BUREAU OF RECLAMATION

Finding of No Significant Impact & Environmental Assessment for the Grandview Canal Middle & Lower Piping Project

Basinwide Salinity Control Program
Upper Colorado Basin: Interior Region 7
Western Colorado Area Office

U.S. Department of the Interior

January 2026

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Finding of No Significant Impact & Environmental Assessment for the Grandview Canal Middle & Lower Piping Project

Basinwide Salinity Control Program
Upper Colorado Basin: Interior Region 7
Western Colorado Area Office

Prepared for the Bureau of Reclamation by
Rare Earth Science, LLC

January 2026

Cover Photo: Middle Project Segment of the Grandview Canal, April 2022, Delta County, Colorado. (Rare Earth Science, LLC).

FINDING OF NO SIGNIFICANT IMPACT AND DECISION RECORD

United States Department of the Interior
Bureau of Reclamation
Interior Region 7: Upper Colorado Basin
Western Colorado Area Office
Grand Junction, Colorado

Grandview Canal Middle & Lower Piping Project

Introduction

In compliance with the National Environmental Policy Act of 1969[1] and the Department of the Interior's NEPA Handbook at 516 DM 1, the Bureau of Reclamation (Reclamation) has completed an environmental assessment (EA) for the Proposed Action of funding the Grandview Canal Middle & Lower Piping Project in Delta County, Colorado. See 42 U.S.C. § 4336 ("An agency shall prepare an environmental assessment with respect to a proposed agency action that does not have a reasonably foreseeable significant effect on the quality of the human environment, … Such environmental assessment shall be a concise public document prepared by a Federal agency to set forth the basis of such agency's finding of no significant impact or determination that an environmental impact statement is necessary."); see also 43 C.F.R. § 46.300. Under the authority of the Colorado River Basin Salinity Control Act, Reclamation will fund the Project and is the lead agency for purposes of compliance with the NEPA for this Proposed Action.

The EA was prepared by Reclamation to address the potential impacts to the human environment due to implementation of the Proposed Action. The EA is attached to this Finding of No Significant Impact (FONSI) and is incorporated by reference.

Alternatives

The EA analyzes the No Action Alternative, the Piping Alternative (Preferred Alternative), and the Ditch Lining Alternative to authorize federal funding to implement the Project.

Decision and Finding of No Significant Impact

Reclamation's decision is to fund the Preferred Alternative ("Piping Alternative" or "Project"). Based upon a review of the EA, Reclamation has determined that implementing the Proposed Action will not significantly affect the quality of the human environment. Therefore, an environmental impact statement is

[1] Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. Reclamation verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. Reclamation has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

not required for this Proposed Action. This finding is based on consideration of the degree of effects of the Proposed Action on the potentially affected environment, as analyzed in the EA.

Potentially Affected Environment
The Project is located on Grandview Mesa, west of the Town of Crawford, in southeastern Delta County, Colorado. The affected locality is the middle and lower area of the Grandview Canal system. Affected interests include Reclamation, Bureau of Land Management (BLM), Colorado Parks and Wildlife, Grandview Canal and Irrigation Company, and adjacent landowners. The EA evaluates the effects on the potentially affected environment, which includes physical, ecological, and socioeconomic factors.

Summary of Effects
The following table (Table 5 in the EA) provides a summary of environmental impacts for each of the resources evaluated in this EA.

