



Consultants in Natural Resources and the Environment

Historical Overview of the Gould Canal Fruitland Irrigation Company Salinity Control Project Delta and Montrose Counties, Colorado

Prepared for—

Fruitland Irrigation Company
447 East Bridge
Hotchkiss, Colorado 81419

Submitted to—

Bureau of Reclamation, Western Colorado Area Office
445 West Gunnison Avenue, Suite 221
Grand Junction, Colorado 81501

Prepared by—

ERO Resources Corporation
835 East Second Avenue Suite 314
Durango, Colorado 81301

Written by—

Kathy Croll
Heather Mrzlack

State Permit No.
ERO Project No. 26-102

June 3, 2026

Contents

History of the Fruitland Mesa Irrigation Network	4
Engineering and Design of the Gould Canal	10
Summary	16
References Cited.....	17

Figures

Figure 1. Fruitland Mesa Irrigation Network Overview.	2
Figure 2. Location of Tunnel Closures.	3
Figure 3. Harry F. White Plate 003: Gould Canal construction, date unknown (early 1900s?). Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.	5
Figure 4. Excavation of open earthen canal, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.	5
Figure 5. Dynamite Blast, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.	6
Figure 6. Gould Siblings. Top left to right: Emmett, George, John, Fanny; Bottom left to right: Libby, James, Edward. Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.	7
Figure 7. George Gould at Gould Camp during construction. Date Unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.	8
Figure 8. Roy Cotten, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.	9
Figure 9. Orlo “Babe” Cotten, date unknown (mid 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.....	9
Figure 10. Headgate with “ORLO COTTEN” engraved in concrete.	10
Figure 11. Gould Canal overview, view to the northeast.	11
Figure 12. Tunnel during construction, date unknown (early 1900s). Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.....	12
Figure 13. Tunnel construction or maintenance, date unknown (likely mid-1900s). Orlo “Babe” Cotten and Everett and George Howard are in the photo.	12
Figure 14. Profile of the canal at the upper tunnel opening, view to the north.	13
Figure 15. Harry F. White Plate 008: siphon construction, 1907–1908. Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.....	14
Figure 16. Wood stave pipe prior to burial.....	15

Appendices

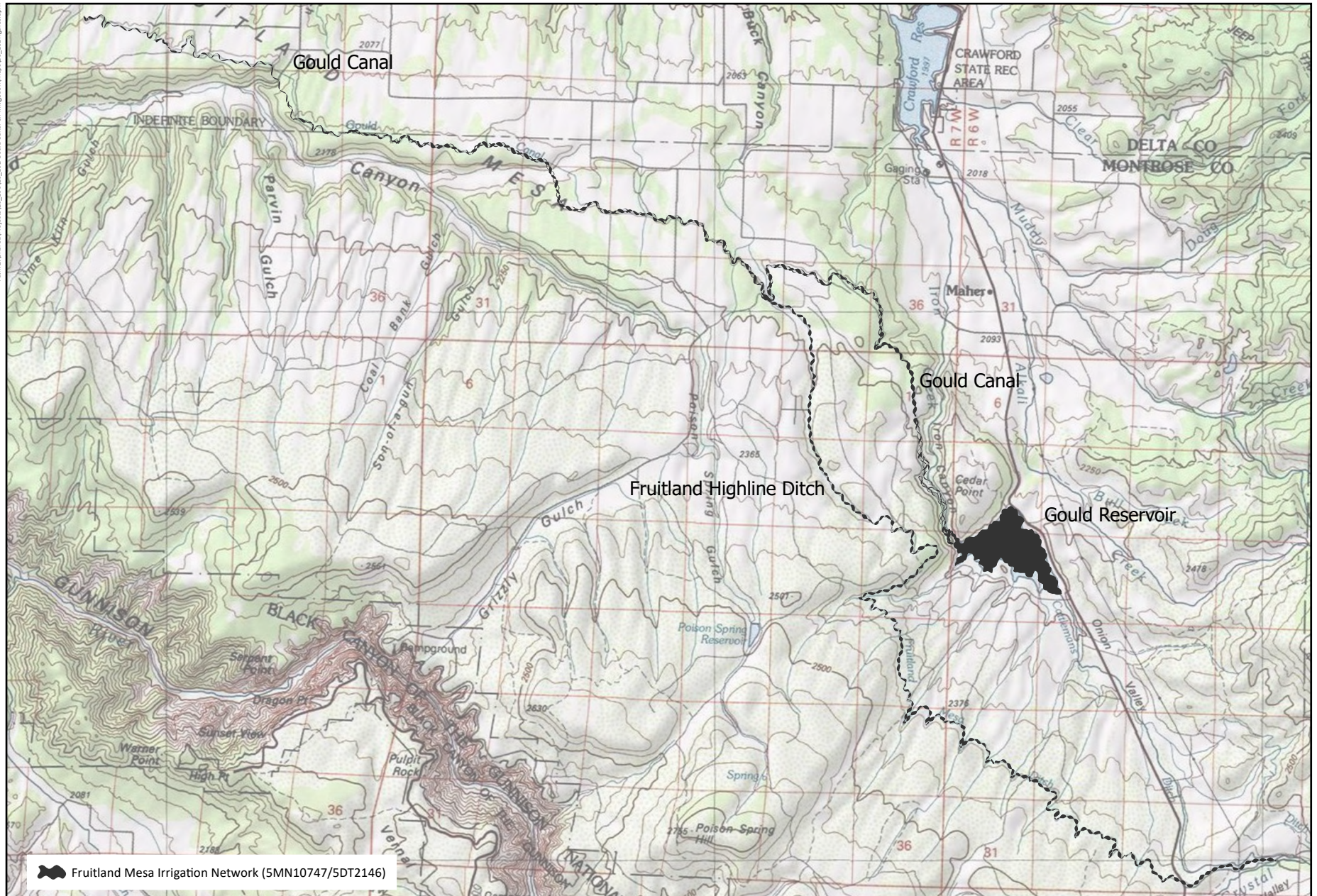
Appendix A Programmatic Agreement Proposal for the Project

