

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APPENDIX A

Survey Log

Site Number	Location	Resource Name	NRHP Eligibility
5LR.1829.4	1303 N. Shields St.	1966 Diversion Dam, Headgate & Pipeline	Segment Does Not Support Eligibility of the Josh Ames Ditch
5LR.1829.5	Salier Natural Area, Legacy Park, River's Edge Natural Area	1867 Headgate & Ditch Segment	Segment Does Not Support Eligibility of the Josh Ames Ditch



SLR. 1829.4

JOSH ANES DITCH

- 1966 DIVERSION DAM + HEADGATE

VIEW TO N

5/6/13

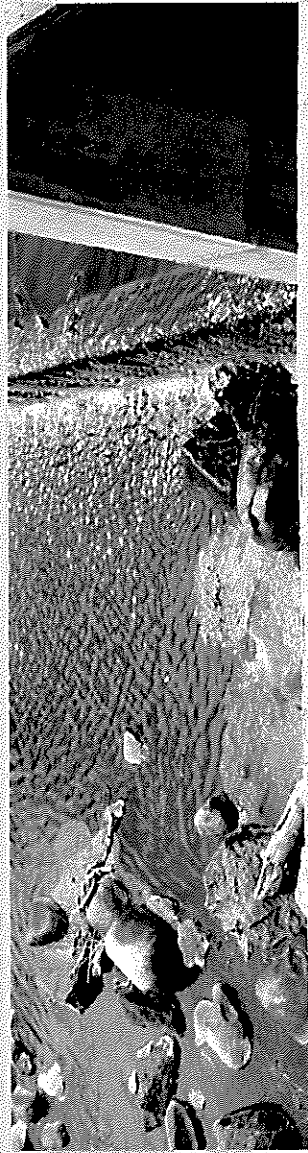
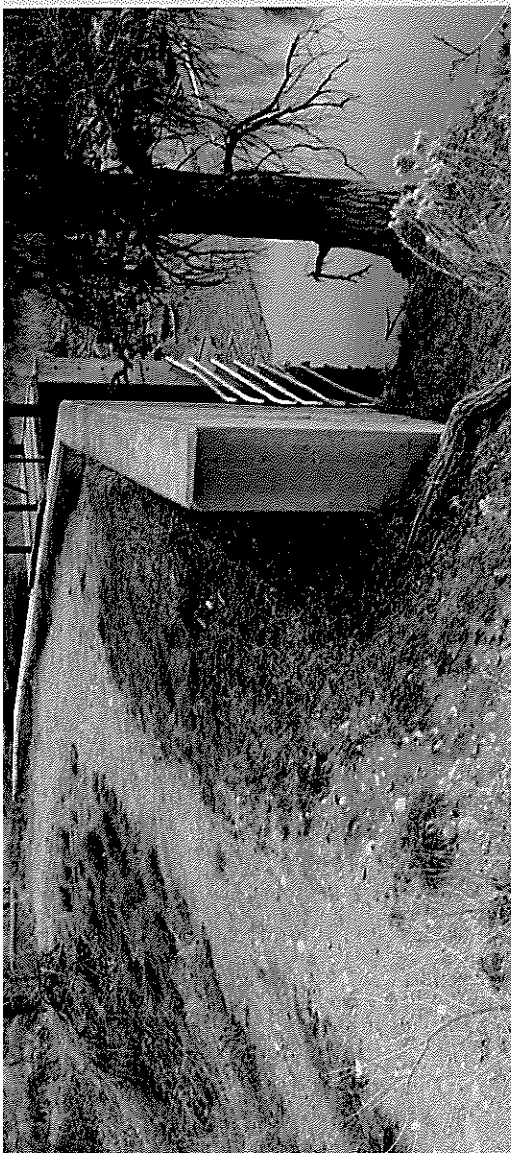
SLR. 1829.4

JOSH ANES DITCH

- 1966 DIVERSION DAM

VIEW TO W

5/6/13



SLR.1829.4

JOSH AMES DITCH

-1966 HEADGATE

VIEW TO S

5/6/13

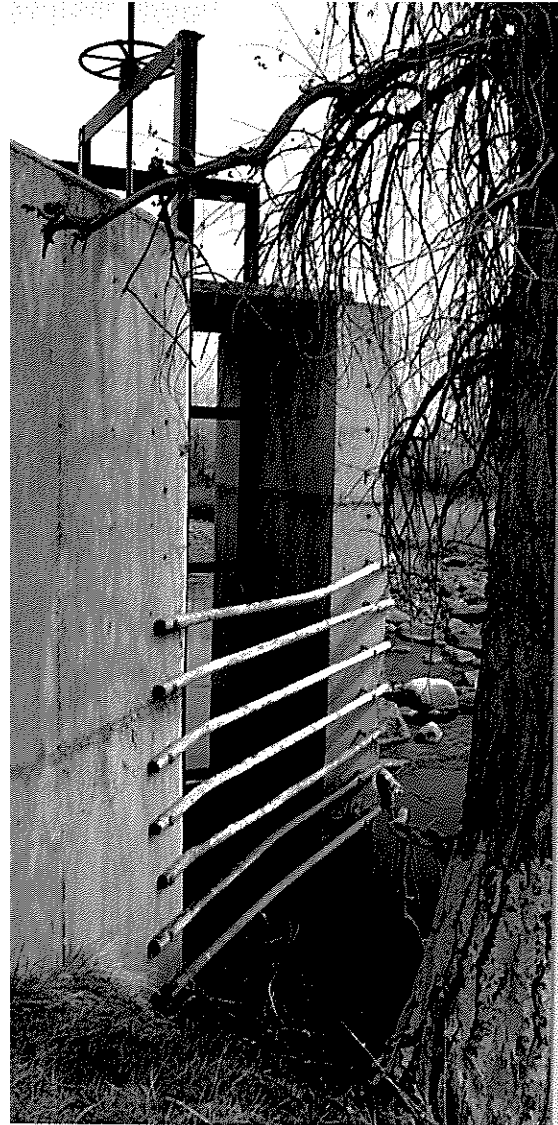
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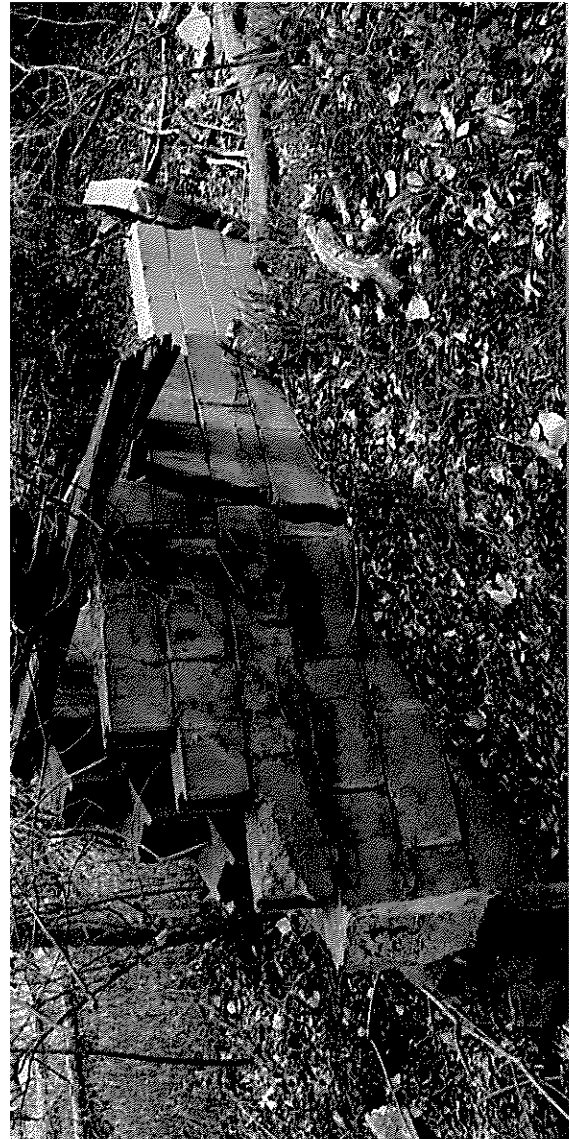
JOSH AMES DITCH

-1966 HEADGATE

VIEW TO SW

5/6/13





SLR. 1829.5

JOSH AMES DITCH

- 1867 HEADGATE (NEBUILT)

VIEW TO E

5/6/13

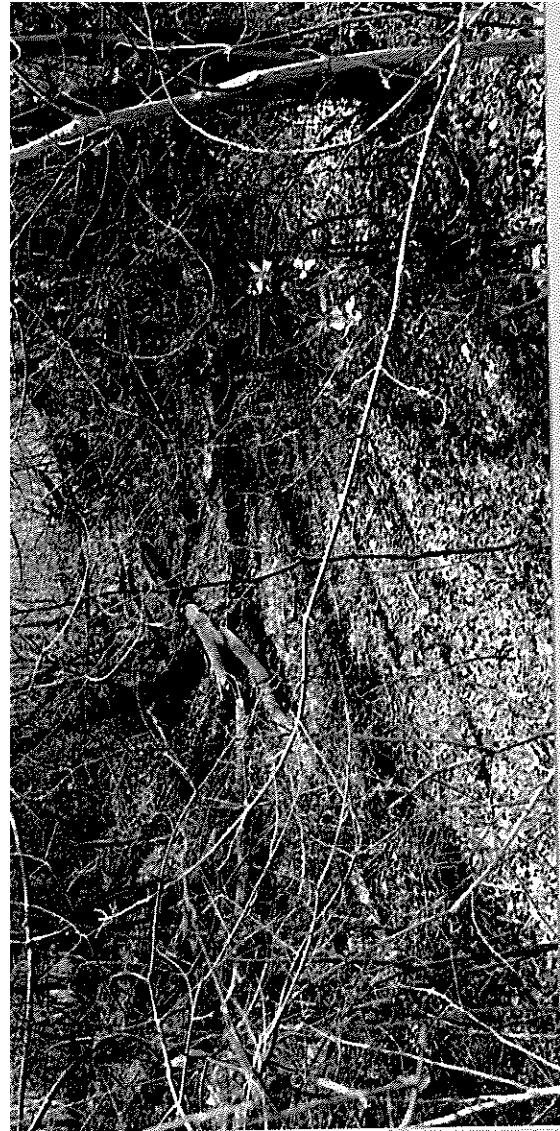
SLR. 1829.5

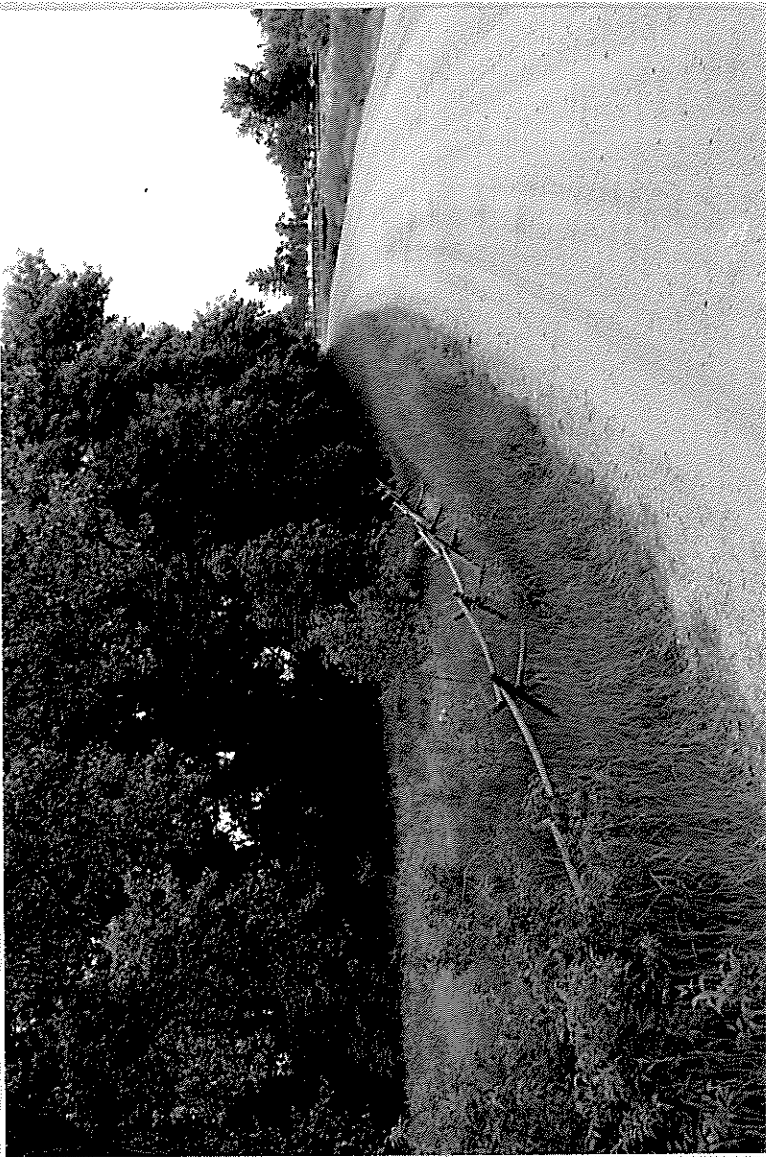
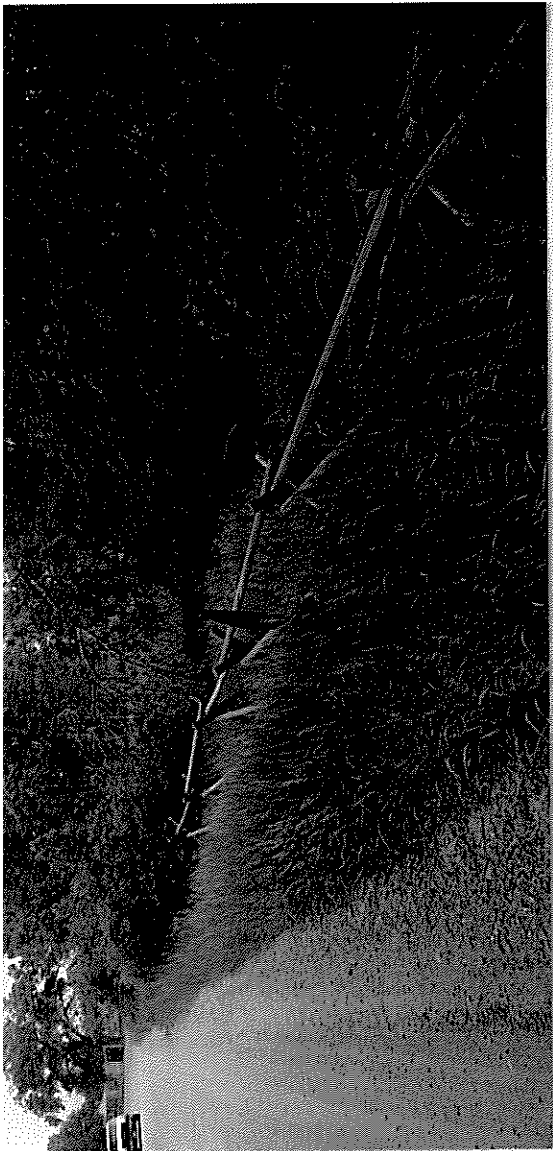
JOSH AMES DITCH