Resource	**Impacts: No Action Alternative**	**Impacts: Action Alternatives**
Water Rights and Use (EA Section 3.2.1)	No Effect; neither Action Alternative would be completed, and ditch seepage and irrigation inefficiencies would continue as they have in the past, and winter stock water would continue to be undeliverable during freezing weather conditions.	With either Action Alternative, the Applicant would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by improving the system. Winter stock water would be unavailable for some shareholders for part of one winter season during construction. Following construction of the Project (Piping Alternative), winter stock water would be delivered to shareholders throughout the winter season, including during periods of freezing weather. Following construction of the Lining Alternative, winter stock water would not be delivered during periods of freezing weather. The Action Alternatives contribute to the growing amount of piped and lined irrigation conveyances in the region, which are collectively reducing water seepage and improving irrigation water delivery efficiency on a larger scale.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Water Quality (EA Section 3.2.2)	No Effect; neither Action Alternative would be completed, and salt and selenium loading from the Project Area would continue to affect water quality in the Colorado River Basin.	An estimated salt loading reduction of 4,421 tons per year to the Colorado River Basin would result from implementation of either of the Action Alternatives. Both Action Alternatives would reduce selenium loading into the Gunnison River (the amount has not been quantified). Improved water quality would benefit downstream aquatic species by reducing salt and selenium loading in the Gunnison and Colorado rivers. The beneficial effects of improved water quality resulting from either of the Action Alternatives would contribute to the regional efforts underway to reduce salinity and selenium in the lower Gunnison and Colorado River watersheds. Both Action Alternatives would affect waters under the jurisdiction of CWA Section 404 (the ditches themselves) and disturb irrigation-induced wetland and riparian vegetation associated with the ditch sections. Both action alternatives would contribute to ongoing regional efforts to improve water quality and reduce salinity basinwide.
Hydrology (EA Section 3.2.3)	No Effect, because nothing would occur which would alter the surface hydrology, estimated groundwater recharge, or domestic well permits in the area.	The distribution of surface water would change in the Project Area as a result of implementing either of the Action Alternatives. Because the excess credits at the existing habitat replacement site would ensure no net loss of riparian and wetland values associated with implementation of either of the Action Alternatives, the effects of the loss of riparian/wetland hydrology adjacent to the involved ditches would be insignificant. Because the estimated amount of groundwater recharge into the two HUC-12 sub-watershed areas in the vicinity would not change, there would be no significant impact to groundwater recharge as a result of implementing the either Action Alternative. Because neither Action Alternative would alter natural sources of groundwater, there would be no significant adverse effect on domestic well permits near the Project Area. Either Action Alternative would contribute to a regional trend resulting in relocation of artificially-created riparian and wetland hydrology values from earthen irrigation conveyances to habitat replacement sites.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Air Quality (EA Section 3.2.4)	No Effect; neither Action Alternative would be completed and the ditch sections would continue to operate in their current condition and dust and exhaust would occasionally be generated by vehicles and equipment conducting routine maintenance and operation.	Exhaust and dust from construction activities would have a minor, short-term effect on the air quality in the immediate area. Following construction of either Action Alternative, impacts to air quality from routine maintenance and operation activities along the pipeline or lined ditch corridors would be similar or less in magnitude to those currently occurring for the existing ditch. If other construction projects occur concurrently with either Action Alternative, the cumulative impact on air quality in the area would be temporary, the contractors completing the work would be required to follow State of Colorado air quality regulations established to protect the airshed from significant impacts (5 CCR 1001-5), and the area would remain in attainment for any criteria pollutants in Delta County.
Public Access, Transportation & Safety (EA Section 3.2.5)	No Effect; neither Action Alternative would be completed and the ditches would continue to operate in their current condition and the baseline status of public safety, transportation routes, utilities, and public access in the vicinity would remain unchanged.	Some short-term disruption of traffic at the involved public roads would occur for either Action Alternative when equipment and materials are hauled into the Project location, and when piped crossings are constructed across public roads. These public roads provide access to public services, including emergency services, education, or social services, and the Applicant would coordinate with the county and sheriff if traffic or access would be delayed or substantially re-routed. If relocation or raising of utilities is necessary during construction, a brief interruption of utility services would occur. Under the Lining Alternative, the safety risks associated with sources of open, moving water would remain following implementation.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Property Values (EA Section 3.2.6)	No Effect; neither Action Alternative would be completed and the ditch sections would continue to operate in their current condition, with no impact to assessed property values or property market values.	