Historical Overview of the Gould Canal Fruitland Irrigation Company Salinity Control Project Delta and Montrose Counties, Colorado

June 3, 2026

The Gould Canal Colorado River Basin Salinity Control Program Project (project) (HC# 75379) would pipe and reroute a segment of the Gould Canal (5DT2146.1/5MN.10747.4), which is a part of the Fruitland Mesa Irrigation Network (Network) and is eligible for listing in the National Register of Historic Places (Figure 1 and Figure 2). The Network was initially surveyed and documented by ERO Resources Corporation in the report *Cultural Resource Survey, Fruitland Irrigation Company Salinity Control Project, Delta and Montrose Counties, Colorado*. Adverse effects on the Network were originally mitigated through stipulations outlined in the Memorandum of Agreement (MOA) for the project that expired in 2022.

In 2023, design changes required that the southernmost upper Gould Canal tunnel be abandoned and sealed with pushed sediment (Figure 2). A new pipe alignment and access road would be created east of the tunnel alignment along the Iron Canyon slope. The bypass would consist of approximately 2,000 ft of pipeline installed near the alignment of the existing upper tunnel, on the east-facing slope of Iron Canyon. The lower tunnel portals would remain open with no changes to the original design. Scope of work and effect changes cannot be covered by the previous MOA since it has been fulfilled. Additional mitigation was agreed upon under the *Programmatic Agreement among the U.S. Department Of The Interior – Bureau Of Reclamation, Bureau Of Land Management, the U.S. Department Of Agriculture – Natural Resources Conservation Service, The U.S. Department Of Agriculture – Forest Service Rocky Mountain Region, the U.S. Department Of The Interior Fish And Wildlife Service – Mountain – Prairie Region, the Colorado State Historic Preservation Officer, and the Advisory Council On Historic Preservation Regarding The Management Of Water Control Features in the State Of Colorado*. This document satisfies the mitigation requirements outlined in the Programmatic Agreement Proposal for the project (Appendix A).



Historical Overview of the Gould Canal
Fruitland Irrigation Company Salinity Control Project
Delta and Montrose Counties, Colorado

Figure 1
Fruitland Mesa Irrigation Network Overview

Prepared for: BOR, Fruitland Irrigation Co.
File: 26_102Figures.mxd (KC)
May 11, 2026

ERO
ERO Resources Corp.