- 1867 HEADGATE (NEBUILT)

VIEW TO N

5/6/13





SLN. 1829.5

JOSH AMES DITCH (JEWELL'S EDGE NATURAL AR
VIEW TO NW

5/6/13

1007742.100

1007742.100

SLN. 1829.5

JOSH AMES DITCH (JEWELL'S EDGE NATURAL AR
VIEW TO SE

5/6/13

1007742.100

1007742.100

Management Data Form

Rev. 11/10

A *Management Data Form* should be completed for each cultural resource recorded during an archaeological survey. Isolated finds and revisits are the exception and they do not require a *Management Data Form*. Please attach the appropriate component forms and use continuation pages if necessary. Fields can be expanded or compressed as necessary.

1. **Resource Number:** 5LR.1829.42. **Temporary Resource Number:**3. **Attachments (check as many as apply)**☐ Prehistoric Archaeological Component☐ Historic Archaeological Component☒ Linear Component☒ Sketch/Instrument Map (required)☒ U.S.G.S. Map Photocopy (required)☒ Photograph(s) (required)☐ Other, specify:4. **Official determination (OAHPI use only)**☐ Determined Eligible NR\SR☐ Determined Not Eligible NR\SR☐ Nominated☐ Need Data NR\SR☐ Contributing to NR Dist.\SR Dist.☐ Not Contributing to NR Dist.\SR Dist.☐ Supports overall linear eligibility

NR\SR

☐ Does not support overall linear eligibility

NR\SR

I. IDENTIFICATION5. **Resource Name:** Josh Ames Ditch - Diversion Dam, Headgate & Pipeline (1966)6. **Project Name/Number:** Documentation and Analysis of the Josh Ames Ditch Headgates, Diversion Dam and Segments West of College Ave., Fort Collins, Larimer County, CO7. **Government Involvement:** ☒ Local ☐ State ☒ Federal

Agency: City of Fort Collins; US Army Corps of Engineers

8. **Site Categories (check as many as apply):**Prehistoric: ☐ archaeological site☐ paleontological site☐ In existing National Register District

National Register District name:

Historic: ☐ archaeology site ☐ building(s) ☒ structure(s) ☐ object(s) ☐ In existing National Register District

National Register District name: N/A (part of NRHP-eligible linear resource: Josh Ames Ditch, 5LR.1829)

9. **Owner(s) Name and Address:** Larimer County, 200 W. Oak St., Fort Collins, CO 80521

10. **Boundary Description and Justification:** The boundaries of this site include the 1966 diversion dam, headgate and a quarter-mile length of buried pipeline associated with the Josh Ames Ditch. All of these features are north of the river and west of N. Shields St. The lands where they are located are owned by Larimer County. These boundaries form a long narrow rectangle that is approximately 400 meters in length by 30 meters in width. This allows for a reasonable buffer around the diversion dam, headgate and pipeline.

11. **Site/Property Dimensions** Length: 400m Width: 30m Area: 12,000m² Acres (m²/4047): 2.96

Area was calculated as: ☒ Length x Width (rectangle/square) ☐ Length x Width x 0.785 (Ellipse) ☐ GIS

II. LOCATION12. **Legal Location**PM 6th Township 7N Range 69W Section 3 SE ¼ NE ¼

PM _____ Township _____ Range _____ Section _____ _____ ¼ _____ ¼

PM _____ Township _____ Range _____ Section _____ _____ ¼ _____ ¼

PM _____ Township _____ Range _____ Section _____ _____ ¼ _____ ¼

If section is irregular, explain alignment method:

Management Data Form**Resource Number:** 5LR.1829.4**Temporary Resource Number:****13. USGS Quad:** Fort Collins 7.5' (1994)**14. County:** Larimer**15. UTM Coordinates:** Datum used ☒ NAD 27 ☐ NAD 83 ☐ WGS 84 Other:A. Zone 13; 491400 mE 4494760 mNB. Zone 13; 491770 mE 4494700 mNC. Zone 13; 491770 mE 4494680 mND. Zone 13; 491400 mE 4494720 mN**16. UTM Source:** ☐ Corrected GPS/rectified survey (<5m error) ☐ Uncorrected GPS ☒ Map template

Other (explain):

17. Site elevation (feet): 4,990'**18. Address:** 1303 N. Shields St. Lot: Block: Addition:
Fort Collins, CO

19. Location/Access: The 1966 diversion dam, headgate, and one-quarter-mile pipeline of the Josh Ames Ditch are located on a property that is owned by Larimer County and partially occupied by the Larimer County Emergency Services facility at 1303 N. Shields St. This is found north of the Cache la Poudre River in northwest Fort Collins. From N. Shields St. and Vine Dr., head north on Shields St. just under three-quarters of a mile, along the way crossing over the Cache la Poudre River; turn left (west) onto an unpaved drive that is located along the north edge of the Larimer County Emergency Services facility; park in the lot there and continue west on foot along the pedestrian trail that runs along the south shore of North Shields Pond; follow the trail due west to where it meets the river. The headgate and north end of the diversion dam are located at this point, just below the trail. The location of these features may also be described as: Latitude 40.361900, Longitude -105.055933. The south end of the diversion dam can also be reached along the Poudre River Trail. Access to this length of the public walking and biking trail can be found along the west side of N. Shields St. just south of the river.

From the headgate, the buried pipeline runs toward the east through the Larimer County Emergency Services property. This segment of the resource is not visible above ground and is not accessible to the public. It terminates in the field south of the Emergency Services building and parking lot. Along N. Shields St., the only feature that remains from the ditch is a large diameter concrete pipe that formerly carried the water under the road.

Management Data Form

Resource Number: 5LR.1829.4

Temporary Resource Number:

III. NATURAL ENVIRONMENT/SITE CONDITION

20. General Description (should include both on site as well as geographical setting with aspect, landforms, vegetation, soils, depositional environment, water, ground visibility): The Josh Ames Ditch's 1966 diversion dam, headgate and buried pipeline segment are located on the high plains of eastern Colorado, on land that is owned by Larimer County but located on the northwestern edge of the corporate boundaries of the City of Fort Collins. These features are situated within the main channel and adjacent to the north bank of the Cache la Poudre River. Except for the pipeline, they are fully exposed to view by anyone walking or bike riding along the public trails that line both banks of the river. The structures are in good condition, although the headgate is no longer operable and the pipeline no longer carries water from the river to the meander and original headgate downstream (see 5LR.1829.5).

With the exception of a few buildings that are located along N. Shields St., the areas surrounding the resource are largely undeveloped. These relatively flat lands are primarily occupied by the river corridor, fields of prairie grasses, mature trees, and North Shields Pond. Due to these characteristics, the resource is surrounded by a rural buffer of hundreds of yards in most directions.

The diversion dam and headgate are constructed of board-formed concrete. Spanning the width of the river from bank to bank, the diversion dam is a low concrete wall with a flat top and sides. The river's flow pools upstream of the low dam wall and then pours over the top, a drop of only a few feet into the rock-filled bed below. At the same time, the dam diverts the pooled water toward the headgate structure along the river's north bank.

The headgate is a large three-sided concrete block-like structure that is similar in construction to a bridge abutment and rises about twelve feet above the river bed. The face of this structure sits parallel to the river, with wingwalls angling back into the riverbank to the east and west. Behind the structure, the concretework retains the raised riverbank. Its top can be reached on foot from the trail to the north, and the flat upper surface of the concrete is marked with the year 1966 and the letters FFL. About four feet into the river in front of the headgate's face is a tall narrow concrete wall that rises from the north end of the diversion dam. This is connected to the main headgate wall by a wood and metal platform at the top. The platform provides access to the two headgate controls that are located there.

One of these gates controlled river flow between the main headgate structure and the wall that projects upward from the diversion dam. This gate, which is aligned with the diversion dam, increased pooling in front of the main headgate and pipeline opening, and passed excess water back into the river channel. The other gate diverted water directly into the corrugated metal pipeline. The shared opening to these gates just above the diversion dam is protected by a grizzly, or trash grate, formed by a series of at least seven short metal pipes that are mounted horizontally across the water.

The metal gate frameworks rise up the concrete walls and project several feet above the structure. At the top are the mechanical controls for the two gates. While the control wheel is missing from the gate that ran water through the structure and back into the river, its vertical rod and gate remain in place. The control wheel, vertical rod and gate for the pipeline are all still present. However, this gate is fixed into an open position and still water fills the opening even though no water flows through the pipe. The metal parts for the gate mechanisms were manufactured by Armco, prior to 1948 known as the American Rolling Mill Company.

The pipeline extends underground from the headgate toward the east in the direction of Shields St. and the abandoned river meander beyond, a distance of about one-quarter mile. Out of use and unmaintained for four decades, the pipeline no longer emerges from the ground, nor does it transport water anywhere. It remains buried and truncated somewhere beneath the field south of the Larimer County Emergency Services facility. A large diameter concrete pipe that runs underneath Shields St. between the Emergency Services facility and the Creekside Garden Center (1224 N. Shields St.) marks where the watercourse used to flow when it was in use decades ago.

21. Soil depth (cm) and description: N/A

22. Condition

a. Architectural/Structural

b. Archaeological/Paleontological

Management Data Form**Resource Number:** 5LR.1829.4**Temporary Resource Number:**

- ☐ Excellent
- ☒ Good
- ☐ Fair
- ☐ Deteriorated
- ☐ Ruin

- ☐ Undisturbed
- ☐ Light disturbance
- ☐ Moderate disturbance
- ☐ Heavy disturbance
- ☐ Total disturbance

23. **Describe condition:** The concrete diversion dam continues to stand in its original location and causes water to pool upstream. It appears to be in good condition, with little deterioration noted. At its north end, the headgate structure has been out of use and unmaintained for over four decades. Despite this, the concretework is in remarkably good condition and the two metal gates remain in place. The mechanisms used to raise and lower the gates are largely intact, except for one missing control wheel and a bent vertical control bar. While the pipeline opening can still be seen, the rest of its length is buried underneath the field to the east. Somewhere under the field, the pipeline has been truncated and it no longer transports water to the east and into the abandoned meander.

24. **Vandalism:** ☒ Yes ☐ No

Describe: As mentioned above, one control wheel is missing and the vertical control bar below has been bent. This appears to have been the result of vandalism.

IV. NATIONAL/STATE REGISTER ELIGIBILITY ASSESSMENT

25. **Context or Theme:** Early High Plains Irrigation and Farming

26. Applicable National Register Criteria:

- ☒ A. Associated with events that have made a significant contribution to the broad pattern of our history
- ☐ B. Associated with the lives of persons significant in our past
- ☐ C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- ☐ D. Has yielded, or may be likely to yield, information important in history or prehistory
- ☐ Does not meet any of the National Register criteria
- ☐ Qualifies under exceptions A through G. List exception(s):

27. Applicable State Register Criteria:

- ☒ A. Property is associated with events that have made a significant contribution to history
- ☐ B. Property is connected with persons significant in history
- ☐ C. Property has distinctive characteristics of a type, period, method of construction or artisan
- ☐ D. Property is of geographic importance
- ☐ E. Property contains the possibility of important discoveries related to prehistory or history
- ☐ Does not meet any of the State Register criteria

28. **Area(s) of significance:** Agriculture, Industry

29. **Period(s) of significance:** 1867-1963

30. **Level of significance:** ☐ National ☐ State ☒ Local

Management Data Form

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Temporary Resource Number:

31. Statement of significance: Several segments and features of the original Josh Ames Ditch have been documented and evaluated since 2001. These are listed as 5LR.1829.1, 5LR.1829.2 and 5LR.1829.3. While the earlier of these evaluations concluded that the ditch was not eligible for the National Register of Historic Places, the evaluation completed in 2010 (5LR.1829.3) resulted in an official determination that it is eligible.

Throughout the period between 1867 and the mid-1960s, the Josh Ames Ditch served as a small but integral part of the irrigation system associated with agricultural lands east of the growing town of Fort Collins. It was started early in the pioneer era and contributed to the agricultural development of the arid plains east of the Rocky Mountains. In addition, after the Great Western Sugar Company plant opened in 1904 across the Cache la Poudre River northeast of downtown, the Josh Ames Ditch was recruited to transport water to the facility for manufacturing purposes. This was accomplished through the construction of a buried pipeline that ran south to the plant from the ditch's main course north of Vine Dr. In light of the ditch's history of development and use, it is eligible for the National Register of Historic Places under Criterion A for its association with agriculture and agricultural industry in the Fort Collins area.