Impacts to assessed property values would not rise to the level of significant as a result of either Action Alternative, because 1) Agricultural land tax valuation does not take into consideration the presence of piped vs. non-piped ditches on the property and therefore the assessed value would not change based on the status of a ditch or canal, and 2) For non-agricultural land tax valuation, the market value impact of piped vs. non-piped ditches would need to be quantified for tax valuation purposes using sales data and would need to be reviewed on an individual property basis. Impacts to open market value of properties involved with either Action Alternative would not rise to the level of significant because the impact on open market value would essentially be speculative and property- and buyer-specific rather than a guaranteed negative impact on properties in the Project Area as a whole.
Noise (EA Section 3.2.7)	No Effect; there would be no construction noise related to ditch piping or lining in the Project Area, and noise related to ditch operation and maintenance activities would continue as it has in the past.	Project construction activities under either Action Alternative would generate a temporary source of noise audible to residents near the area. If other construction projects occur concurrently with either Action Alternative, the incremental impact on noise in the area would be short-term would not raise the noise level of the area above the moderate noise baseline.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Visual Resources (EA Section 3.2.8)	No Effect; the baseline level of visual aesthetics and visual disturbance in the Project Area associated with residential and farmstead developments, wildlife, local ranching and farming activities, local construction projects, and the Applicant's operation and routine maintenance of the ditch sections would continue.	Machinery would be operating on the landscape and highly visible from public roads in certain locations on a spatially incremental basis during construction of either Action Alternative. Following construction of the Piping Alternative, the disturbance footprint would be a linear area of bare ground, rather than an open earthen ditch. Following construction of the Lining Alternative, the disturbance footprint would be the shotcrete-lined ditch sections, with shotcrete edges visible alongside the open water of the ditch. Within a few growing seasons, revegetation would help the disturbed ground blend with the surroundings. Overall, the long-term level of change to the visual characteristics of the landscape in and around the Project Area during and following construction of either Action Alternative would be minor and not out of character with the surrounding landforms or with the rural and agricultural character of the vicinity. The same wildlife providing visual aesthetics in the area would continue to be in the general vicinity, but may not frequent the precise properties or locations they currently do along the canal as often once piping is complete. These impacts would not rise to the level of significant.
Vegetation (EA Section 3.2.9)	No Effect; the Applicant would continue to routinely manage vegetation along the ditch sections, which includes periodic mechanical clearing with heavy equipment, burning, or application of herbicides.	Construction of either Action Alternative would result in a temporary minor impact to upland native vegetation located within the construction corridor. The impact would be evident in the Project Area for a period of several years. Either Action Alternative would result in the permanent loss of approximately 1.7 acres of riparian and wetland vegetation associated with the unlined ditch sections. The value of the habitat loss which would occur is 7.4 habitat units (ERO 2023). The existing habitat replacement site would fully maintain the value of the fish and wildlife values to be lost as a result of either of the Action Alternatives. The Proposed Action would contribute to a regional trend resulting in relocation of artificially-created riparian and wetland values from earthen irrigation conveyances to habitat replacement sites. The construction of either Action Alternative would not significantly affect the passive use of ecosystems, including stewardship, existence values, and bequest values.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Noxious Weeds (EA Section 3.2.10)	No Effect; neither Action Alternative would be completed and noxious weeds would continue to exist in the general area, and flowing water in the irrigation ditch sections, along with animals traveling along the ditch corridor would continue to serve as vectors for the spread of noxious weeds in the area.	The Piping Alternative would remove segments of open water, a key element of invasive seed transport. Under the Piping Alternative, finishing the ground surface with subsurface soil would help eliminate the weed seed bank in the construction area. Piped sections of the ditch would no longer require regular maintenance, lowering the potential for the continued spread and establishment of weeds. Under both Action Alternatives, downgradient herbaceous and woody noxious weeds which rely on ditch seepage would no longer be supported. Under either Action Alternative, noxious weeds would continue to be present throughout the Project Area. The Piping Alternative, along with other salinity control piping projects in the region, would remove an important vector of weed seed transport in the vicinity—open water. Under both Action Alternatives, seeps from the earthen ditch sections that currently support herbaceous and woody noxious weeds would be dried and the cumulative ability of the environment to support these weeds would be diminished.