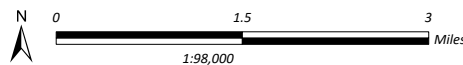
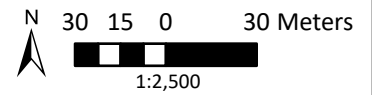
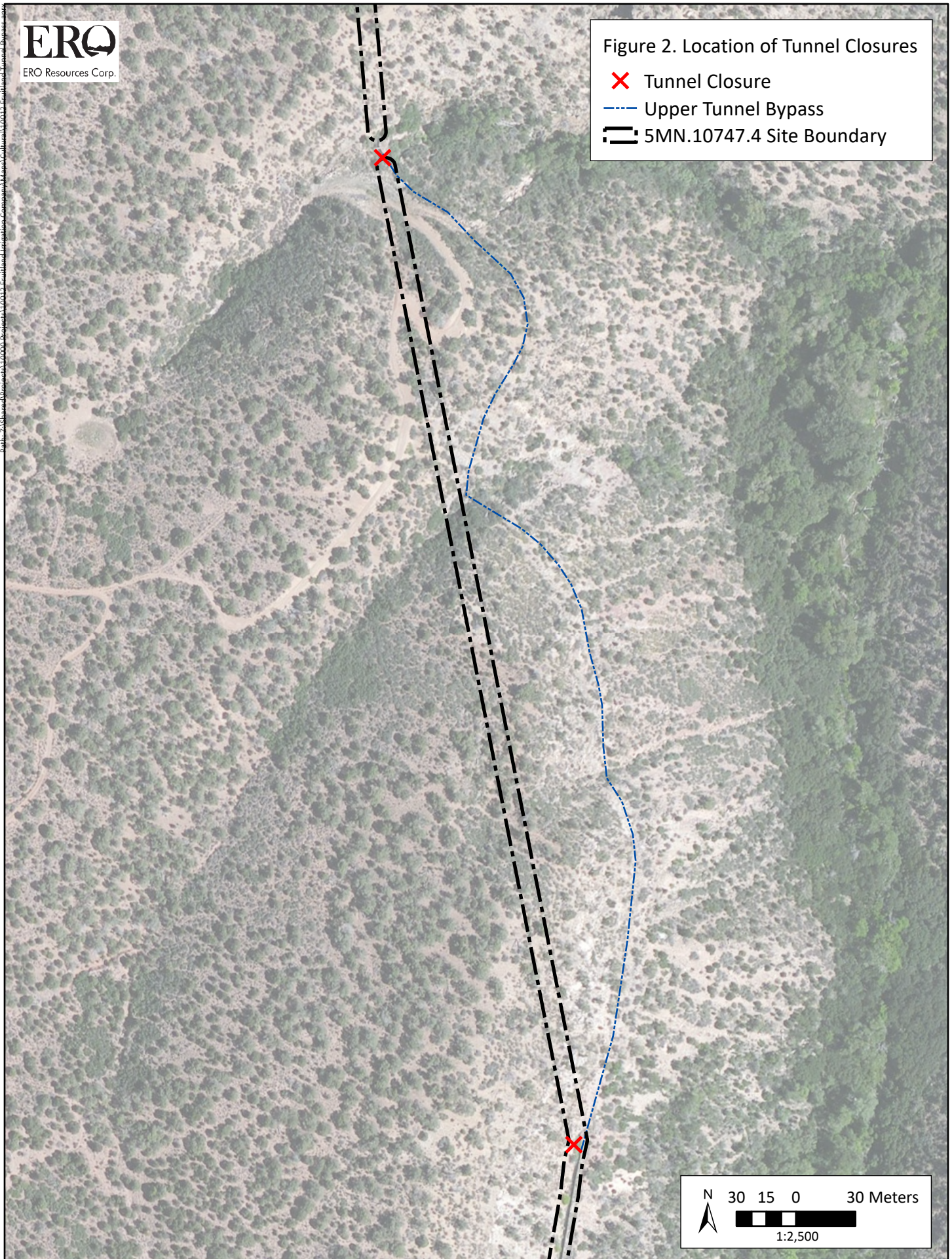


Figure 2. Location of Tunnel Closures

- ✕ Tunnel Closure
- Upper Tunnel Bypass
- ▬ 5MN.10747.4 Site Boundary



History of the Fruitland Mesa Irrigation Network

Colorado's semiarid climate made the development of irrigation necessary for settlement of the area. Agricultural irrigation began in the state in the 1860s with the development of small mutual and individual ditches, also known as pioneer ditches. These ditches irrigate low-lying areas in the floodplains and bottomlands by drawing water off existing sources such as creeks, rivers, and streams. These early irrigation systems required little engineering or technology (King 1984). Pioneer ditches were often expanded into or replaced by mutual ditches, which were used by multiple entities and were controlled by a ditch company. These ditches, too, soon expanded, and irrigation enterprises developed to construct large systems that could carry more water and serve a larger area. By the late 1800s, the development of irrigation ditches in Colorado was viewed as an investment opportunity. Large sums of money were spent constructing irrigation systems to reach more remote areas of land in the hopes of creating a profit by selling water rights. However, Colorado's water laws, which protect the water rights of earlier uses, made many of these ditches less successful than originally planned by limiting the quantity of available water (Holleran 2005).

Irrigation ditches and canals across the state divert water from rivers and streams and carry it to cultivated fields, grass pastures, and reservoirs. The Fruitland Mesa Irrigation Network (Network) is representative of organized efforts in which ditch users and commercial agriculture investors collaborated to operate and maintain a ditch. Users and investors organized themselves as a mutual ditch company, a unique legal entity in Colorado. The purpose of these types of companies was to operate the ditch on behalf of shareholders, who were considered owners of the ditch and contributed to decision making pertaining to improvements to and maintenance of the ditch. A share in a mutual ditch company represents an actual pro rata ownership interest in all of the water rights, ditches, facilities, and other assets of the company. The shareholders are, in essence, the company (Hobbs 1997).

The Network was constructed in the early 1900s to supply water to what would come to be known as Fruitland Mesa, and has been continuously in use for irrigation since its original construction (Houston 2005). The Network extends from Crystal Creek east of State Highway 92 to a basin at the northwestern end of Onion Valley and then onto Fruitland Mesa southwest of Crawford and includes the Fruitland Highline Ditch, Gould Reservoir, and Gould Canal. The primary diversion is known as the Fruitland Highline Ditch, which diverts water from Crystal Creek in the northwest (NW) $\frac{1}{4}$ of the southeast (SE) $\frac{1}{4}$ of Section 34, Township (T) 50 North (N), Range (R) 6 West (W) of the New Mexico Meridian (NMM).