The period of significance for the Josh Ames Ditch runs from 1867, when the ditch was started, through 1963, which is the current fifty year mark. The sugar plant ceased operations in 1960, after which the ditch was no longer needed by the factory. However it continued to serve agricultural fields east of town for another decade. In 1966, work began on development of the Fort Collins Airpark in the crop fields that had been watered by the ditch for a century. This facility continued to expand throughout the late 1960s and by 1970 the ditch was abandoned as it was no longer needed. During the early 1970s, the water rights were sold to the City of Fort Collins and then transferred to another ditch company through an arrangement that enhanced the city's municipal water supply.

While the historical significance of the Josh Ames Ditch is recognized as substantial enough to merit National Register eligibility, the 1966 diversion dam, headgate and pipeline west of Shields St. fall outside the period of significance and are considered non-historic elements of the ditch system that were installed very late in its history. Due to these characteristics, these resources and this upstream segment fail to support the eligibility of the ditch as a whole.

32. Statement of historic integrity related to significance: The 1966 diversion dam, headgate and buried pipeline that form the westernmost segment of the Josh Ames Ditch system are in remarkably good condition and exhibit a relatively high degree of physical integrity despite the fact that they have been abandoned and out of use for over four decades.

Through its bulletin entitled "How to Apply the National Register Criteria," the National Register of Historic Places provides guidance on assessing the seven aspects of integrity. The bulletin states that "to retain historic integrity a property will always possess several, and usually most, of the aspects." In his 2005 Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado, Michael Holleran more specifically addresses the aspects of integrity as they relate to irrigation features. The following evaluates the seven aspects as they relate to this segment of the Josh Ames Ditch:

Location - The diversion dam, headgate and buried pipeline (or at least the pipeline opening along the river) are still in their original locations and meet the standard for the aspect of location.

Design - These resources are largely intact and the diversion dam and headgate remain visible. For this reason, the aspect of design is virtually undiminished.

Setting - The areas surrounding the diversion dam, headgate and buried pipeline remain rural in appearance and are still dominated by the river and the open fields and stands of trees.

Materials - The concrete and metal diversion dam, headgate and pipeline opening are visible and their materials remain intact.

Workmanship - The workmanship of the resource remains evident and visible.

Feeling - The diversion dam and headgate continue to provide the feeling of an irrigation ditch structure, conveying a clear indication of its past use and significance.

Association - While the diversion dam and headgate remain visible and their general use is obvious, the pipeline is buried and no longer carries water. The resources are completely disconnected from the Josh Ames Ditch system. For this reason, its association with the Josh Ames Ditch farther downstream would not be clear to the casual observer. Most people today would be hard pressed to determine why this structure was placed in this location.

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The Colorado Engineering Context (King, 1984) also addresses the integrity of irrigation resources as it relates to significance. According to King, the physical condition of canals and ditches "should be clearly evident, not substantially modified." The Colorado Plains Historic Context (Mehls, 1984) discusses irrigation, but refers recorders to the Engineering Context for information on analyzing the integrity and significance of canals and ditches.

In light of these contexts and the assembled facts, it is clear that the segment retains a good level of integrity. The only aspect that appears to be diminished is that related to its association with the Josh Ames Ditch. However, despite the fact that the segment retains a good degree of integrity, its features are non-historic and outside the period of significance. For this reason, the segment does not support the National Register eligibility of the Josh Ames Ditch as a whole.

33. National Register Eligibility Field Assessment:

Linear Segment Evaluation (if applicable):

☒ Eligible☐ Not eligible☐ Need data☐ Supporting☒ Non Supporting**34. Status in an Existing National Register District:**☐ Contributing☐ Non-contributing**35. State Register Eligibility Field Assessment:**☒ Eligible☐ Not eligible☐ Need data**36. Status in an Existing State Register District:**☐ Contributing☐ Non-contributing**37. National/State Register District Potential:** ☐ Yes ☒ No Describe:**38. Cultural Landscape Potential:** ☐ Yes ☒ No Describe:**39. If Yes to either 37 or 38, is this site:** ☐ Contributing ☐ Non-contributing Explain:**V. MANAGEMENT AND ADMINISTRATIVE DATA**

40. Threats to Resource: ☒ Water erosion ☐ Wind erosion ☐ Grazing ☒ Neglect ☐ Vandalism
☐ Recreation ☐ Construction ☐ Other (explain): Freeze/thaw damage to concrete headgate structure

41. Existing protection ☒ None ☐ Marked ☐ Fenced ☐ Patrolled ☐ Access controlled
Other (specify):

Comments:

42. Local landmark designation:**43. Easement:****44. Recorder's Management Recommendations:** No Further Work or Mitigation Necessary

Management Data Form

Resource Number: 5LR.1829.4

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VI. DOCUMENTATION

45. Previous actions accomplished at the site: ☐ Tested ☐ Partial excavation ☐ Complete excavation

Date(s):

a. Excavations:

b. Stabilization:

Date(s):

c. HABS/HAER documentation [date(s) and numbers]:

d. Other:

46. **Known collections/reports/interviews and other references (list):** SHPO Files, Josh Ames Ditch, 5LR.1829.1 through 5LR.1829.3; Irrigation and Water Supply Ditches and Canals in Colorado, 1787-1961, National Register of Historic Places Nomination Form; Carl McWilliams, Josh Ames Diversion Dam & Headgate, Fort Collins Agricultural Resources Survey, 1994; Articles of Incorporation, Josh Ames Irrigation Ditch Company, 1899; Water Decrees of Water District No. Three, 1882; Jay Trask, Irrigation and Water-Related Structures in the Cache la Poudre River Corridor, 2003; Rose Laflin, Irrigation, Settlement, and Change on the Cache la Poudre River, Colorado Water Resources Research Institute, Special Report No. 15, 2005; USGS Fort Collins, Colorado 7.5' Topographic Quadrangle Maps, 1906-1994; Michael Holleran, Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado (Colorado Center for Preservation Research, 2005); Joseph E. King, Colorado Engineering Context (Colorado Historical Society, 1984)

47. **Primary location of additional data:** N/A

48. **State or Federal Permit number:**

49. **Collection:** Artifact collection authorized: ☐ Yes ☒ No Were artifacts collected: ☐ Yes ☒ No
Artifact repository:

Collection method: ☐ Diagnostics ☐ Grab Sample ☐ Random Sample

Other (specify):

50. **Photograph Numbers:** JAD4262 - JAD4355

Files or negatives stored at: Tatanka Historical Associates Inc., P.O. Box 1909, Fort Collins, CO 80522

51. **Report title:** Documentation and Analysis of the Josh Ames Ditch Headgates, Diversion Dam and Segment West of College Ave., Fort Collins, Larimer County, CO

52. **Recorder(s):** Ron Sladek, President

Date: 6/19/2013

53. **Recorder affiliation:** Tatanka Historical Associates, Inc.

Phone number/Email: 970/221-1095 / tatanka@verinet.com

NOTE: Please attach a site map, a photocopy of the USGS 1:24000 map indicating resource location, and photographs.

History Colorado - Office of Archaeology & Historic Preservation
1200 Broadway, Denver, CO 80203
303-866-3395

Linear Component Form

This form should be completed for each linear resource or linear segment. Use this form in conjunction with the *Management Data Form*. Call OAHP staff (303-866-5216) prior to assigning a resource number.

I. Resource Identification

1. Resource Number: 5LR.1829.4

2. Temporary Resource Number:

3. Site Name: Josh Ames Ditch - Diversion Dam, Headgate & Pipeline (1966)

4. Record of: ☐ Entire resource ☒ Segment**II. Resource Description**5. Resource Type: ☐ Road ☐ Railroad ☐ Trail ☒ Ditch/Canal

Other (specify):

6. Component Description: The Josh Ames Ditch's 1966 diversion dam, headgate and buried pipeline segment are located on the high plains of eastern Colorado, on land that is owned by Larimer County but located on the northwestern edge of the corporate boundaries of the City of Fort Collins. These features are situated within the main channel and adjacent to the north bank of the Cache la Poudre River. Except for the pipeline, they are fully exposed to view by anyone walking or bike riding along the public trails that line both banks of the river. The structures are in good condition, although the headgate is no longer operable and the pipeline no longer carries water from the river to the meander and original headgate downstream (see 5LR.1829.5).

With the exception of a few buildings that are located along N. Shields St., the areas surrounding the resource are largely undeveloped. These relatively flat lands are primarily occupied by the river corridor, fields of prairie grasses, mature trees, and North Shields Pond. Due to these characteristics, the resource is surrounded by a rural buffer of hundreds of yards in most directions.

The diversion dam and headgate are constructed of board-formed concrete. Spanning the width of the river from bank to bank, the diversion dam is a low concrete wall with a flat top and sides. The river's flow pools upstream of the low dam wall and then pours over the top, a drop of only a few feet into the rock-filled bed below. At the same time, the dam diverts the pooled water toward the headgate structure along the river's north bank.

The headgate is a large three-sided concrete block-like structure that is similar in construction to a bridge abutment and rises about twelve feet above the river bed. The face of this structure sits parallel to the river, with wingwalls angling back into the riverbank to the east and west. Behind the structure, the concretework retains the raised riverbank. Its top can be reached on foot from the trail to the north, and the flat upper surface of the concrete is marked with the year 1966 and the letters FFL. About four feet into the river in front of the headgate's face is a tall narrow concrete wall that rises from the north end of the diversion dam. This is connected to the main headgate wall by a wood and metal platform at the top. The platform provides access to the two headgate controls that are located there.

One of these gates controlled river flow between the main headgate structure and the wall that projects upward from the diversion dam. This gate, which is aligned with the diversion dam, increased pooling in front of the main headgate and pipeline opening, and passed excess water back into the river channel. The other gate diverted water directly into the corrugated metal pipeline. The shared opening to these gates just above the diversion dam is protected by a grizzly, or trash grate, formed by a series of at least seven short metal pipes that are mounted horizontally across the water.

The metal gate frameworks rise up the concrete walls and project several feet above the structure. At the top are the mechanical controls for the two gates. While the control wheel is missing from the gate that ran water through the structure and back into the river, its vertical rod and gate remain in place. The control wheel, vertical rod and gate for the pipeline are all still present. However, this gate is fixed into an open position and still water fills the opening even though no water flows through the pipe. The metal parts for the gate mechanisms were manufactured by Armco, prior to 1948 known as the American Rolling Mill Company.

The pipeline extends underground from the headgate toward the east in the direction of Shields St. and the abandoned river meander beyond, a distance of about one-quarter mile. Out of use and unmaintained for four decades, the pipeline no longer emerges from the ground, nor does it transport water anywhere. It remains buried and truncated somewhere beneath the field south of the Larimer County Emergency Services facility. A large diameter concrete pipe that runs underneath Shields St. between the Emergency Services facility and the Creekside Garden Center (1224 N. Shields St.) marks where the watercourse used to flow when it was in use decades ago.

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7. **Original use:** Irrigation Canal

8. **Current use:** Not in Use

9. **Modifications (describe and include dates):** The concrete diversion dam continues to stand in its original location and causes water to pool upstream. It appears to be in good condition, with little deterioration noted. At its north end, the headgate structure has been out of use and unmaintained for over four decades. Despite this, the concretework is in remarkably good condition and the two metal gates remain in place. The mechanisms used to raise and lower the gates are largely intact, except for one missing control wheel and a bent vertical control bar. While the pipeline opening can still be seen, the rest of its length is buried underneath the field to the east. Somewhere under the field, the pipeline has been truncated and it no longer transports water to the east and into the abandoned meander. All of these features were installed in 1966 to replace a natural diversion along the north bank of the river where it previously flowed unrestricted into a meander that supplied the original downstream headgate of the Josh Ames Ditch. This work also involved substantial reshaping and raising of the river bank. The ditch ceased operations around 1970 and since that time the diversion dam, headgate and pipeline have been abandoned.

10. **Extent of Entire Resource:** Beyond this segment to the east and downstream, the pipeline is truncated as described above and the meander that it previously supplied is nowhere to be found in the vicinity of Shields St. All that remains in this area is a large diameter concrete pipe that formerly carried the water flow under the street. East of the pipe, where the meander previously ran through the Creekside Garden Center property (1224 N. Shields St.), the meander has also been erased. Behind the garden center, about one-quarter mile east of Shields St., the meander starts and heads toward the northeast. It is filled with a thick growth of vegetation and continues to arc through the countryside to the northeast, east and then southeast before it reaches the original headgate of the Josh Ames Ditch, which is located in the Salyer Natural Area. Along the way, it picks up water that drains from the countryside to the north.

From the original headgate, the ditch continues to the southeast in the direction of College Ave., passing through the Salyer Natural Area, Legacy Park, and the River's Edge Natural Area. This length of the ditch is difficult to distinguish as it is filled with soil and vegetation. All that is left is a shallow swale and a line of trees and shrubs. In addition, a length of the ditch has been erased as it passes through Legacy Park. Although it is slightly deeper and more visible as it passes through the River's Edge Natural Area, the ditch disappears entirely as it approaches the north-south Union Pacific train tracks that are located just west of College Ave.

East of the train tracks and College Ave., the ditch is entirely gone from the landscape for another half mile. It reemerges just east of Redwood St., where it runs from west to east behind the Larimer County Fleet Management facility (614 E. Vine Dr.). The ditch then continues its easterly course through the field north of Vine Dr. Although clearly distinguishable, this length of the ditch is also eroded. In this field, it reaches a concrete junction box where water was diverted into the 12" pipeline that ran south to the Great Western Sugar Company factory. This concrete structure and the pipeline opening are still intact and visible. From there, the ditch travels a short distance before it dies out and disappears as it approaches the Alta Vista neighborhood. It picks up again on the west side of Lindenmeier Rd., where it enters a concrete culvert that passes below the street. On the east side of Lindenmeier Rd., another concrete structure diverts the ditch into the adjacent bed of Dry Creek. This junction is the physical terminus of the Josh Ames Ditch, although the ditch water historically continued a short distance east through the creek as it approached the farms of its original builders.