Wildlife Resources (EA Section 3.2.11)	No Effect; neither Action Alternative would be completed and wildlife would continue to use the area as in the past. Salt and selenium loading from the Project Area would continue to affect aquatic dependent species.	Construction of either Action Alternative would create incremental activity and ground disturbance throughout the Project Area, resulting in minor temporary impacts to mule deer and elk. There would be a short-term loss of vegetative cover in big game critical winter habitat until the areas are revegetated. Construction impacts to small animals, especially burrowing amphibians, reptiles, and small mammals, would include direct mortality and displacement during construction activities. Bird, bat, reptile, and amphibian species dependent on wetland and riparian habitats would experience a long-term (greater than five years) loss of habitat due to either Action Alternative. However, the habitat value associated with the lost wetland and riparian habitat would be fully maintained at the existing habitat replacement site. After implementation of the Project, water resources for big game and other wildlife would continue to exist in the Project Area at a rate of more than 4 sources per square mile Hooved animals such as deer may be unable to escape a lined irrigation canal due to the depth and steepness of its sides. Both Action Alternatives would contribute to a regional trend resulting in the relocation of artificially-created riparian and wetland values from earthen irrigation conveyances to habitat replacement sites.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Threatened & Endangered Species (EA Section 3.2.12)	Neither Action Alternative would be completed, and historic salt and selenium loading from the Project Area would continue to affect the four Colorado River basin listed fishes and their critical habitat downstream.	Both Action Alternatives may adversely affect the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker and their critical habitat. However, the Applicant's historic depletions are covered under the 2009 PBO following the execution of a 2010 Recovery Agreement between the Applicant and FWS for a different project. The Recovery Program ensures impacts to listed fishes or adverse modification of their designated critical habitat resulting from projects covered under the 2009 PBO would not result in jeopardy to the species. The reduction in selenium loading to the Colorado River and Gunnison River basins resulting from both Action Alternatives would contribute incrementally to the beneficial effects of the Gunnison Basin Selenium Management Program in improving water quality within designated critical habitat for the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail throughout the Colorado River and lower Gunnison River basins.
Cultural Resources (EA Section 3.2.13)	No Effect: neither Action Alternative would be completed, and the cultural resources documented as eligible for listing in the NRHP would continue to exist in their current condition on the landscape.	Both Action Alternatives would have an adverse effect on NRHP eligible cultural resources. An MOA (Appendix B) between Reclamation, and the Colorado SHPO, with the Applicant participating as an invited party, outlines stipulations designed to conserve the value of the eligible cultural resources. Both Action Alternatives would contribute to an area-wide adverse effect on NRHP eligible cultural resources. The value of the eligible cultural resources in the area which have been or may be affected due to federally-funded irrigation piping and ditch lining projects have been and would continue to be maintained due to the Project stipulations developed with the Colorado SHPO. Therefore, no significant impacts to cultural resources would occur as a result of the Project, including impacts to education and knowledge, learning and interpretation, and research opportunities, because the cultural heritage of irrigation history would be maintained.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Soils & Farmlands of Agricultural Significance (EA Section 3.2.14)	No Effect; neither Action Alternative would be completed and soils and farmlands of significance in the Project Area would continue to produce as in the past. Salinity loading from deep percolation of irrigation water through saline soils along the ditches would continue.	The construction of either Action Alternative would temporarily disturb soils in or near the previously-disturbed ditch prisms. Construction activities would cause temporary disturbance to soils that are either not in irrigated agricultural production, or soils directly adjacent to irrigated agricultural lands, or irrigated lands. Some currently farmed agriculturally significant soils would be temporarily directly disturbed by either Action Alternative, but would be put back into production prior to the following irrigation season. No farmlands would be permanently altered or removed from production as a result of either Action Alternative, and no interruption to agricultural production would occur. Soil erosion from irrigation water conveyances would be substantially reduced where ditch reaches are either piped or lined. Either Action Alternative would contribute to the growing amount of piped or lined irrigation conveyances in the region, which are collectively having a beneficial effect on the reduction of soil erosion on a larger scale.
Microclimate (EA Section 3.2.15)	No Effect; neither Action Alternative would be completed and the surface hydrology, soil, and vegetation aspects of microclimate would continue to function as they have in the past within the Project Area.	Conversion of the open, earthen ditches to pipelines or lined ditches would convert areas with wetland or riparian soils, hydrology, and vegetation (elements contributing to microclimate differences) to irrigated farmlands or uplands. The open water aspect of the ditches would remain following the Lining Alternative. However, the preponderance of microclimate benefits in the Project Area and on Grandview Mesa and in the lower Smith Fork drainage are provided by irrigated agricultural lands. Because no irrigated agricultural lands would be lost as a result of either of the Action Alternatives, there would be no significant impact to microclimate.