This component of the Network carries water from the creek west, both to Gould Reservoir and to shareholders with land located (topographically) above Gould Reservoir. A feeder ditch connects the main canal with the reservoir (Colorado's Decision Support System (CDSS) 2004).

Work began on the reservoir in May 1901; farms and ranches on the mesa had irrigation water by 1910. Local irrigators and investors constructed the irrigation network by hand using manual labor, mules, and dynamite (Figure 3, Figure 4, and Figure 5).



Harry F. White
Plate 003

Figure 3. Harry F. White Plate 003: Gould Canal construction, date unknown (early 1900s?). Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 4. Excavation of open earthen canal, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 5. Dynamite Blast, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.

According to the CDSS structure summaries, water rights for both the Gould Reservoir (referred to as the Fruitland Reservoir in CDSS records) and the Gould Canal were first appropriated on May 17, 1901, and were adjudicated on June 23, 1914. A second adjudication occurred on February 10, 1930, and a third on March 20, 1954 (CDSS 2018a, 2018b). The Network currently irrigates approximately 7,400 acres (CDSS 2004). According to the June 23, 1914 decree, Gould Reservoir was originally decreed 2,800 acre-ft of water (The Onion Valley Reservoir Water Rights Decree 1914); this amount was increased to 5,283 acre-ft in 1930 (The Onion Valley Reservoir Water Rights Decree 1930). The Gould Dam was originally 45 ft high; 3 years of spring runoff from Crystal Creek was required before the reservoir was full. The elevation of Fruitland Mesa combined with the limited days of irrigation water made farming difficult (Houston 2005). An additional 2,532 acre-ft were added to the decree in 1949 before raising the height of the dam (The Onion Valley Reservoir Water Rights Decree 1954). The dam was raised to 63 ft high in 1930 and to 73 ft high in 1954. The period of significance is from 1901, at the time water was appropriated for the project, to 1930, when the original decree was modified. This date range is when the Network played the largest role in early settlement of the mesa specifically and in the region more broadly. The tunnels, one of the more unique aspects of the Network, were designed and built during this period as well.

The canal and reservoir were named for the developers of the water conveyance network—brothers Jim, Ernest, John, and George Gould. Fruitland Mesa was so named because of the high hopes developers had for the area to become a large supplier of fruit, similar to Paonia to the north. The Gould family in Aspen was one of two families that were influential in the early settlement and agricultural development of the region (Figure 6 and Figure 7). The Goulds contributed to the early 1900s community of Aspen and the surrounding area. Emmett and James Gould owned the Mesa Store in Aspen, which was built in 1890. Emmett Gould split his time between Aspen and his agricultural holdings, including the first of which he established in Hotchkiss in 1905 (Willoughby 2024). His wife, Mary, and their children lived in Hotchkiss full time, while Emmett commuted back and forth. Emmett and his wife Mary Gould moved to California in the 1930s after purchasing agricultural land there.



Figure 6. Gould Siblings. Top left to right: Emmett, George, John, Fanny; Bottom left to right: Libby, James, Edward. Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 7. George Gould at Gould Camp during construction. Date Unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.

The Cotten family in Crawford was the other influential family in the agricultural development of the region. John W. Cotten, one of the early settlers in Delta County, homesteaded in the Crawford area in 1881 (Webb 2024). John's son Milton Leroy (Roy), born January 6, 1884, homesteaded close to what is now Gould Reservoir. John and Roy Cotten were both hired to help build the dam. John and Roy's work included "rolling rocks down onto the dam site at one point as their employers faced a deadline to show due diligence on moving forward on its construction" (Webb 2024). Roy Cotten became the first ditch rider for the Gould Canal (Figure 8). A ditch rider maintains the ditch, watching for debris, leaks, and other problems, and ensures the main headgate to the ditch and lateral gates from it open and close at the proper time (Holleran 2005).

Many of the photos and much of the historical information come from presentations given by Danny Cotten (now deceased) via Greg Powers, who was the water commissioner for Water District 40 of the Colorado Division of Water Resources. Danny Cotten was the grandson of Roy Cotten and great-grandson of John W. Cotten. Orlo "Babe" Cotten (Figure 9) was one of Roy's sons and was uncle to Danny Cotten. Orlo replaced his father as ditch rider and constructed many of the dropgates for field laterals documented during the 2018 survey (Croll and Nordstrom 2018). The dropgates have a narrow concrete-lined channel with a wood lumber gate that drops into grooves on the sides of the concrete. Many of these dropgates have "Orlo Cotten" and a construction date inscribed in the concrete wall (Figure 10).

Dates range from 1941 to 1956. A search for "Cotten" in the phone book for Hotchkiss and Crawford indicates that it is a common family name in the area to this day.



Figure 8. Roy Cotten, date unknown (early 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 9. Orlo "Babe" Cotten, date unknown (mid 1900s). Photo credit: Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 10. Headgate with “ORLO COTTEN” engraved in concrete.