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11. Associated Artifacts: N/A

12. Associated Features or Resources: N/A

III. Research Information

13. Architect/Engineer: N/A

Source(s) of Information: N/A

14. Builder: Joshua B. Ames / Josh Ames Irrigation Ditch Company

Source(s) of Information: "Water Decrees of Water District No. Three," Larimer County District Court, 1882;
Articles of Incorporation, Josh Ames Irrigation Ditch Company, 1899

15. Date of Construction / Date Range: 1867 / 1966

Source(s) of Information: Water Decrees of Water District No. Three," Larimer County District Court, 1882; Date inscribed in the concrete on top of the headgate structure

16. **Historical / Archival Data:** The history of the Josh Ames Ditch begins shortly after the Civil War, when pioneer Josh Ames launched the construction of a ditch along the north side of the Cache la Poudre River that would provide irrigation water for his crop fields about two miles downstream. Joshua Beardsley Ames was born on 23 March 1839 in the area of Clintonville, New York, close to Lake Champlain. By 1850, the family was living in the same vicinity, specifically in Chesterfield, Essex County, where Josh's father Seymour worked as a farmer.

In the spring of 1862, Joshua and his younger brother Orvand set out for the western frontier with the goal of reaching the Colorado Territory that summer. Their journey coincided with the Civil War, a time when many young men of their generation were volunteering for service rather than heading west to start a new life. The brothers traveled with Andrew Ames, possibly an older cousin, who had already been to Colorado and had returned east to retrieve his mother and sisters. In Kansas, the Ames party met up with the family of John G. Coy, who had left Missouri hoping to reach California. However, the Coys experienced delays in their crossing of the plains that forced them to shorten their journey and also head to Colorado.

Together, the Ames and Coy families made their way to the South Platte River and then followed the Cache la Poudre River upstream to the area of present-day Fort Collins. At that time there was still no fort or town in the vicinity except for the small village of Laporte, located close to the foothills. Several miles below Laporte they claimed adjacent homestead parcels in the open countryside north of the Cache la Poudre. Today this area is just east of downtown Fort Collins in the vicinity of Lemay Ave., from the river north to Vine Dr. The Coy family settled the acreage now occupied by the Link-N-Greens Golf Course (SE¼ of Section 12, T7N-R69W). Joshua Ames located his homestead in the adjacent section to the east and northeast across today's Lemay Ave. (E½ NW¼; SW¼ NW¼; and the NE¼ SW¼ of Section 7, T7N-R68W).

Ames filed a preemption claim in October 1864 and then obtained the patent to the 160-acre parcel in December 1870. His lands were located just east, south and southeast of today's Andersonville neighborhood. This includes the western grounds of the Downtown Fort Collins Airpark, which started to be developed in the mid-1960s, including the area surrounding the intersection of Link Ln. and Lincoln Ave. In addition to the Coy family to the southwest, his neighbors included a pioneer named Peter Anderson, who farmed extensive acreage to the north across Vine Dr. In addition to farming, Anderson went on to become a Fort Collins banker, merchant, city alderman and president of the Chamber of Commerce (the community of Andersonville near his farm and the sugar factory was named in his honor).

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In 1866, Joshua returned briefly to the Midwest to marry Eliza Lorain Angier. She was born in 1842 in Lakeport, New York, a village along the south shore of Oneida Lake northeast of Syracuse. The couple married in Clayton, Iowa and went on to have four children, the first three of them born in Colorado. They settled on Joshua's farm near Fort Collins and remained there into the 1870s. During the early 1870s, Joshua transferred ownership of half his acreage to his wife.

The first irrigation ditch along the Cache la Poudre River was constructed in 1860 near the town of Bellvue. Pioneers eager to irrigate their crops launched additional projects along the length of the river over the following years. Most of these early ditches stayed in the bottomlands and were modest in construction and length due to the labor-intensive work involved. In 1867, Joshua Ames established a new ditch that would irrigate his fields. He partnered with his neighbor to the north, Peter Anderson, and the two men excavated a 1.75-mile ditch that brought water from the Cache la Poudre River to their farms. The ditch diverted the water through a headgate located along a meander north of the river and then headed east through the open fields until it terminated in Dry Creek at today's intersection of Lemay Ave. and Vine Dr. From there, Dry Creek and a system of lateral ditches carried the irrigation water to their fields.

Joshua and Eliza sold their agricultural lands in the mid-1870s, with different parcels going to Orvand Ames, John Coy and Alfred Howes. In 1878, the last of the acreage was sold and Joshua and Eliza moved to Storm Lake, Buena Vista County, Iowa. There he became a clothing merchant and they continued to raise their four children. Sometime between 1885 and 1900, they relocated to Kenosha, Wisconsin. Still working as a clothing dealer, Joshua had reached his early sixties. The couple made their last move between 1905 and 1910 to San Juan Batista, San Benito County, California, just east of Monterey Bay. Joshua operated his own chicken farm there for a short time. He died on 31 May 1911 and was buried in the San Juan Batista Cemetery.

In 1882, four years after Joshua and Eliza Ames left Fort Collins for Iowa, the ditches throughout Water District No. 3 were adjudicated by the District Court of Larimer County to firmly establish the priorities and appropriation of water rights from the Cache la Poudre River. During this period, the Josh Ames Ditch (Ditch No. 17) was owned by Peter Anderson, Alexander Barry, Charles G. Buckingham and Robert Howes. The adjudication decree described it as used for "the irrigation of lands and domestic purposes taking its supply of water from the Cache la Poudre River with headgate in a slough of said river on the north side thereof about one half mile above the crossing of the Colorado Central Rail Road in the S.E. ¼ of section 2." Holding priority number twenty-five along the river, the ditch had a floor four feet in width and was capable of carrying 2,155 cubic feet of flowing water per minute, an appropriation of 35.91 cubic feet per second. Priority number twenty-five was listed as dating from 1 October 1867, the date that construction was started by Ames and Anderson.

The Josh Ames Ditch continued to operate throughout the 1880s and into the 1890s, largely under the same ownership as described in the 1882 adjudication. Its sole purpose during the period from 1867 to 1899 was to provide irrigation water to the farms of Josh Ames and Peter Anderson, and to those who acquired the former Ames acreage. In June 1899, Peter Anderson, Alexander Barry and J. H. C. Walker filed articles of incorporation for the Josh Ames Irrigation Ditch Company. Through this action, the ditch entered a new period of its history. With a declared capital stock of \$40,000, the new firm took possession of the ditch and its water rights. The articles of incorporation declared the company to be a profit-making enterprise engaged in the sale of irrigation water along with related activities such as the acquisition and sale of water rights, ditches and real estate. Four hundred shares were issued, each with a par value of \$100.

The articles of incorporation were amended in 1904, raising the number of shares to four thousand and setting the par value of each at \$10. In 1913, the company amended the articles again, this time to reduce the capital stock to 2,885 shares valued at \$10 each. Although Peter Anderson remained involved with the ditch company into the early twentieth century, the president of the firm during these years was Franklin C. Avery and the secretary was F. P. Stover, both prominent Fort Collins pioneers and businessmen.

In August 1912, the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company petitioned the district court in Fort Collins to change the water rights assigned to the Josh Ames Ditch. The two firms sought a reapportionment and change in the diversion point of its water. This would allow them to remove a defined amount of water from the river at their two headgates above the town of Laporte. By that time, the petitioning ditch companies had acquired more than one-quarter of the capital stock of the Josh Ames Irrigation Ditch Company (1,115 shares out of a total of 4,000). This, they claimed, entitled the two stockholders to 10.91 cubic feet of water per second from the ditch. No objections were raised and the court granted the request. The amount of water still available to the Josh

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Ames Ditch was reduced to 25 cubic feet per second to supply 710 acres of irrigated agricultural lands east and northeast of the town.

Two years later, in July 1914, the Water Supply & Storage Company filed a similar petition with the district court for a water transfer and change in diversion point. In this case, the company held 447 shares of the Josh Ames Ditch and wanted to divert this water directly from the river into its Larimer County Canal. The Water Supply Company owned approximately one-ninth of the Josh Ames Ditch's water, or close to four cubic feet per second. Different from the 1912 petition, this request was contested by the Fort Collins Milling & Elevator Company and by the New Cache la Poudre Irrigation Company. Both firms claimed that the change would deprive them of water that was secured by their own appropriations. The Water Supply & Storage Company responded to their objections by withdrawing the petition.

Another petition involving the Josh Ames Ditch came before the district court in late 1917. This case, The New Cache la Poudre Irrigating Company (plaintiff) vs. The Josh Ames Irrigating Ditch Company et al (defendants), was settled in early January 1919. It was an attempt by the plaintiff to settle issues that remained unresolved from the 1912 case that reallocated water from the ditch to two other companies. In addition to the Josh Ames Ditch, the defendants included the New Mercer Ditch Company, Charles R. Evans (on behalf of the Water Supply & Storage Company), and John L. Armstrong (the water commissioner of Water District 3). The Larimer County Canal No. 2 Irrigating Company was no longer in the picture, as the New Mercer Ditch Company had apparently acquired its share of the water rights during the intervening years.

The court found that of the Josh Ames Ditch's original 35.91 cubic feet of water per second that was permitted for irrigation by the adjudication decree of 1882, only 25 cubic feet had been diverted into the ditch each irrigation season between 1890 and 1912. Because the ditch company had not used the remaining 10.91 cubic feet of water per second for more than twenty years, the court concluded that this water had been abandoned. The transfer of 10.91 cubic feet of water per second in 1912 to the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company was therefore more than should have been allowed.

In his 2 January 1919 decision, Judge Robert Strong found that the New Mercer Ditch Company should have been granted an allocation from the Josh Ames Ditch in 1912 based upon its reduced appropriation of just 25 cubic feet of water per second. In other words, rather than 10.91 cubic feet of water per second, the New Mercer Ditch Company should have been allocated 7.03 cubic feet per second. With this amount removed from the Josh Ames Ditch's re-adjudicated 25 cubic feet per second, the court ordered that from 1919 on its allocation would be reduced to 17.97 cubic feet of water per second. The New Mercer Ditch Company was also ordered to limit its diversion of Josh Ames Ditch water to 7.03 cubic feet per second from that time forward. The case was appealed to the Colorado Supreme Court, which in 1921 upheld the lower court's decision.

Despite the reduced flow of the ditch, the stockholders of the Josh Ames Irrigating Ditch Company met in Fort Collins in October 1919 and voted to extend the life of the corporation for another twenty years. Around that time, the ditch was still providing irrigation water for 480 acres of land. The president of the company during the 1910s and well into the 1920s was Charles R. Evans.

By the late 1910s, the natural flow of water into the meander that supplied the Josh Ames Ditch headgate was supplemented by the installation of a small cobblestone dam in the river near the natural diversion point west of the county road that later became Shields St. Water pooled by the dam was diverted into a narrow channel that ran east and into the meander. A short distance to the east, the meander passed under a bridge along the county road. These features were located along the north side of the river on the parcel where the Larimer County Emergency Services facility is now found at 1303 N. Shields St.

While the ditch company held many of its meetings in local attorneys' offices, during the 1920s at least some of these took place at the Great Western Sugar Company factory. This underscored the ditch company's relationship with the plant. Although little information remains about the exact nature of this business relationship, it is known that the ditch provided water to the factory for many years. This may have been used for the washing of beets after they arrived at the plant. Water was diverted from the ditch at a concrete junction box located across the county road (now Vine Dr.) north of the factory. From that point, it was transported to the plant through a buried 12" diameter pipeline that ran directly into the factory's eastern wing. Wastewater exited the south end of the building and then headed east along Lateral No. 3. Much of the ditch's flow was reportedly utilized by the sugar plant for many decades.

The articles of incorporation of the Josh Ames Irrigation Ditch Company were amended again in 1926. This time the

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firm declared itself to be a mutual ditch company, operating as a non-profit organization rather than a for-profit enterprise. It had essentially returned to its original purpose, that of providing irrigation water to its owners, although in this case they were its stockholders. In May 1942, the stockholders met again to extend the life of the corporation, this time perpetually. Its president around that time was S. F. Webster.

The Josh Ames Ditch continued to operate through the 1950s and into the 1960s. However, during this period events began to occur that would change the ditch's history and bring its period of use to a rapid conclusion. First, the Great Western Sugar Company factory in Fort Collins closed in 1960 and the process water from the Josh Ames Ditch was no longer needed. Then in 1966, work began on development of the Fort Collins Airpark in the fields southeast of the sugar plant that were irrigated by the ditch. Industrial-warehouse properties also began to be developed in this area, which included the lands that were homesteaded by Josh Ames a century earlier. Redevelopment of the crop fields into a city airport and industrial park quickly reduced the need for irrigation water from the ditch.

Despite the fact that the ditch's history of use was coming to a close, the Josh Ames Irrigation Ditch Company made one last improvement to its water diversion and delivery system during the years before its demise became fully apparent. For many years, maybe even centuries, prior to the 1860s, water from the Cache la Poudre River had flowed naturally out of the main channel and into the north meander that in 1867 started to supply the headgate of the Josh Ames Ditch. After leaving the river's main channel just west of Shields St., the river water flowed through and pooled in the triangular property now occupied by the Larimer County Emergency Services facility (1303 N. Shields St.) and the vacant ground to the south. From there it continued east along the meander, passing under a small roadway bridge along County Road 35 (now Shields St.).

After passing under the road, the meander headed east through the parcel now occupied by the Creekside Garden Center (1224 N. Shields St.). The watercourse then arced through the countryside, curving to the northeast, east and then southeast. It passed the Josh Ames Ditch headgate, where some of the water was diverted for irrigation and the sugar factory. Finally, the meander traveled a short distance to the south where it met again with the river's main channel. As mentioned above, flow through the meander was first enhanced by the 1910s when a small cobblestone dam was placed in the river near the diversion point west of Shields St.