Degree of the Effects

In determining the degree of effects of the Proposed Action, Reclamation has considered the following criteria. These criteria were incorporated into the resource issues and analyses described in the EA. See 43 C.F.R. § 46.310 ("The level of detail and depth of impact analysis should normally be limited to the minimum needed to determine whether there would be significant environmental effects.").

1. **Both Short- and Long-Term Effects.** The Proposed Action would have minor impacts on resources as described in the EA Section 3.2. Environmental commitments were incorporated into the design of the Proposed Action to further reduce impacts. The predicted short-term and long-term effects of the Proposed Action are fully analyzed in Section 3.2 and are incorporated by reference here.

2. **Beneficial and Adverse Effects.** The Proposed Action would have a minor impact on resources as described and analyzed in the EA. Environmental commitments were incorporated into the design of the Proposed Action to further reduce impacts. The beneficial and adverse effects of the Proposed Action are fully analyzed in Section 3.2 of the EA, and incorporated by reference here.

3. **Effects on Public Health and Safety.** The Proposed Action will have minimal impacts on public health or safety. A full analysis can be found in Section 3.2.5 of the EA, and is incorporated by reference.

4. **Economic Effects.** The Proposed Action will have minimal impacts on economics, because construction would be short-term and localized, no agricultural lands would be taken out of production, water rights and delivery allocations would remain unchanged, and long-term delivery reliability and efficiency of irrigation water would improve. A full analysis can be found in Sections 3.2.1 and 3.2.14 of the EA, and is incorporated by reference.

5. **Effects on the Quality of Life of the American People.** The Proposed Action will have minimal impacts on the quality of life of the American people. The Proposed Action will have no effect on access to products, including opportunities to consume, use, possess, or purchase products extracted or produced from Federal lands and in the Outer Continental Shelf, as explained in Section 1.7 of the EA. The Proposed Action will have no effect to visitor experience, including recreation access and visitor services, as explained in Section 1.7 of the EA. The Proposed Action will have no effect to public services, including emergency services, public water supply, transportation, education, or social services. A full analysis can be found in Section 3.2.5 of the EA, and is incorporated by reference. The Proposed Action will have no effect to the way of life and cultural practices for Native Americans, including traditional land and water use and practices, and their cultural heritage, as explained in Section 1.7 of the EA. The Proposed Action will have no effect on the passive use of ecosystems, including stewardship, existence values, and bequest values, because the approximately 37.7 acres of temporary disturbance will be reclaimed, the approximately 1.7 acres of riparian habitat loss is being replaced by an existing habitat replacement project, and there are long-term water-quality improvements as open ditches are piped. A full analysis can be found in Section 3.2.9 of the EA, and is incorporated by reference. The Proposed Action will have no effect on education and knowledge, including learning, interpretation, and research opportunities related to cultural, historic, and natural resources. A full analysis can be found in Section 3.2.13 of the EA, and is incorporated by reference.

Environmental Commitments

The environmental commitments in 0 of the Final EA are an integral part of the Proposed Action and were considered when analyzing the Proposed Action's impacts. 0 also states the authority for any mitigation

adopted and any applicable monitoring or enforcement provisions. 0 of the Final EA is incorporated by reference.

Decision Record
Based on the analysis of the Proposed Action Alternative located in CHAPTER 3 of the Final EA, the Decision Maker has determined the Final Environmental Assessment adequately discloses the effects of the Proposed Action Alternative as required under the National Environmental Policy Act and has decided to authorize implementation of the Proposed Action Alternative.