Engineering and Design of the Gould Canal

The Gould Canal is part of the Network and leaves the reservoir on the southern side of the dam in the northeast (NE) $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 13, T50N, R7W of the NMM. This ditch extends to the north and then west. The Fruitland Highline Ditch and the Gould Canal join in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 34, T51N, R7W of the NMM. The joined canal crosses into Delta County in Section 24, T51N, R8W of the NMM and ends in the southwest (SW) $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 16, T51N, R8W of the NMM above an unnamed drainage that flows north into the Smith Fork (CDSS 2004).

The entire extent of the Gould Canal is 14.8 miles long. From Gould Reservoir, the canal conveys water north and contours the west side of Iron Canyon north-northwest approximately 1.3 miles. The first 1.2 miles is an open U-shaped earthen channel (Figure 11); the last 0.1 mile of the canal before entering two separate tunnels is a concrete-lined channel approximately 6 feet (ft) deep and 5 ft wide.



Figure 11. Gould Canal overview, view to the northeast.

The ditch conveys water north in two concrete- and rock-lined tunnels under the upper terrace west of Iron Canyon for approximately 0.8 mile (Figure 12, Figure 13, and Figure 14). The construction of the upper and lower tunnels using dynamite and manual labor was an inventive strategy for transporting water up to the mesa (Figure 13). The upper tunnel (southernmost) is 1,643 ft long and the lower tunnel (northernmost) is 2,650 ft long. Both tunnels average approximately 7 ft wide, and the height varies from 4.5 ft to more than 5 ft. The District has maintained the tunnels' original design. Although the District reinforced the tunnels with cedar stays and railroad ties later, the District has not made any significant modifications to the tunnels. The upper and lower tunnels are divided by a short opening at a drainage; the opening is an open U-shaped concrete-lined channel approximately 6 ft deep and 5 ft wide. At the opening between the tunnels is a dry-stacked stone retaining wall made of local stone.



Figure 12. Tunnel during construction, date unknown (early 1900s). Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.



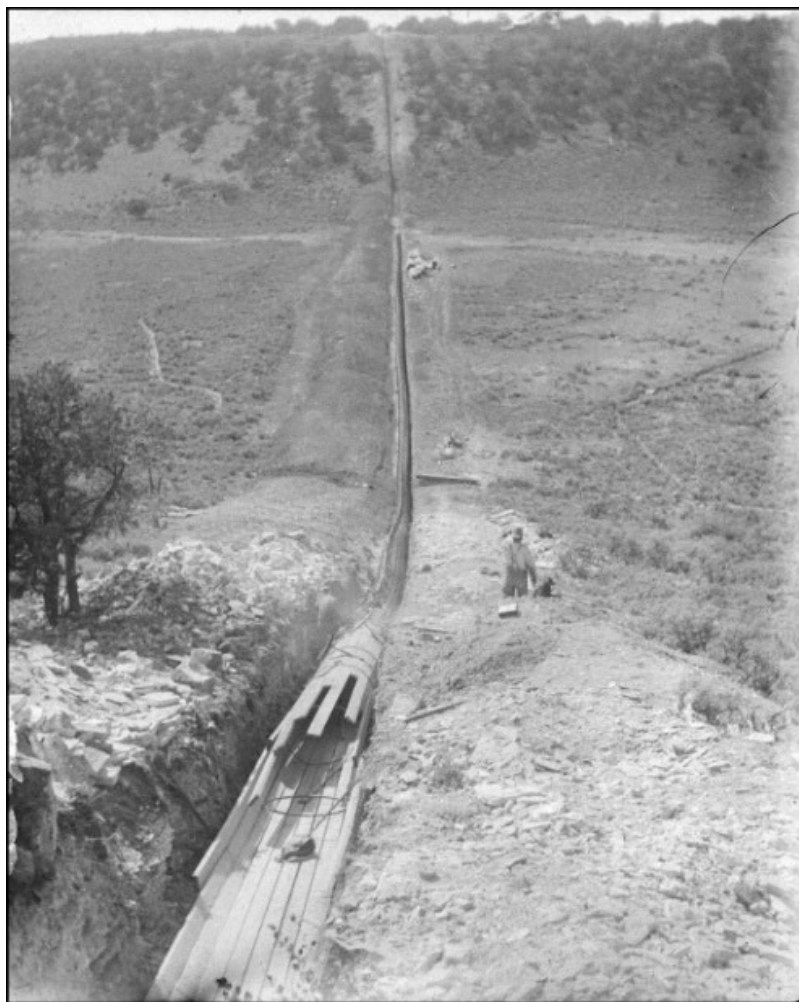
Figure 13. Tunnel construction or maintenance, date unknown (likely mid-1900s). Orlo “Babe” Cotten and Everett and George Howard are in the photo.



Figure 14. Profile of the canal at the upper tunnel opening, view to the north.

North of the tunnels, the canal conveys water in an open earthen U-shaped ditch cut along a 45-degree northeast-facing slope for approximately 1.3 miles, then contours the surrounding valley into the eastern edge of Fruitland Mesa and the topography becomes gentler. The walls of the canal are vertical, the bottom of the canal is 2 to 4 ft deep and 8 to 12 ft wide, and the maximum waterway width is 12 ft. Within the Fruitland Mesa landform, the majority of the remaining portion of the canal is an open earthen U-shaped ditch in the same design and dimensions of the canal between Gould Reservoir and the upper and lower tunnels.