In 1952, the triangular parcel of land that held the beginning of the meander where it diverged from the main river channel was acquired by Larimer County. Over the following years, it appears that the county completed grading on the site to channel this first length of the meander and eliminate the pooling west of Shields St. This work may have been completed in conjunction with the ditch company. By 1960, the meander was channeled under Shields St. through two parallel pipes that were each 72" in diameter. These seem to have been installed as part of a road improvement project along Shields St. that also involved bridge replacement.

Six years later, in 1966, it appears that the Josh Ames Irrigation Ditch Company had a new diversion dam and headgate built near where the late 1910s cobblestone dam and diversion channel had been constructed to draw water into the meander. This may have been a response to low precipitation years in 1963, 1964 and 1966 that probably decreased flow through the meander to the original ditch headgate. In addition to the new concrete dam, which spanned the river channel, the 1966 project involved raising the north river bank and the construction of a tall headgate structure. These features reduced the potential for periodic flooding along the meander while siphoning much needed water through the headgate into a buried corrugated metal pipe. From the headgate, the pipe ran toward the east under the property now occupied by the Larimer County Emergency Services facility. The diverted river water then emerged from the pipe near the west side of Shields St., passed under the road, and continued east along the surface through the meander.

Following the dry years in the mid-1960s, the City of Fort Collins formed a Water Board that advised the council on water-related matters. This board studied the question of adequate water supplies for the growing city and determined that the municipality ought to be purchasing shares in area ditch companies. In June 1971, the City of Fort Collins acquired all of the water adjudicated under Priority No. 25, as amended and decreased to 17.97 cubic feet of water per second, from the Josh Ames Irrigation Ditch Company. The company's stockholders voted to approve the sale, which was of the raw water and not the ditch system itself. In exchange for the ditch company's water, the stockholders were provided with certificates giving them proportional use of treated city water. Each certificate also entitled the owner to fulfill future City of Fort Collins water requirements as their lands were annexed. Company president Donald Pavel, one of the largest stockholders, made the arrangements with the city. The other directors at the time were Henry Schlagel, Samuel Webster, and Thomas Bassett.

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Following the sale, the City of Fort Collins submitted an application to the water court for Division No. 1 stating that it intended to use the Josh Ames Ditch water to augment its municipal water supply. It accomplished this by conveying the water rights (along with rights to the Arthur, Larimer County No. 2 and New Mercer ditches) to the North Poudre Irrigation Company. This transfer covered a portion of the price for the city's acquisition of the Michigan Ditch and Joe Wright Reservoir, both of which remained important parts of the municipal water system into the twenty-first century.

In 1972, the Josh Ames Irrigation Ditch Company's remaining physical assets, excluding the water rights sold to the city the previous year, were transferred to trustee Henry Schlagel. The following year, in December 1973, the ditch system, together with its rights of way, easements, headgates and all other ditch structures were transferred again, this time from Schlagel to Donald Pavel. These transfers of the water rights and ditch system during the early 1970s effectively ended the useful life of the Josh Ames Ditch and its long history of irrigation came to an end.

17. Cultural Affiliation and Justification: N/A

IV. Management Recommendations

18. Eligibility of Entire Resource

☒ Eligible ☐ Not Eligible ☐ Need Data Is this an official determination? ☒ Yes ☐ No

Remarks / Justification: In 2010, the Josh Ames Ditch was determined by the Colorado Office of Archaeology and Historic Preservation to be eligible for the National Register of Historic Places. This determination was made despite the fact that earlier recorders found it to be ineligible. No rationale is provided regarding this determination.

The current study concluded that much of the Josh Ames Ditch's length has been physically compromised by erosion, a lack of maintenance, vegetative growth, deterioration, and more than four decades of abandonment. Lengthy sections of the earthen ditch have either been reduced to a shallow swale filled with vegetation, or have disappeared entirely from the landscape. A short segment west of the Alta Vista neighborhood is eroded but more readily visible. Concretework is the primary feature that has remained largely intact, although the headgate at the original diversion point along the meander is seriously deteriorated. Essentially, the ditch has been largely erased by erosion and development activities of recent decades, and no longer conveys its history and physical characteristics as a conveyance structure for agricultural and industrial water.

Also running through the same area as the Josh Ames Ditch, particularly to the east of College Ave., is the Lake Canal. This ditch has a sizable headworks near the railroad tracks just west of College Ave. After crossing College Ave., it runs toward the east parallel to the Josh Ames Ditch for one-half mile along the north side of Vine Dr. before turning toward the northeast near Redwood St. As the Josh Ames Ditch is no longer present through this area, it appears that the Lake Canal may have been mistaken for the Josh Ames Ditch when the 2010 determination was made that it was eligible for the NRHP. Although the current segment was evaluated in light of the 2010 OAHF determination that the entire ditch is eligible, it is recommended that this determination be reviewed again by OAHF.

19. Evaluation of integrity of the segment of the entire linear resource being recorded (Complete only if "Segment" under item 4 is checked and the entire resource is marked as Eligible under item 18)

☐ Supporting ☒ Non-supporting ☐ Not applicable

Remarks / Justification: The diversion dam, headgate and pipeline that are located west of N. Shields St. were installed in 1966 by the Josh Ames Irrigation Ditch Company to replace a natural diversion point where for years, if not centuries, water flowed unrestrained into a meander that arced through the countryside north of the river. Since 1867, this meander had supplied the Josh Ames Ditch with water that was diverted downstream at its original headgate west of College Ave. Changes to the meander's diversion point along the river west of Shields St. included raising the river bank to cut off its natural flow and the construction of a diversion dam, headgate and pipeline that would allow the company to control flow into the ditch system. These features were used for a few short years before the ditch was abandoned around 1970. While the integrity of the diversion dam and headgate is good, they are cut off from the meander and are no longer in use. The aspect of association has been substantially diminished. In addition, these features were constructed less than fifty years ago and are non-historic alterations. In light of the assembled facts, it is clear that this segment fails to support the National Register eligibility of the Josh Ames Ditch as a whole.

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20. Recorder(s): Ron Sladek, Tatanka Historical Associates Inc.

21. Date: 6/18/2013

Colorado Historical Society - Office of Archaeology & Historic Preservation
1560 Broadway, Suite 400 Denver, CO 80202
303-866-3395

Management Data Form

A *Management Data Form* should be completed for each cultural resource recorded during an archaeological survey. Isolated finds and revisits are the exception and they do not require a *Management Data Form*. Please attach the appropriate component forms and use continuation pages if necessary. Fields can be expanded or compressed as necessary.

1. **Resource Number:** 5LR.1829.52. **Temporary Resource Number:**3. **Attachments (check as many as apply)**☐ Prehistoric Archaeological Component☐ Historic Archaeological Component☒ Linear Component☒ Sketch/Instrument Map (required)☒ U.S.G.S. Map Photocopy (required)☒ Photograph(s) (required)☐ Other, specify:4. **Official determination (OAHPI use only)**☐ Determined Eligible NR\SR _____☐ Determined Not Eligible NR\SR _____☐ Nominated _____☐ Need Data NR\SR _____☐ Contributing to NR Dist.\SR Dist. _____☐ Not Contributing to NR Dist.\SR Dist. _____☐ Supports overall linear eligibility

NR\SR _____

☐ Does not support overall linear eligibility

NR\SR _____

I. IDENTIFICATION5. **Resource Name:** Josh Ames Ditch - Original Headgate & Segment (1867)6. **Project Name/Number:** Documentation and Analysis of the Josh Ames Ditch Headgates, Diversion Dam and Segments West of College Ave., Fort Collins, Larimer County, CO7. **Government Involvement:** ☒ Local ☐ State ☒ Federal

Agency: City of Fort Collins; US Army Corps of Engineers

8. **Site Categories (check as many as apply):**Prehistoric: ☐ archaeological site☐ paleontological site☐ In existing National Register District

National Register District name:

Historic: ☐ archaeology site ☐ building(s)☒ structure(s)☐ object(s)☐ In existing National Register District

National Register District name: N/A (part of NRHP-eligible linear resource: Josh Ames Ditch, 5LR.1829)

9. **Owner(s) Name and Address:** City of Fort Collins, 300 Laporte Ave., Fort Collins, CO 80521

10. **Boundary Description and Justification:** The boundaries of this site include the original headgate and the initial one-half-mile length of the Josh Ames Ditch that stretches to the east-southeast from the headgate to the west side of the Union Pacific railroad tracks that run north-south just west of College Ave. The lands where the headgate sits and the ditch segment runs are all owned by the City of Fort Collins. These boundaries form a long narrow rectangle that is approximately 800 meters in length by 10 meters in width. This allows for a reasonable buffer around the headgate and ditch segment.

11. **Site/Property Dimensions** Length: 800m Width: 10m Area: 8000m² Acres (m²/4047): 1.97

Area was calculated as: ☒ Length x Width (rectangle/square)☐ Length x Width x 0.785 (Ellipse)☐ GIS**II. LOCATION**12. **Legal Location**

PM 6th Township 7N Range 69W Section 2 NW ¼ SE ¼

PM 6th Township 7N Range 69W Section 2 SW ¼ SE ¼

PM 6th Township 7N Range 69W Section 2 SE ¼ SE ¼

PM Township Range Section ¼ ¼

Management Data Form**Resource Number:** 5LR.1829.5**Temporary Resource Number:**

If section is irregular, explain alignment method:

13. **USGS Quad:** Fort Collins 7.5' (1994)14. **County:** Larimer15. **UTM Coordinates:** Datum used ☒ NAD 27 ☐ NAD 83 ☐ WGS 84 Other:A. Zone 13; 492860 mE 4494290 mNB. Zone 13; 493450 mE 4493940 mNC. Zone 13; 493450 mE 4493930 mND. Zone 13; 492840 mE 4494270 mN16. **UTM Source:** ☐ Corrected GPS/rectified survey (<5m error)☐ Uncorrected
GPS☒ Map
template

Other (explain):

17. **Site elevation** (feet): 4,980'18. **Address:** Salyer Natural Area, Legacy Park Lot: Block: Addition:
& River's Edge Natural Area,
Fort Collins, CO

19. **Location/Access:** The original headgate and initial one-half-mile length of the Josh Ames Ditch are located in the Salyer Natural Area, Legacy Park & River's Edge Natural Area, all of which are found north of the Cache la Poudre River in an area that is northwest of downtown Fort Collins and north of Lee Martinez Park. From Mountain Ave. and College Ave. in downtown, head north on College Ave. just under one mile; turn left onto Hemlock St. and follow it across the railroad tracks and on west until it terminates at an unpaved parking lot; continue on foot along a pedestrian trail to the southeast into the Salyer Natural Area; staying north of the Cache la Poudre River, follow the trail to the southeast and cross over a small drainage that runs into the river; from that point head northeast along the tree line. The headgate is located in the trees a short distance (about 400') northeast of where the drainage meets the Cache la Poudre River. The location of the headgate may also be described as: Latitude 40.360244, Longitude -105.050592.

From the headgate, the ditch segment can be walked as it heads to the southeast into Legacy Park and then the River's Edge Natural Area. Although the shallow swale is barely evident and even missing in one length, it is filled with a snaking line of trees and shrubs that also provide a clue to its location. The resource can also be reached from College Ave. along Woodlawn Dr. This is a short road just north of the river that provides vehicular access over the railroad tracks, past the headworks of the Lake Canal, and into the River's Edge Natural Area and Legacy Park. The road runs along the south edge of the Josh Ames Ditch, terminating in a parking lot at the west end of Woodlawn Dr. The headgate and ditch segment are located on public lands, and are fully open and accessible to the public.

Management Data Form

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III. NATURAL ENVIRONMENT/SITE CONDITION

20. General Description (should include both on site as well as geographical setting with aspect, landforms, vegetation, soils, depositional environment, water, ground visibility): The original headgate and segment of the Josh Ames Ditch are located on the high plains of eastern Colorado, within the corporate boundaries of the City of Fort Collins. Situated along the east bank of an arcing abandoned meander, the headgate is located about 400' north of the Cache la Poudre River in the Salyer Natural Area. The meander contains water and its banks are thickly overgrown with vegetation. Largely hidden from view by this vegetation, the headgate sits abandoned and in deteriorated condition. The structure is partially collapsed and silted in, allowing water to flow through the headgate only during episodes of flooding.

The Josh Ames Ditch headgate and initial length are located in, and run through, the Salyer Natural Area, Legacy Park, and the River's Edge Natural Area. All of these are adjacent open space and parks lands that are owned and managed by the City of Fort Collins. They are largely undeveloped except for unpaved parking areas, minimally developed walking trails, and limited picnic grounds. These lands are mostly occupied by prairie grasses and mature trees, with the abandoned meander to the northwest, the Cache la Poudre River to the south, a commercial area to the north, and a small residential neighborhood and commercial buildings to the east. These characteristics provide the resource with a rural buffer of hundreds of yards in most directions.

The headgate is constructed of both board-formed concrete and concrete blocks assembled with mortar. Mounted atop the structure is a vertical metal ratchet bar and mechanism used to raise and lower the gate. The entire headgate structure, including its concrete block wingwalls, is collapsing and in poor condition. While the metal gate itself does not appear to be present at the site, it may be buried or obscured by soils or debris.

The earthen ditch segment extends from the headgate toward the east-southeast in the direction of College Ave., a distance of about one-half mile. Out of use and unmaintained for over four decades, this length of the ditch has filled with soil and vegetation. Today it is largely undistinguishable to the untrained eye, and sections of the segment have disappeared entirely where it passes through Legacy Park and the River's Edge Natural Area. Where it is distinguishable, the ditch's route between the headgate and College Ave. is marked by a very shallow swale covered with prairie grasses, and lined and filled with a profusion of shrubs and trees. The ditch no longer makes it to College Ave., but terminates just west of the Union Pacific railroad tracks. From that point to College Ave., a distance of perhaps 100 yards, its original course has been obliterated by development in recent decades.