Approved by:

Bart Deming
Acting Area Manager, Western Colorado Area Office

Table of Contents

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1 - INTRODUCTION

This Environmental Assessment (EA) has been prepared to explain and evaluate the potential environmental effects of Grandview Canal and Irrigation Company's (GCIC's) proposed Grandview Canal Middle and Lower Piping Project and a Lining Alternative. The Piping Alternative ("Project") is the Preferred Alternative. The Federal action ("Proposed Action") evaluated in this EA is whether the Bureau of Reclamation ("Reclamation") would provide funding assistance to GCIC (the "Applicant") for the Project. Reclamation is authorized by the Colorado River Basin Salinity Control Act's Colorado River Basinwide Salinity Control Program to fund the Project under the 2020 Funding Opportunity Announcement (FOA) BOR-UC-20-F001.

Reclamation has prepared this EA in compliance with the National Environmental Policy Act (NEPA) and the Department of the Interior's NEPA regulations at 43 C.F.R. §§ 46.10-46.450. After a public review period for the Draft EA, Reclamation determined that a Finding of No Significant Impact (FONSI) for the Proposed Action is warranted.

1.1 – Project Location and Legal Description

The Project is located in southeast Delta County, near the Town of Crawford, Colorado (see Figure 1, below).

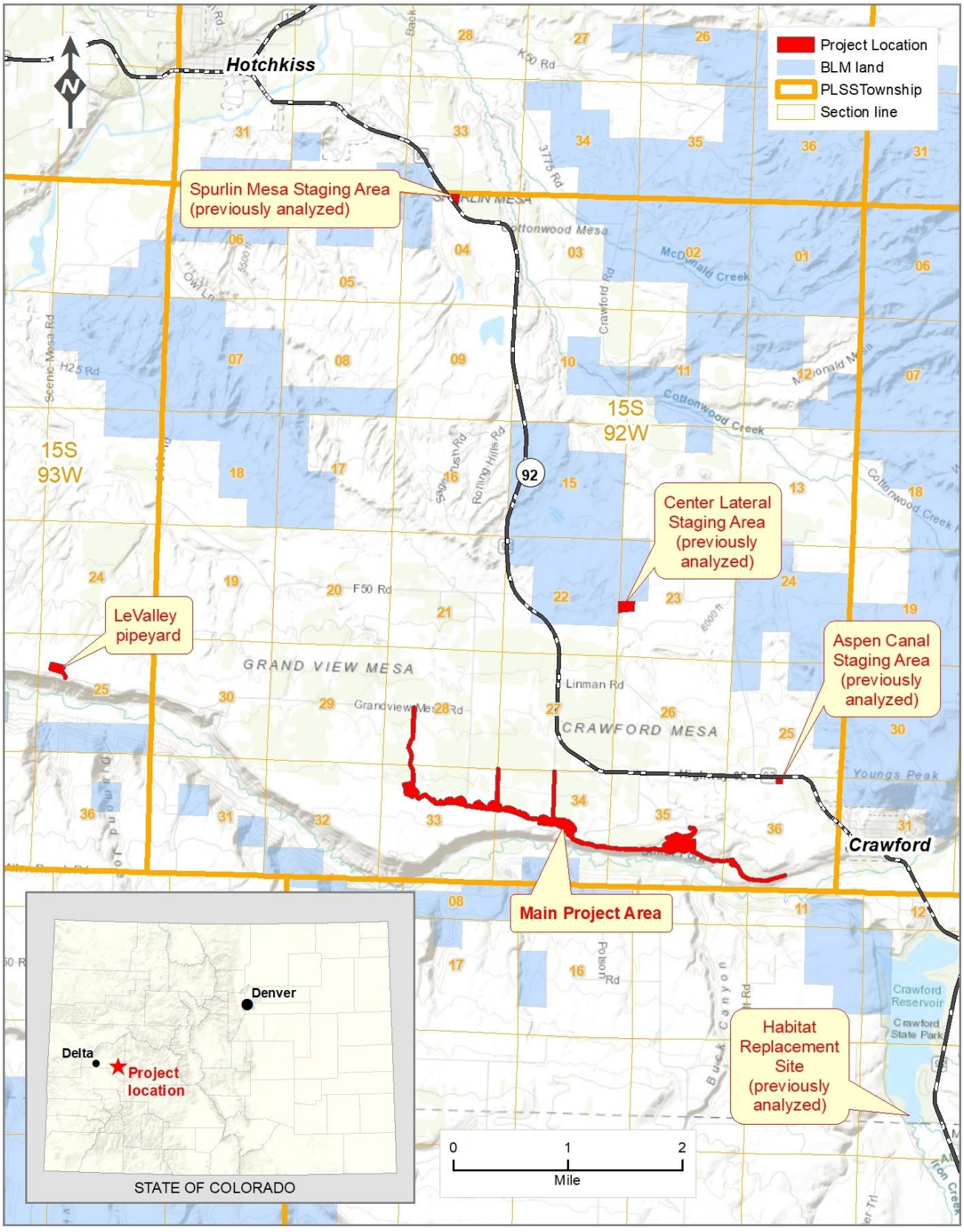
The piping component of the Project is in the local geographic areas of Grandview Mesa and the lower Smith Fork drainage, and extends from an area approximately 0.5 mile southwest of the Town of Crawford to about 4 miles west of the Town of Crawford. Other sites involved with the Project are materials staging areas not in the immediate vicinity of the proposed pipeline alignment. The piping component and the staging areas for the Project lie entirely on private land. The areas that would be affected by the Project (the "Project Areas") and their general physical locations are summarized in Table 1.