Two siphons carry water underground in two areas. Wood stave water pipe was commonly used for siphons during the period of significance for the irrigation network (1910–1930). It is assumed that both siphons are constructed of wood stave pipe (Figure 15 and Figure 16); no evidence of modification to these features could be found in the archival record. One siphon is located approximately 8 miles from the beginning of the ditch at the Gould Reservoir and is approximately 0.4 mile long. The other siphon is in the Delta County segment in Section 23, T51N, R8W and is 0.6 mile long. The siphons are buried and are assumed to be in good condition because they are functional.



Harry F. White
Plate 008

Figure 15. Harry F. White Plate 008: siphon construction, 1907–1908. Photo credit: Harry F. White, received from Danny Cotten via Greg Powers, electronic version on file at ERO.



Figure 16. Wood stave pipe prior to burial.

Two wood and earthen chutes are located on steep slopes above an unnamed tributary of Iron Creek above a bend in the canal and are constructed of wood cribbing that retains artificial earthen berms that form a central chute. The wood cribbing likely reinforces the downslope berm of the ditch and the cribbing and associated earthen berms function to convey gravels and sediments into natural drainages that cross under the canal. One wood cribbing consists of a stacked-log retaining wall covered with an earthen berm; a collapsed shaft bisects the berm, and an excavated pit is located on the southeastern end of the berm. Both features are built into the edge of a relatively flat terrace, and the shaft was built at an angle with the upper end opening to the terrace surface and the lower end opening pointed downslope. The terrace behind both features appears to have been mechanically leveled, indicating the terrace was created using the landform as a borrow area to construct the chute features. Sediments from these areas may have been excavated and then carried downslope via the chute in the center of the berm. Other partially buried wood cribbing is located directly across the drainage to the west and appears to have similar construction.

Most features along Gould Canal are turnouts (dropgates or sluiceways) to convey water for irrigation into field laterals, and do not date to the period of significance. Forty-two of these features consist of

dropgates for field laterals with a narrow concrete-lined channel with a wood lumber gate that drops into grooves on the sides of the concrete; many of these have “Orlo Cotten” as well as a construction date inscribed in the concrete wall. Dates range from 1941 to 1956. One of these dropgates empties water into Iron Creek, which then conveys water downstream to the Cattlemans Ditch, located outside of the project area. Four features are sluiceways with concrete-lined channels, and seven are sluiceways with a screw stem and handwheel to control the flow of water into a buried field lateral conduit under the northern berm of the ditch. Other feature types include two Parshall flumes, four concrete drop structures, one metal drop structure, two 12-inch-diameter steel pipes, and two bridges. Fourteen features are steel pipe bridges used to access and maintain a center pivot irrigation system. Materials and design demonstrate the District and irrigators constructed and altered these features for modern use after the period of significance (1901-1930).

Although the technology available for construction of irrigation ditch systems has improved over time, many historical gravity-fed earthen ditches like the Gould Canal have undergone very few modifications or improvements. Changes to the canal are the result of continual use and maintenance rather than improvement of materials and equipment to make maintenance and water monitoring more efficient. One significant change to the canal is the use of concrete; concrete can be seen in ditch features, such as turnouts and dropgates, and as a channel liner in sections of the canal in the Iron Creek drainage. The tunnels, the open earthen canal structure, the siphons, and the wood cribbing convey significant aspects of historic trends and engineering for operation of the canal related to water conveyance and irrigation. These elements likely date to the original construction of the canal.

Summary

The Gould Canal supports the eligibility of the Fruitland Mesa Irrigation Network and abandoning the upper tunnel and sealing the ends with sediment constituted an adverse effect to the resource. This document serves as mitigation to this effect as agreed upon in the Programmatic Agreement Proposal for the project (Appendix A).