21. Soil depth (cm) and description: N/A

22. Condition

a. Architectural/Structural

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☒ Deteriorated
- ☐ Ruin

b. Archaeological/Paleontological

- ☐ Undisturbed
- ☐ Light disturbance
- ☐ Moderate disturbance
- ☐ Heavy disturbance
- ☐ Total disturbance

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23. **Describe condition:** The headgate structure has been out of use and unmaintained for over four decades, and is now silted in and collapsing. Its concretework, including the headgate and wingwalls, is falling apart, with perhaps half of the structure still standing upright. The vertical ratchet bar used to raise and lower the gate is present but dislocated from its deteriorated wood mount atop the structure. The gate itself may be buried under the silt and debris. Additional concrete and stonework that was used to stabilize the ditch banks just below the headgate have either collapsed or have become largely obscured by vegetation. The half-mile ditch segment to the east-southeast between the headgate and Union Pacific railroad tracks has filled with soil and vegetation, and is barely recognizable today except for a very shallow swale and line of trees. This appears to have been caused by natural erosion and a lack of maintenance. The ditch is no longer capable of carrying irrigation water to area crop fields. Along this segment it has deteriorated and filled to the point at which the location and configuration of its original floor and side walls can no longer be distinguished. In addition, some lengths of the ditch segment have been completely obliterated, especially through Legacy Park and between the railroad tracks and College Ave.

24. **Vandalism:** ☐ Yes ☒ No

Describe:

IV. NATIONAL/STATE REGISTER ELIGIBILITY ASSESSMENT

25. **Context or Theme:** Early High Plains Irrigation and Farming

26. Applicable National Register Criteria:

- ☒ A. Associated with events that have made a significant contribution to the broad pattern of our history
- ☐ B. Associated with the lives of persons significant in our past
- ☐ C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- ☐ D. Has yielded, or may be likely to yield, information important in history or prehistory
- ☐ Does not meet any of the National Register criteria
- ☐ Qualifies under exceptions A through G. List exception(s):

27. Applicable State Register Criteria:

- ☒ A. Property is associated with events that have made a significant contribution to history
- ☐ B. Property is connected with persons significant in history
- ☐ C. Property has distinctive characteristics of a type, period, method of construction or artisan
- ☐ D. Property is of geographic importance
- ☐ E. Property contains the possibility of important discoveries related to prehistory or history
- ☐ Does not meet any of the State Register criteria

28. **Area(s) of significance:** Agriculture, Industry

29. **Period(s) of significance:** 1867-1963

30. **Level of significance:** ☐ National ☐ State ☒ Local

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31. Statement of significance: Several segments and features of the original Josh Ames Ditch have been documented and evaluated since 2001. These are listed as 5LR.1829.1, 5LR.1829.2 and 5LR.1829.3. While the earlier of these evaluations concluded that the ditch was not eligible for the National Register of Historic Places, the evaluation completed in 2010 (5LR.1829.3) resulted in an official determination that it is eligible.

Throughout the period between 1867 and the mid-1960s, the Josh Ames Ditch served as a small but integral part of the irrigation system associated with agricultural lands east of the growing town of Fort Collins. It was started early in the pioneer era and contributed to the agricultural development of the arid plains east of the Rocky Mountains. In addition, after the Great Western Sugar Company plant opened in 1904 across the Cache la Poudre River northeast of downtown, the Josh Ames Ditch was recruited to transport water to the facility for manufacturing purposes. This was accomplished through the construction of a buried pipeline that ran south to the plant from the ditch's main course north of Vine Dr. In light of the ditch's history of development and use, it is eligible for the National Register of Historic Places under Criterion A for its association with agriculture and agricultural industry in the Fort Collins area.

The period of significance for the Josh Ames Ditch runs from 1867, when the ditch was started, through 1963, which is the current fifty year mark. The sugar plant ceased operations in 1960, after which the ditch was no longer needed by the factory. However it continued to serve agricultural fields east of town for another decade. In 1966, work began on development of the Fort Collins Airpark in the crop fields that had been watered by the ditch for a century. This facility continued to expand throughout the late 1960s and by 1970 the ditch was abandoned as it was no longer needed. During the early 1970s, the water rights were sold to the City of Fort Collins and then transferred to another ditch company through an arrangement that enhanced the city's municipal water supply.

While the historical significance of the Josh Ames Ditch is recognized as substantial enough to merit National Register eligibility, the original headgate and initial segment west of College Ave. suffer today from substantial problems related to physical integrity. Due to severe erosion, vegetative growth, the eradication of some lengths of the ditch, reconstruction of the headgate sometime between around 1950 and 1970, and deterioration of that headgate over the past four decades, the headgate and ditch segment included in this study fail to support the eligibility of the ditch as a whole.

32. Statement of historic integrity related to significance: As described above, the original headgate and first half-mile segment of the Josh Ames Ditch experienced significant deterioration over the past four-decades of its abandonment. Not only has the headgate silted in and partially collapsed, but the ditch segment itself is filled with soil and thick vegetation, leaving a shallow swale and a line of trees and shrubs to mark its historic presence on the landscape. In areas both east and west of the Union Pacific railroad tracks (the segment's current eastern terminus), lengths of the ditch have been completely obliterated.

In addition to the deteriorated state of the headgate and ditch, the resource has experienced another form of alteration. The ditch was started in 1867 and operated for just over a century before it was abandoned. However, the headgate that is present on the site today does not date from the 19th century or early 20th century. It is constructed of board-formed concrete and concrete blocks, none of which appear to date from before around 1950. The research completed for this project uncovered no information about exactly when the current headgate was rebuilt. What is known is that based upon the appearance of the materials used, the headgate that remains there at this time could have been constructed anytime between approximately 1950 and 1970. Given its unknown date of construction within this broad period, the current headgate may be less than fifty years old and a non-historic feature that replaced the original headgate or an early reconstruction that would have been at this location.

Through its bulletin entitled "How to Apply the National Register Criteria," the National Register of Historic Places provides guidance on assessing the seven aspects of integrity. The bulletin states that "to retain historic integrity a property will always possess several, and usually most, of the aspects." In his 2005 Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado, Michael Holleran more specifically addresses the aspects of integrity as they relate to irrigation features. The following evaluates the seven aspects as they relate to the segment of the Josh Ames Ditch that is currently under study:

Location - The headgate and initial segment of the Josh Ames Ditch are still in their original locations and meet the standard for the aspect of location.

Design - Although the headgate is present but deteriorated, the ditch segment is almost completely filled with soil and vegetation. For this reason, the aspect of design is substantially diminished since much of the segment has all but disappeared from the landscape other than a shallow swale and a line of mature trees and shrubs. In some areas, the

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swale is gone and the ditch has been completely erased. Its floor and side walls can no longer be distinguished. Due to the effects of erosion and alteration, significant elements of the ditch's design have been lost from much of this segment.

Setting - The areas surrounding the headgate and ditch segment remain rural in appearance and are still dominated by the river, the meander, and the open fields and stands of trees. For this reason, although the setting beyond this area has been developed and is now urban, these features are not readily visible and the headgate and ditch segment remain surrounded by a rural setting.

Materials - The headgate was likely to have been constructed of wood during its earliest period of operation. Concrete came into use during the late 1800s and the headgate was probably rebuilt more than once or twice during its century of use. The current headgate is constructed of materials that have the appearance of dating from the decades following World War II, and it could have been rebuilt as late as the late 1960s. While the ditch segment was originally earthen, it has filled with soil and vegetation. Despite these changes, the aspect of materials does not appear to have been substantially diminished.

Workmanship - While the workmanship of the headgate remains evident, that employed along the ditch segment is completely obscured.

Feeling - Although the headgate continues to provide the feeling of an irrigation ditch structure, the ditch segment itself no longer exhibits anything of its feeling as a water conveyance structure since it is almost completely filled with soil and vegetation. Not enough of its historic physical fabric remains visible for it to meet the aspect of feeling and convey its function and significance.

Association - While the headgate is visible and the course of the deteriorated ditch can be made out by a professional skilled in reading the landscape, the segment is hardly intact enough to convey its use and significance as a water conveyance structure to the casual observer. Most people today would be hard pressed to recognize the shallow swale and line of trees and shrubs as a former irrigation ditch.

The Colorado Engineering Context (King, 1984) also addresses the integrity of irrigation resources as it relates to significance. According to King, the physical condition of canals and ditches "should be clearly evident, not filled-in or substantially modified." The Colorado Plains Historic Context (Mehls, 1984) discusses irrigation, but refers recorders to the Engineering Context for information on analyzing the integrity and significance of canals and ditches.

In light of these contexts and the assembled facts, it is clear that several important elements of integrity (design, workmanship, feeling and association) have been substantially diminished. Consequently, the headgate and ditch segment do not support the National Register eligibility of the Josh Ames Ditch as a whole.

- | | | | |
|---|---|--|------------------------------------|
| 33. National Register Eligibility Field Assessment: | <input checked="" type="checkbox"/> Eligible | <input type="checkbox"/> Not eligible | <input type="checkbox"/> Need data |
| Linear Segment Evaluation (if applicable): | <input type="checkbox"/> Supporting | <input checked="" type="checkbox"/> Non Supporting | |
| 34. Status in an Existing National Register District: | <input type="checkbox"/> Contributing | <input type="checkbox"/> Non-contributing | |
| 35. State Register Eligibility Field Assessment: | <input checked="" type="checkbox"/> Eligible | <input type="checkbox"/> Not eligible | <input type="checkbox"/> Need data |
| 36. Status in an Existing State Register District: | <input type="checkbox"/> Contributing | <input type="checkbox"/> Non-contributing | |
| 37. National/State Register District Potential: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe: | | |

38. Cultural Landscape Potential: ☐ Yes ☒ No Describe:

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39. If Yes to either 37 or 38, is this site: ☐ Contributing ☐ Non-contributing Explain:

V. MANAGEMENT AND ADMINISTRATIVE DATA

40. Threats to Resource: ☒ Water erosion ☐ Wind erosion ☐ Grazing ☒ Neglect ☐ Vandalism
☐ Recreation ☐ Construction ☒ Other (explain): Freeze/thaw damage to concrete headgate structure

41. Existing protection ☒ None ☐ Marked ☐ Fenced ☐ Patrolled ☐ Access controlled
Other (specify):

Comments:

42. Local landmark designation:

43. Easement:

44. Recorder's Management Recommendations: No Further Work or Mitigation Necessary

VI. DOCUMENTATION

45. Previous actions accomplished at the site: ☐ Tested ☐ Partial excavation ☐ Complete excavation

Date(s):

a. Excavations:

b. Stabilization:

Date(s):

c. HABS/HAER documentation [date(s) and numbers]:

d. Other:

46. Known collections/reports/interviews and other references (list): SHPO Files, Josh Ames Ditch, 5LR.1829.1 through 5LR.1829.3; Irrigation and Water Supply Ditches and Canals in Colorado, 1787-1961, National Register of Historic Places Nomination Form; Carl McWilliams, Josh Ames Diversion Dam & Headgate, Fort Collins Agricultural Resources Survey, 1994; Articles of Incorporation, Josh Ames Irrigation Ditch Company, 1899; Water Decrees of Water District No. Three, 1882; Jay Trask, Irrigation and Water-Related Structures in the Cache la Poudre River Corridor, 2003; Rose Laflin, Irrigation, Settlement, and Change on the Cache la Poudre River, Colorado Water Resources Research Institute, Special Report No. 15, 2005; USGS Fort Collins, Colorado 7.5' Topographic Quadrangle Maps, 1906-1994; Michael Holleran, Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado (Colorado Center for Preservation Research, 2005); Joseph E. King, Colorado Engineering Context (Colorado Historical Society, 1984)

47. Primary location of additional data: N/A

48. State or Federal Permit number:

49. Collection: Artifact collection authorized: ☐ Yes ☒ No Were artifacts collected: ☐ Yes ☒ No
Artifact repository:

Collection method: ☐ Diagnostics ☐ Grab Sample ☐ Random Sample

Management Data Form

Resource Number: 5LR.1829.5

Temporary Resource Number:

Other (specify):

50. Photograph Numbers: JAD4360 - JAD4389

Files or negatives stored at: Tatanka Historical Associates Inc., P.O. Box 1909, Fort Collins, CO 80522

51. Report title: Documentation and Analysis of the Josh Ames Ditch Headgates, Diversion Dam and Segment West of College Ave., Fort Collins, Larimer County, CO

52. Recorder(s): Ron Sladek, President

Date: 6/18/2013

53. Recorder affiliation: Tatanka Historical Associates, Inc.

Phone number/Email: 970/221-1095 / tatanka@verinet.com

NOTE: Please attach a site map, a photocopy of the USGS 1:24000 map indicating resource location, and photographs.

History Colorado - Office of Archaeology & Historic Preservation
1200 Broadway, Denver, CO 80203
303-866-3395

Linear Component Form

This form should be completed for each linear resource or linear segment. Use this form in conjunction with the *Management Data Form*. Call OAHP staff (303-866-5216) prior to assigning a resource number.

I. Resource Identification1. **Resource Number:** 5LR.1829.52. **Temporary Resource Number:**3. **Site Name:** Josh Ames Ditch - Original Headgate & Segment (1867)4. **Record of:** ☐ Entire resource ☒ Segment**II. Resource Description**5. **Resource Type:** ☐ Road ☐ Railroad ☐ Trail ☒ Ditch/Canal

Other (specify):

6. **Component Description:** The original headgate and segment of the Josh Ames Ditch are located on the high plains of eastern Colorado, within the corporate boundaries of the City of Fort Collins. Situated along the east bank of an arcing abandoned meander, the headgate is located about 400' north of the Cache la Poudre River in the Salyer Natural Area. The meander contains water and its banks are thickly overgrown with vegetation. Largely hidden from view by this vegetation, the headgate sits abandoned and in deteriorated condition. The structure is partially collapsed and silted in, allowing water to flow through the headgate only during episodes of flooding.