An existing habitat replacement site developed for a previous GCIC project (the original Grandview Canal Piping Project completed in 2010) generated excess habitat credits that would be applied to the current Project. The existing habitat replacement site is on Reclamation-owned land administered by Crawford Reservoir State Park in the location shown on Figure 1. No physical activity directly related to the Project would take place at the habitat replacement site.

Table 1. Areas Involved in the Project

Project Area	Specific Project Element or Activity	General Physical Location	Previous Analyses Incorporated by Reference
Main Project Area	The piping component: middle and lower segments of that part of Grandview Canal involved with the Project (including access ways)	Crawford and Grandview Mesas. T15S R92W of the 6th PM: Sections 28, 33, 34, 35, 36, all in Delta County.	--
LeValley Staging Area	Staging area for supplies and equipment during construction	Western area of Grandview Mesa. T15S R93W 6th PM. Section 25, in Delta County.	--
Aspen Canal Staging Area	Staging area for supplies and equipment during construction	Crawford Mesa. T15S R92W of the 6th PM: Section 36, in Delta County.	The "Aspen Canal Staging Area" in the general physical location of this Project Area was previously analyzed and authorized as part of the Aspen Canal Piping Project (see Section 1.6).
Spurlin Mesa Staging Area	Staging area for supplies and equipment during construction	Spurlin Mesa. T15S R92W of the 6th PM: Section 4, in Delta County.	The "Spurlin Mesa Staging Area" was previously analyzed and authorized as part of the Clipper Center Lateral Piping Project (see Section 1.6).
Center Lateral Staging Area	Material for pipe bedding, if needed	T15S R92W of the 6th PM: Section 23, in Delta County.	The "Center Lateral Staging Area" was previously analyzed and authorized as part of the Clipper Center Lateral Piping Project (see Section 1.6).
Existing Habitat Replacement Site	No physical activity directly related to the Project would take place at this site	T51N R7W of the New Mexico PM: Section 24, Delta County.	The habitat replacement site was developed for the original Grandview Canal Pipeline Project. Excess habitat credits generated at the site would be applied to the current Project (see Section 2.2.8).

Figure 1. Map of project location.



1.2 - Need for and Purpose of the Proposed Action

The need and purpose for the Proposed Action is to reduce salinity concentrations in the Colorado River basin, in compliance with the Colorado River Basin Salinity Control Act of 1974, 43 U.S.C. §§ 1571, et seq., as amended).

1.3 – Decision to be Made

Reclamation will decide whether to provide funding to the Applicant to implement the Project.

1.4 – Background

1.4.1 – Salinity Control Program

The threat of salinity loading in the Colorado River basin is a major concern in both the United States and Mexico (Reclamation 2023). Salinity affects water quality, which in turn affects downstream users, by threatening the productivity of crops, degrading wildlife habitat, and corroding residential and municipal plumbing. Irrigated agriculture contributes approximately 37 percent of the salinity in the system (Reclamation 2023). Irrigation increases salinity in the system both by depleting in-stream flows, and by mobilizing salts found in underlying geologic formations into the system, especially during flood irrigation practices.