References Cited

- Colorado Decision Support Systems. 2018a. Fruitland Reservoir Structure Detail, Colorado Decision Support System Structure Report Webpage. Colorado Decision Support Systems. <https://dnrweb.state.co.us/cdss/Structures/4003395>, accessed October 3, 2018.
- Colorado Decision Support Systems. 2018b. Fruitland Canal Structure Detail, Colorado Decision Support System Structure Report Webpage. Colorado Decision Support Systems. <https://dnrweb.state.co.us/cdss/Structures/4000549>, accessed October 3, 2018.
- Colorado's Decision Support System (CDSS). 2004. Gunnison River Basin Information.
- Croll, Kathy, and Ryan Nordstrom. 2018. Cultural Resource Survey, Fruitland Irrigation Company Salinity Control Project, Delta and Montrose Counties, Colorado. Prepared by ERO Resources Corporation, Durango, Colorado. Prepared for the Fruitland Irrigation Company, Crawford, Colorado and submitted to the Bureau of Reclamation, Montrose, Colorado.
- Hobbs, Justice Gregory J. Jr. 1997. Colorado Water Law: An Historical Overview. University of Denver Water Law Review 1(1).
- Holleran, Michael. 2005. Historic Context for Irrigation and Water Supply: Ditches and Canals in Colorado. On file at the Colorado Office of Archaeology and Historic Preservation, Denver, Colorado.
- Houston, Robert. 2005. Two Colorado Odysseys: Chief Ouray Porter Nelson. iUniverse, Inc., Lincoln, Nebraska.
- King, Joseph E. 1984. Colorado Engineering Context. Prepared by the Colorado Historical Society. On file at the Colorado Office of Archaeology and Historic Preservation, Denver, Colorado.
- The Onion Valley Reservoir Water Rights Decree. 1914. The Onion Valley Reservoir No. A-8. CA0617. The Onion Valley Reservoir Water Rights Decree. 1930. The Onion Valley Reservoir Priority No. G-3 1/2, CA2030.
- The Onion Valley Reservoir Water Rights Decree. 1954. The Onion Valley Reservoir, CA3503. Priority No. J-344 Stor. Conditional.
- Webb, Dennis. 2024. Couple Protects Land by Reservoir with Ties to Family Ancestors. The Daily Sentinel, January 11. https://www.gjsentinel.com/news/couple-protects-land-by-reservoir-with-ties-to-family-ancestors/article_3eedc528-75b8-11ed-868b-ab3ca9908b10.html, accessed April 27, 2026.
- Willoughby, Tim. 2024. Willoughby Gould and Grover Important to Aspen for Over 50 Years. The Aspen Times, March 16. <https://www.aspentimes.com/opinion/willoughby-gould-and-grover-important-to-aspen-for-over-50-years/>, accessed April 28, 2026.

Appendix A Programmatic Agreement Proposal for the Project

PROGRAMMATIC AGREEMENT

AMONG

THE U.S. DEPARTMENT OF THE INTERIOR – BUREAU OF RECLAMATION, BUREAU OF LAND MANAGEMENT, THE U.S. DEPARTMENT OF AGRICULTURE – NATURAL RESOURCES CONSERVATION SERVICE, THE U.S. DEPARTMENT OF AGRICULTURE – FOREST SERVICE ROCKY MOUNTAIN REGION, THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE – MOUNTAIN – PRAIRIE REGION, THE COLORADO STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

REGARDING

THE MANAGEMENT OF WATER CONTROL FEATURES IN THE STATE OF COLORADO

PA Mitigation Proposal for Adverse Effects to Components of Irrigation Systems

Project Proponent: Fruitland Irrigation Company (FIC)

Lead Agency: Bureau of Reclamation (Reclamation)

Other Federal Agencies: Bureau of Land Management, Uncompahgre Field Office (BLM UFO)

Project Name, Agency Project Number, and Description: The Gould Canal Colorado River Basin Salinity Control Program Project, Colorado (HC# 75379) will pipe and reroute a segment of the National Register of Historic Places (NRHP) eligible Gould Canal (5DT2146.1 / 5MN.10747.4). The Area of Potential Effect (APE) includes buffers of all necessary staging, access, and borrow pits. The APE was initially surveyed and documented by ERO in their 2018 report titled, *Cultural Resource Survey, Fruitland Irrigation Company Salinity Control Project, Delta and Montrose Counties, Colorado*. Four subsequent addendum reports were written to add:

- 2019a: habitat assessment area, fence line, access road, new turnout;
- 2019b: staging area;
- 2020: access road;
- 2023: Upper Tunnel reroute.

The entire APE included 347.3 acres of privately owned lands and 17.85 acres of BLM UFO lands.

Projected Project Construction Date: Fall 2024

Finding of Effect (describe the resource(s) affected by Smithsonian # including type of effect, scope of effect, and other details as needed):

The Gould Canal (5DT2146.1 / 5MN10747.4) is eligible to the NRHP under Criteria A, B, and C. Reclamation initiated consultation on January 8, 2019. In consultation it was determined that the Gould Canal would be adversely impacted by piping. *The Memorandum of Agreement (MOA) Among the Western Colorado Area Office, Bureau of Reclamation, Bureau of Land Management, Uncompahgre Field Office, the Fruitland Irrigation Company, and the Colorado State Historic Preservation Officer Regarding the Gould Canal Piping Project, Colorado River Basin Salinity Control Program, Located in*

Delta and Montrose Counties, Colorado was executed on August 15, 2019. Mitigation stipulated within the MOA is complete. The State Historic Preservation Office (SHPO) confirmed fulfillment of the agreement on September 16, 2022.

In 2023, newly identified leaks and the potential future failure of the Gould Canal Tunnel necessitated changes to the initially consulted scope of work. The Gould Canal Tunnel is proposed to be abandoned and sealed with pushed sediment. A new pipe alignment and access road would be created to the east of the tunnel alignment along the canyon slope. Scope of work and effect changes can't be covered by the previous MOA since it has been fulfilled.

Selected mitigation from Appendix B of the PA or other mitigation activity:

The project team proposes online Gould Canal content to contribute to the PA identified Appendix B Topic: X. Local Canal, Canal System, or Regional Irrigation History. Historic narrative content for the topic would cover the entire length of the Gould Canal. However, the interpretive focus will be on the Canal Tunnel impacted by this scope of work change. The interpretive material's intended audience is the general public.