The Josh Ames Ditch headgate and initial half-mile segment to the southeast are located in, and run through, the Salyer Natural Area, Legacy Park, and the River's Edge Natural Area. All of these are adjacent open space and parks lands that are owned and managed by the City of Fort Collins. They are largely undeveloped except for unpaved parking areas and drives, minimally developed walking trails, and limited picnic grounds. These lands are mostly occupied by prairie grasses and mature trees, with the abandoned meander to the northwest and the Cache la Poudre River to the south. Farther to the north and east are commercial buildings and a small collection of houses. These characteristics provide the resource with a rural buffer of hundreds of yards in almost every direction.

The headgate, about four feet in height and approximately twenty feet long (with its wingwalls), is constructed of both board-formed concrete and concrete blocks assembled with mortar. Mounted atop the headgate structure is a vertical metal ratchet bar and mechanism used to raise and lower the gate. The entire headgate, including its concrete block wingwalls, is collapsing and in poor condition. The metal gate does not appear to be present at the site, but may be buried or obscured by soils or debris. At this time, as much as half of the concrete structure has collapsed or is obscured by soil and vegetation.

The earthen ditch segment extends from the headgate toward the southeast in the direction of College Ave., a distance of about one-half mile. It appears to have originally been about twelve feet wide and perhaps four to six feet deep. Out of use and unmaintained for over four decades, this length of the ditch has filled with soil and vegetation. Today it is largely undistinguishable to the untrained eye, and sections of the segment have disappeared entirely where it passes through Legacy Park and the River's Edge Natural Area. Where it is distinguishable, the ditch's route is marked by a very shallow swale covered with prairie grasses and filled with a profusion of shrubs and trees. The ditch no longer makes it to College Ave., but terminates just west of the north-south Union Pacific railroad tracks. From that point to College Ave., a distance of perhaps 100 yards, the ditch's original course has been obliterated by development.

7. **Original use:** Irrigation Canal8. **Current use:** Not in Use

9. **Modifications (describe and include dates):** The headgate structure appears to have been constructed between around 1950 and 1970, and probably replaced an earlier headgate at this location. It has been out of use and unmaintained for over four decades, and is now silted in and collapsing. The concretework, including the headgate and wingwalls, is falling apart, with perhaps half of the structure still standing upright. The vertical ratchet bar used to raise and lower the gate is present but dislocated from its deteriorated wood mount. The gate itself may be buried under the silt and debris. Additional concrete and stonework that stabilized the ditch banks just below the headgate have either collapsed or become largely obscured by vegetation. The half-mile ditch segment to the southeast between the headgate and Union Pacific railroad tracks remains in its original location, but after decades of abandonment has filled with soil and vegetation. It is barely recognizable today except for a very shallow swale and line of trees. Some lengths of the segment have been completely erased. The ditch is no longer capable of carrying irrigation water and has eroded to the point at which its original floor and side walls can no longer be distinguished.

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10. Extent of Entire Resource: Beyond this segment to the east and downstream, the Josh Ames Ditch disappears as it approaches the north-south Union Pacific train tracks that are located just west of College Ave. East of the train tracks and College Ave., the ditch is entirely gone from the landscape for another half mile. It reemerges just east of Redwood St., where it runs from west to east behind the Larimer County Fleet Management facility. The ditch then continues its easterly course through the field north of Vine Dr. In this field, it reaches a concrete junction box where water was diverted into the 12" pipeline that ran south to the Great Western Sugar Company factory. This concrete structure and the pipeline opening are still intact and visible. From there, the ditch travels a short distance before it dies out and disappears as it approaches the Alta Vista neighborhood. It picks up again on the west side of Lindenmeier Rd., where it enters a concrete culvert that passes below the street. On the east side of Lindenmeier Rd., another concrete structure diverts the ditch into the adjacent bed of Dry Creek. This junction is the physical terminus of the Josh Ames Ditch, although the ditch water historically continued a short distance east through the creek as it approached the farms of its original builders.

Northwest of the original headgate, the abandoned meander arcs upstream through the countryside for a length of just under one mile. While it used to reach Shields St., today the meander falls a few hundred yards short of that road on its west end. It now starts a distance behind the Creekside Garden Center at 1224 N. Shields St. West of that, the meander disappears except for an out-of-use large diameter concrete pipe that passes under Shields St. Visible evidence of the meander is again erased west of Shields St. as it approaches the Cache la Poudre River. Along the river west of the Larimer County Emergency Services facility (1303 N. Shields St.) is a later diversion dam and headgate for the Josh Ames Ditch. Although this was the original location of the natural diversion into the river meander, the riverbank there has been reshaped and the diversion dam, headgate and an associated buried pipeline were constructed in 1966. The pipeline headed east through the County Emergency Services property long before this facility was built, but no longer emerges from the ground or carries water to any location. While these features were installed to control the diversion of river water into the meander and supply the original Josh Ames headgate and ditch 1.25 miles downstream, today they are disconnected from the irrigation system and are no longer in use. All of these abandoned upstream features are documented separately under site number 5LR.1829.4.

11. Associated Artifacts: N/A

12. Associated Features or Resources: N/A

III. Research Information

13. Architect/Engineer: N/A

Source(s) of Information: N/A

14. Builder: Joshua B. Ames

Source(s) of Information: "Water Decrees of Water District No. Three," Larimer County District Court, 1882;
"Table For Irrigation District No. 3," Fort Collins Courier, 4 September 1883, p. 7

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15. Date of Construction / Date Range: 1867

Source(s) of Information: Water Decrees of Water District No. Three," Larimer County District Court, 1882; "Table For Irrigation District No. 3," Fort Collins Courier, 4 September 1883, p. 7

16. **Historical / Archival Data:** The history of the Josh Ames Ditch begins shortly after the Civil War, when pioneer Josh Ames launched the construction of a ditch along the north side of the Cache la Poudre River that would provide irrigation water for his crop fields about two miles downstream. Joshua Beardsley Ames was born on 23 March 1839 in the area of Clintonville, New York, close to Lake Champlain. By 1850, the family was living in the same vicinity, specifically in Chesterfield, Essex County, where Josh's father Seymour worked as a farmer.

In the spring of 1862, Joshua and his younger brother Orvand set out for the western frontier with the goal of reaching the Colorado Territory that summer. Their journey coincided with the Civil War, a time when many young men of their generation were volunteering for service rather than heading west to start a new life. The brothers traveled with Andrew Ames, possibly an older cousin, who had already been to Colorado and had returned east to retrieve his mother and sisters. In Kansas, the Ames party met up with the family of John G. Coy, who had left Missouri hoping to reach California. However, the Coys experienced delays in their crossing of the plains that forced them to shorten their journey and also head to Colorado.

Together, the Ames and Coy families made their way to the South Platte River and then followed the Cache la Poudre River upstream to the area of present-day Fort Collins. At that time there was still no fort or town in the vicinity except for the small village of Laporte, located close to the foothills. Several miles below Laporte they claimed adjacent homestead parcels in the open countryside north of the Cache la Poudre. Today this area is just east of downtown Fort Collins in the vicinity of Lemay Ave., from the river north to Vine Dr. The Coy family settled the acreage now occupied by the Link-N-Greens Golf Course (SE¼ of Section 12, T7N-R69W). Joshua Ames located his homestead in the adjacent section to the east and northeast across today's Lemay Ave. (E½ NW¼; SW¼ NW¼; and the NE¼ SW¼ of Section 7, T7N-R68W).

Ames filed a preemption claim in October 1864 and then obtained the patent to the 160-acre parcel in December 1870. His lands were located just east, south and southeast of today's Andersonville neighborhood. This includes the western grounds of the Downtown Fort Collins Airpark, which started to be developed in the mid-1960s, including the area surrounding the intersection of Link Ln. and Lincoln Ave. In addition to the Coy family to the southwest, his neighbors included a pioneer named Peter Anderson, who farmed extensive acreage to the north across Vine Dr. In addition to farming, Anderson went on to become a Fort Collins banker, merchant, city alderman and president of the Chamber of Commerce (the small community of Andersonville near his farm and the sugar factory was later named in his honor).

In 1866, Joshua returned briefly to the Midwest to marry Eliza Lorain Angier. She was born in 1842 in Lakeport, New York, a village along the south shore of Oneida Lake northeast of Syracuse. The couple married in Clayton, Iowa and went on to have four children, the first three of them born in Colorado. They settled on Joshua's farm near Fort Collins and remained there into the 1870s. During the early 1870s, Joshua transferred ownership of half his acreage to his wife.

The first irrigation ditch along the Cache la Poudre River was constructed in 1860 near the town of Bellvue. Pioneers eager to irrigate their crops launched additional projects along the length of the river over the following years. Most of these early ditches stayed in the bottomlands and were modest in construction and length due to the labor-intensive work involved. In 1867, Joshua Ames established a new ditch that would irrigate his fields. He partnered with his neighbor to the north, Peter Anderson, and the two men excavated a 1.75-mile ditch that brought water from the Cache la Poudre River to their farms. The ditch diverted the water through a headgate located along a meander north of the river and then headed east through the open fields until it terminated in Dry Creek at today's intersection of Lemay Ave. and Vine Dr. From there, Dry Creek and a system of lateral ditches carried the irrigation water to their fields.

Joshua and Eliza sold their agricultural lands in the mid-1870s, with different parcels going to Orvand Ames, John Coy and Alfred Howes. In 1878, the last of the acreage was sold and Joshua and Eliza moved to Storm Lake, Buena Vista County, Iowa. There he became a clothing merchant and they continued to raise their four children. Sometime between 1885 and 1900, they relocated to Kenosha, Wisconsin. Still working as a clothing dealer, Joshua had reached his early sixties. The couple made their last move between 1905 and 1910 to San Juan Batista, San Benito County, California, just east of Monterey Bay. Joshua operated his own chicken farm there for a short time. He died on 31 May 1911 and was buried in the San Juan Batista Cemetery.

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In 1882, four years after Joshua and Eliza Ames left Fort Collins for Iowa, the ditches throughout Water District No. 3 were adjudicated by the District Court of Larimer County to firmly establish the priorities and appropriation of water rights from the Cache la Poudre River. During this period, the Josh Ames Ditch (Ditch No. 17) was owned by Peter Anderson, Alexander Barry, Charles G. Buckingham and Robert Howes. The adjudication decree described it as used for "the irrigation of lands and domestic purposes taking its supply of water from the Cache la Poudre River with headgate in a slough of said river on the north side thereof about one half mile above the crossing of the Colorado Central Rail Road in the S.E. ¼ of section 2." Holding priority number twenty-five along the river, the ditch had a floor four feet in width and was capable of carrying 2,155 cubic feet of flowing water per minute, an appropriation of 35.91 cubic feet per second. Priority number twenty-five was listed as dating from 1 October 1867, the date that construction was started by Ames and Anderson.

The Josh Ames Ditch continued to operate throughout the 1880s and into the 1890s, largely under the same ownership as described in the 1882 adjudication. Its sole purpose during the period from 1867 to 1899 was to provide irrigation water to the farms of Josh Ames and Peter Anderson, and to those who acquired the former Ames acreage. In June 1899, Peter Anderson, Alexander Barry and J. H. C. Walker filed articles of incorporation for the Josh Ames Irrigation Ditch Company. Through this action, the ditch entered a new period of its history. With a declared capital stock of \$40,000, the new firm took possession of the ditch and its water rights. The articles of incorporation declared the company to be a profit-making enterprise engaged in the sale of irrigation water along with related activities such as the acquisition and sale of water rights, ditches and real estate. Four hundred shares were issued, each with a par value of \$100.

The articles of incorporation were amended in 1904, raising the number of shares to four thousand and setting the par value of each at \$10. In 1913, the company amended the articles again, this time to reduce the capital stock to 2,885 shares valued at \$10 each. Although Peter Anderson remained involved with the ditch company into the early twentieth century, the president of the firm during these years was Franklin C. Avery and the secretary was F. P. Stover, both prominent Fort Collins pioneers and businessmen.

In August 1912, the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company petitioned the district court in Fort Collins to change the water rights assigned to the Josh Ames Ditch. The two firms sought a reapportionment and change in the diversion point of its water. This would allow them to remove a defined amount of water from the river at their two headgates above the town of Laporte. By that time, the petitioning ditch companies had acquired more than one-quarter of the capital stock of the Josh Ames Irrigation Ditch Company (1,115 shares out of a total of 4,000). This, they claimed, entitled the two stockholders to 10.91 cubic feet of water per second from the ditch. No objections were raised and the court granted the request. The amount of water still available to the Josh Ames Ditch was reduced to 25 cubic feet per second to supply 710 acres of irrigated agricultural lands east and northeast of the town.

Two years later, in July 1914, the Water Supply & Storage Company filed a similar petition with the district court for a water transfer and change in diversion point. In this case, the company held 447 shares of the Josh Ames Ditch and wanted to divert this water directly from the river into its Larimer County Canal. The Water Supply Company owned approximately one-ninth of the Josh Ames Ditch's water, or close to four cubic feet per second. Different from the 1912 petition, this request was contested by the Fort Collins Milling & Elevator Company and by the New Cache la Poudre Irrigation Company. Both firms claimed that the change would deprive them of water that was secured by their own appropriations. The Water Supply & Storage Company responded to their objections by withdrawing the petition.

Another petition involving the Josh Ames Ditch came before the district court in late 1917. This case, The New Cache la Poudre Irrigating Company (plaintiff) vs. The Josh Ames Irrigating Ditch Company et al (defendants), was settled in early January 1919. It was an attempt by the plaintiff to settle issues that remained unresolved from the 1912 case that reallocated water from the ditch to two other companies. In addition to the Josh Ames Ditch, the defendants included the New Mercer Ditch Company, Charles R. Evans (on behalf of the Water Supply & Storage Company), and John L. Armstrong (the water commissioner of Water District 3). The Larimer County Canal No. 2 Irrigating Company was no longer in the picture, as the New Mercer Ditch Company had apparently acquired its share of the water rights during the intervening years.