A reader of the interpretive material will learn the significance of the Gould Canal to regional settlement and agricultural development between 1901 and 1930. In addition, the Gould Canal's association with the Gould family in Aspen and the Cotton family in Crawford, both influential in the early settlement and agricultural development of the region would be outlined. Lastly, the initial unique engineering and design of the Gould Canal would be clearly conveyed.

Digital interpretation will include primary sources such as: current and historic images and maps. Drawings, historic newspaper articles, oral histories, and other primary sources will be incorporated as possible.

Mitigation for the resolution of the adverse effect(s) stated above in accordance with the PA is agreed upon by the proponent, lead agency, and SHPO. The scope of the mitigation and timeline for completion shall be commensurate with the adverse effect being mitigated. The proponent agrees to the included schedule to complete the required mitigation. Failure to complete mitigation will result in an adverse effect to a historic property that will require the proponent and lead agency to negotiate a Memorandum of Agreement to resolve adverse effects to historic properties in accordance with 36 CFR 800.6.

Mitigation for this project will be completed no later than March 1, 2027

The proponent will pay a one-time \$400 website hosting fee to PaleoCultural Research Group. Details on uploading the information can be accessed at <https://archaeologycolorado.org/content/water-west-content-submission>.

SHPO concurrence letter will be attached acknowledging the adverse effect and the mitigation proposed.

SIGNATURE PAGE

PROGRAMMATIC AGREEMENT

AMONG

**THE U.S. DEPARTMENT OF THE INTERIOR – BUREAU OF RECLAMATION, BUREAU OF LAND
MANAGEMENT, THE U.S. DEPARTMENT OF AGRICULTURE – NATURAL RESOURCES
CONSERVATION SERVICE, THE U.S. DEPARTMENT OF AGRICULTURE – FOREST SERVICE ROCKY
MOUNTAIN REGION, THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE –
MOUNTAIN – PRAIRIE REGION, THE COLORADO STATE HISTORIC PRESERVATION OFFICER,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

REGARDING

THE MANAGEMENT OF WATER CONTROL FEATURES IN THE STATE OF COLORADO

Bureau of Reclamation, Western Colorado Area Office

Ed Warner, Area Manager

Fruitland Irrigation Company

Danny Todd President FIC

Schedule of accomplishments for the mitigation proposal

Date submitted to SHPO (30-day review/comment for accepting proposal): October 11, 2024

Date SHPO letter accepting the proposal: October 17, 2024

Mitigation kickoff meeting to discuss the proposal with the lead agency, proponent (including any contractors), and SHPO (must be within 30 days of proposal acceptance): November 14, 2024

Biannual progress meetings (if no progress has been made, all parties may agree in writing to not hold a progress meeting): May 15, 2025

Date draft submitted to lead agency (30-day review): January 2, 2026

Date revised draft final submitted to lead agency (15-day review): April 2, 2026

Date draft submitted to SHPO (30-day review): July 2, 2026

Date SHPO accepts mitigation product and mitigation is considered complete: January 2, 2027

Please attach all appropriate supporting documents of the proposal (e.g. historic properties treatment plans, etc.) to this template with initial and final submission.



Mr. Ed Warner
Bureau of Reclamation
Western Colorado Area Office
445 West Gunnison Avenue, Suite 221
Grand Junction, Colorado 81501

RE: Fruitland Irrigation Company Salinity Control Project, Salinity Control Program
Project Scope of Work Change in Montrose County, Colorado
History Colorado No. 75379

Dear Mr. Warner:

Thank you for your email correspondence dated and received on October 15, 2024, regarding consultation of the aforementioned project under Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC § 306108), and its implementing regulations, 36 CFR Part 800.

We have reviewed all documentation submitted for this project. As noted in our letter dated March 29, 2024, we are unable to concur with your finding of “no adverse effect” for the undertaking. It is our opinion the revised undertaking as described will result in an *adverse effect* to 5MN.13522 and the Gould Canal (5MN.10747) pursuant to 36 CFR § 800.5(a)(2)(i-iv, and vi).

It is our understanding that your office prefers to utilize Appendix B of the Water Control Features Programmatic Agreement executed in 2022 to resolve adverse effects for this portion of the undertaking. Given the nature of the present undertaking, we agree this course of action is appropriate. Accordingly, execution of a memorandum of agreement in accordance with 36 CFR § 800.6 is not necessary. We have also reviewed, and are amenable to, the mitigation proposal prepared in accordance with Appendix B of the aforementioned PA. We look forward to reviewing those materials once drafts are available for review.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Mitchell K. Schaefer, Section 106 Compliance Manager, at (303) 866-2673 or mitchell.schaefer@state.co.us.

Sincerely,

Dr. Holly Kathryn Norton Digitally signed by Dr. Holly Kathryn Norton
Date: 2024.10.17 15:35:19 -06'00'

Dawn DiPrince
State Historic Preservation Officer