The court found that of the Josh Ames Ditch's original 35.91 cubic feet of water per second that was permitted for irrigation by the adjudication decree of 1882, only 25 cubic feet had been diverted into the ditch each irrigation season between 1890 and 1912. Because the ditch company had not used the remaining 10.91 cubic feet of water per second

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for more than twenty years, the court concluded that this water had been abandoned. The transfer of 10.91 cubic feet of water per second in 1912 to the New Mercer Ditch Company and the Larimer County Canal No. 2 Irrigating Company was therefore more than should have been allowed.

In his 2 January 1919 decision, Judge Robert Strong found that the New Mercer Ditch Company should have been granted an allocation from the Josh Ames Ditch in 1912 based upon its reduced appropriation of just 25 cubic feet of water per second. In other words, rather than 10.91 cubic feet of water per second, the New Mercer Ditch Company should have been allocated 7.03 cubic feet per second. With this amount removed from the Josh Ames Ditch's re-adjudicated 25 cubic feet per second, the court ordered that from 1919 on its allocation would be reduced to 17.97 cubic feet of water per second. The New Mercer Ditch Company was also ordered to limit its diversion of Josh Ames Ditch water to 7.03 cubic feet per second from that time forward. The case was appealed to the Colorado Supreme Court, which in 1921 upheld the lower court's decision.

Despite the reduced flow of the ditch, the stockholders of the Josh Ames Irrigating Ditch Company met in Fort Collins in October 1919 and voted to extend the life of the corporation for another twenty years. Around that time, the ditch was still providing irrigation water for 480 acres of land. The president of the company during the 1910s and well into the 1920s was Charles R. Evans.

By the late 1910s, the natural flow of water into the meander that supplied the Josh Ames Ditch headgate was supplemented by the installation of a small cobblestone dam in the river near the natural diversion point west of the county road that later became Shields St. Water pooled by the dam was diverted into a narrow channel that ran east and into the meander. A short distance to the east, the meander passed under a bridge along the county road. These features were located along the north side of the river on the parcel where the Larimer County Emergency Services facility is now found at 1303 N. Shields St.

While the ditch company held many of its meetings in local attorneys' offices, during the 1920s at least some of these took place at the Great Western Sugar Company factory. This underscored the ditch company's relationship with the plant. Although little information remains about the exact nature of this business relationship, it is known that the ditch provided water to the factory for many years. This may have been used for the washing of beets after they arrived at the plant. Water was diverted from the ditch at a concrete junction box located across the county road (now Vine Dr.) north of the factory. From that point, it was transported to the plant through a buried 12" diameter pipeline that ran directly into the factory's eastern wing. Wastewater exited the south end of the building and then headed east along Lateral No. 3. Much of the ditch's flow was reportedly utilized by the sugar plant for many decades.

The articles of incorporation of the Josh Ames Irrigation Ditch Company were amended again in 1926. This time the firm declared itself to be a mutual ditch company, operating as a non-profit organization rather than a for-profit enterprise. It had essentially returned to its original purpose, that of providing irrigation water to its owners, although in this case they were its stockholders. In May 1942, the stockholders met again to extend the life of the corporation, this time perpetually. Its president around that time was S. F. Webster.

The Josh Ames Ditch continued to operate through the 1950s and into the 1960s. However, during this period events began to occur that would change the ditch's history and bring its period of use to a rapid conclusion. First, the Great Western Sugar Company factory in Fort Collins closed in 1960 and the process water from the Josh Ames Ditch was no longer needed. Then in 1966, work began on development of the Fort Collins Airpark in the fields southeast of the sugar plant that were irrigated by the ditch. Industrial-warehouse properties also began to be developed in this area, which included the lands that were homesteaded by Josh Ames a century earlier. Redevelopment of the crop fields into a city airport and industrial park quickly reduced the need for irrigation water from the ditch.

Despite the fact that the ditch's history of use was coming to a close, the Josh Ames Irrigation Ditch Company made one last improvement to its water diversion and delivery system during the years before its demise became fully apparent. For many years, maybe even centuries, prior to the 1860s, water from the Cache la Poudre River had flowed naturally out of the main channel and into the north meander that in 1867 started to supply the headgate of the Josh Ames Ditch. After leaving the river's main channel just west of Shields St., the river water flowed through and pooled in the triangular property now occupied by the Larimer County Emergency Services facility (1303 N. Shields St.) and the vacant ground to the south. From there it continued east along the meander, passing under a small roadway bridge along County Road 35 (now Shields St.).

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After passing under the road, the meander headed east through the parcel now occupied by the Creekside Garden Center (1224 N. Shields St.). The watercourse then arced through the countryside, curving to the northeast, east and then southeast. It passed the Josh Ames Ditch headgate, where some of the water was diverted for irrigation and the sugar factory. Finally, the meander traveled a short distance to the south where it met again with the river's main channel. As mentioned above, flow through the meander was first enhanced by the 1910s when a small cobblestone dam was placed in the river near the diversion point west of Shields St.

In 1952, the triangular parcel of land that held the beginning of the meander where it diverged from the main river channel was acquired by Larimer County. Over the following years, it appears that the county completed grading on the site to channel this first length of the meander and eliminate the pooling west of Shields St. This work may have been completed in conjunction with the ditch company. By 1960, the meander was channeled under Shields St. through two parallel pipes that were each 72" in diameter. These seem to have been installed as part of a road improvement project along Shields St. that also involved bridge replacement.

Six years later, in 1966, it appears that the Josh Ames Irrigation Ditch Company had a new diversion dam and headgate built near where the late 1910s cobblestone dam and diversion channel had been constructed to draw water into the meander. This may have been a response to low precipitation years in 1963, 1964 and 1966 that probably decreased flow through the meander to the original ditch headgate. In addition to the new concrete dam, which spanned the river channel, the 1966 project involved raising the north river bank and the construction of a tall headgate structure. These features reduced the potential for periodic flooding along the meander while siphoning much needed water through the headgate into a buried corrugated metal pipe. From the headgate, the pipe ran toward the east under the property now occupied by the Larimer County Emergency Services facility. The diverted river water then emerged from the pipe near the west side of Shields St., passed under the road, and continued east along the surface through the meander.

Following the dry years in the mid-1960s, the City of Fort Collins formed a Water Board that advised the council on water-related matters. This board studied the question of adequate water supplies for the growing city and determined that the municipality ought to be purchasing shares in area ditch companies. In June 1971, the City of Fort Collins acquired all of the water adjudicated under Priority No. 25, as amended and decreased to 17.97 cubic feet of water per second, from the Josh Ames Irrigation Ditch Company. The company's stockholders voted to approve the sale, which was of the raw water and not the ditch system itself. In exchange for the ditch company's water, the stockholders were provided with certificates giving them proportional use of treated city water. Each certificate also entitled the owner to fulfill future City of Fort Collins water requirements as their lands were annexed. Company president Donald Pavel, one of the largest stockholders, made the arrangements with the city. The other directors at the time were Henry Schlagel, Samuel Webster, and Thomas Bassett.

Following the sale, the City of Fort Collins submitted an application to the water court for Division No. 1 stating that it intended to use the Josh Ames Ditch water to augment its municipal water supply. It accomplished this by conveying the water rights (along with rights to the Arthur, Larimer County No. 2 and New Mercer ditches) to the North Poudre Irrigation Company. This transfer covered a portion of the price for the city's acquisition of the Michigan Ditch and Joe Wright Reservoir, both of which remained important parts of the municipal water system into the twenty-first century.

In 1972, the Josh Ames Irrigation Ditch Company's remaining physical assets, excluding the water rights sold to the city the previous year, were transferred to trustee Henry Schlagel. The following year, in December 1973, the ditch system, together with its rights of way, easements, headgates and all other ditch structures were transferred again, this time from Schlagel to Donald Pavel. These transfers of the water rights and ditch system during the early 1970s effectively ended the useful life of the Josh Ames Ditch and its long history of irrigation came to an end.

17. Cultural Affiliation and Justification: N/A

IV. Management Recommendations

18. Eligibility of Entire Resource

☒ Eligible ☐ Not Eligible ☐ Need Data Is this an official determination? ☒ Yes ☐ No

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Remarks / Justification: In 2010, the Josh Ames Ditch was determined by the Colorado Office of Archaeology and Historic Preservation to be eligible for the National Register of Historic Places. This determination was made despite the fact that earlier recorders found it to be ineligible. No rationale is provided regarding this determination.

The current study concluded that much of the Josh Ames Ditch's length has been physically compromised by erosion, a lack of maintenance, vegetative growth, deterioration, and more than four decades of abandonment. Lengthy sections of the earthen ditch have either been reduced to a shallow swale filled with vegetation, or have disappeared entirely from the landscape. A short segment west of the Alta Vista neighborhood is eroded but more readily visible. Concretework is the primary feature that has remained largely intact, although the headgate at the original diversion point along the meander is seriously deteriorated. Essentially, the ditch has been largely erased by erosion and development activities of recent decades, and no longer conveys its history and physical characteristics as a conveyance structure for agricultural and industrial water.

Also running through the same area as the Josh Ames Ditch, particularly to the east of College Ave., is the Lake Canal. This ditch has a sizable headworks near the railroad tracks just west of College Ave. After crossing College Ave., it runs toward the east parallel to the Josh Ames Ditch for one-half mile along the north side of Vine Dr. before turning toward the northeast near Redwood St. As the Josh Ames Ditch is no longer present through this area, it appears that the Lake Canal may have been mistaken for the Josh Ames Ditch when the 2010 determination was made that it was eligible for the NRHP. Although the current segment was evaluated in light of the 2010 OAHHP determination that the entire ditch is eligible, it is recommended that this determination be reviewed again by OAHHP.

19. Evaluation of integrity of the segment of the entire linear resource being recorded (Complete only if "Segment" under item 4 is checked and the entire resource is marked as Eligible under item 18)

☐ Supporting ☒ Non-supporting ☐ Not applicable

Remarks / Justification: The original headgate and first half-mile segment of the Josh Ames Ditch experienced significant deterioration over the past four-decades of its abandonment. Not only has the headgate silted in and partially collapsed, but the ditch segment itself is filled with soil and thick vegetation, leaving a shallow swale and a line of trees and shrubs to mark its historic presence on the landscape. In areas both east and west of the Union Pacific railroad tracks (the segment's current eastern terminus), lengths of the ditch have been completely obliterated.

In addition to the deteriorated state of the headgate and ditch, the resource has experienced another form of alteration. The ditch was started in 1867 and operated for just over a century before it was abandoned. However, the headgate that is present on the site today does not date from the 19th century or early 20th century. It is constructed of board-formed concrete and concrete blocks, none of which appear to date from before around 1950. The research completed for this project uncovered no information about exactly when the current headgate was rebuilt. What is known is that based upon the appearance of the materials used, the headgate that remains there at this time could have been constructed anytime between approximately 1950 and 1970. Given its unknown date of construction within this broad period, the current headgate may be less than fifty years old and a non-historic feature that replaced the original headgate or an early reconstruction that would have been at this location.

Through its bulletin entitled "How to Apply the National Register Criteria," the National Register of Historic Places provides guidance on assessing the seven aspects of integrity. The bulletin states that "to retain historic integrity a property will always possess several, and usually most, of the aspects." In his 2005 Historic Context for Irrigation and Water Supply Ditches and Canals in Colorado, Michael Holleran more specifically addresses the aspects of integrity as they relate to irrigation features. The following evaluates the seven aspects as they relate to the segment of the Josh Ames Ditch that is currently under study:

Location - The headgate and initial segment of the Josh Ames Ditch are still in their original locations and meet the standard for the aspect of location.

Design - Although the headgate is present but deteriorated, the ditch segment is almost completely filled with soil and

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vegetation. For this reason, the aspect of design is substantially diminished since much of the segment has all but disappeared from the landscape other than a shallow swale and a line of mature trees and shrubs. In some areas, the swale is gone and the ditch has been completely erased. Its floor and side walls can no longer be distinguished. Due to the effects of erosion and alteration, significant elements of the ditch's design have been lost from much of this segment.

Setting - The areas surrounding the headgate and ditch segment remain rural in appearance and are still dominated by the river, the meander, and the open fields and stands of trees. For this reason, although the setting beyond this area has been developed and is now urban, these features are not readily visible and the headgate and ditch segment remain surrounded by a rural setting.

Materials - The headgate was likely to have been constructed of wood during its earliest period of operation. Concrete came into use during the late 1800s and the headgate was probably rebuilt more than once or twice during its century of use. The current headgate is constructed of materials that have the appearance of dating from the decades following World War II, and it could have been rebuilt as late as the late 1960s. While the ditch segment was originally earthen, it has filled with soil and vegetation. Despite these changes, the aspect of materials does not appear to have been substantially diminished.

Workmanship - While the workmanship of the headgate remains evident, that employed along the ditch segment is completely obscured.

Feeling - Although the headgate continues to provide the feeling of an irrigation ditch structure, the ditch segment itself no longer exhibits anything of its feeling as a water conveyance structure since it is almost completely filled with soil and vegetation. Not enough of its historic physical fabric remains visible for it to meet the aspect of feeling and convey its function and significance.

Association - While the headgate is visible and the course of the deteriorated ditch can be made out by a professional skilled in reading the landscape, the segment is hardly intact enough to convey its use and significance as a water conveyance structure to the casual observer. Most people today would be hard pressed to recognize the shallow swale and line of trees and shrubs as a former irrigation ditch.

The Colorado Engineering Context (King, 1984) also addresses the integrity of irrigation resources as it relates to significance. According to King, the physical condition of canals and ditches "should be clearly evident, not filled-in or substantially modified." The Colorado Plains Historic Context (Mehls, 1984) discusses irrigation, but refers recorders to the Engineering Context for information on analyzing the integrity and significance of canals and ditches.

In light of these contexts and the assembled facts, it is clear that several important elements of integrity (design, workmanship, feeling and association) have been substantially diminished. Consequently, the headgate and ditch segment do not support the National Register eligibility of the Josh Ames Ditch as a whole.

20. Recorder(s): Ron Sladek, Tatanka Historical Associates Inc.

21. Date: 6/18/2013

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