The Colorado River Basin Salinity Control Act of 1974 authorizes the Secretary of the Interior to proceed with a program to enhance and protect the quality of water available in the Colorado River for use in the United States and Republic of Mexico. Public Law 104-20 of July 28, 1995, authorizes the Secretary of the Interior, acting through the Bureau of Reclamation, to implement a Basinwide Salinity Control Program. The Secretary may carry out the purposes of this legislation directly, or make grants, enter into contracts, memoranda of agreement, commitments for grants, cooperative agreements, or advances of funds to non-federal entities under such terms and conditions as the Secretary may require (43 U.S.C. § 1592).

The Basinwide Salinity Control Program funds salinity control projects with a one-time grant that is limited to an applicant's competitive bid. Salinity control projects are awarded based on applications received in response to a Notice of Funding Opportunity (NOFO) (formerly called Funding Opportunity Announcement [FOA]) issued by Reclamation. As part of the NOFO, applicants are evaluated individually according to the following criteria: cost effectiveness, ability to enable on-farm salinity control features, risk assessment, detailed project plan, costs & capability to implement the project, future operation & maintenance and management capabilities for the project, past performance, and Department of the Interior goals. Applications are ranked by an Application Review Committee made up of multiple disciplines, and high-ranking projects are recommended to the Salinity Control Program Manager for consideration. The Salinity Control Program Manager then provides recommendations to the Grants Officer for award. Once constructed, the facilities are operated, maintained, and replaced by the Applicant at their own expense.

The cost effectiveness value of a proposed project is quantified as the estimated total annual salt load (in tons) reduced in the Colorado River basin divided by the project cost amortized over 50

years. Estimated salinity reduction is calculated based on measured total dissolved solids loads in basin streams, GIS-based model calculations to determine subbasin loads, and ditch mapping data that include average flows, ditch lengths, and average annual days of use. Richards et al. (2014), Schaffrath (2012), and Linard (2013) provide more detailed information on salt loading estimate methodology.

Earthen irrigation ditch water seepage and the resultant deep percolation through saline soils is one way that salts are mobilized and transported into regional streams and rivers. Piping such ditches removes a source of deep percolation and salt mobilization to regional streams and rivers from the system. The Project would eliminate water seepage from approximately 4 miles of earthen ditches, reducing salinity loading by 4,421 tons per year (Reclamation 2020a) in the Lower Gunnison Basin and the Colorado River Basin.

While the Project is not a selenium reduction project, it is anticipated that an unquantified reduction in selenium loading in the Colorado River basin would also be associated with the Project. The U.S. Geological Survey (USGS) monitors dissolved selenium loads in rivers and tributaries immediately downstream of the Project Area. There has been a 47.7 percent decrease in selenium levels in the Gunnison River near Whitewater between 1986 and 2020 (Henneberg 2021). The Gunnison Basin Selenium Management Program (SMP), a private/public partnership of concerned parties working together to identify and implement solutions to reduce selenium concentrations in the Gunnison and Colorado rivers, attributes a portion of the reduction in selenium throughout the area to the reduction of deep percolation from seeping irrigation ditches due to the implementation of salinity control projects (Reclamation 2020b, 2022).

1.4.2 – The Applicant

GCIC, the Applicant, is a privately owned, non-profit, mutually-funded irrigation company incorporated and operating in Delta County since 1922. The Grandview Canal system originates at a head gate on the Smith Fork River at a location just south of the Town of Crawford, and provides users with irrigation water and winter stock water across Grandview and Scenic Mesas. Late season water called from Crawford Reservoir is also delivered in the Grandview Canal system. The irrigated crops associated with the system include hay crops and grass pasture.

1.5 – Relationship to Other Projects

1.5.1 – Salinity Control Program

Reclamation, under the authority of the Colorado River Basin Salinity Control Act of 1974 provides funding through the Basinwide Salinity Control Program and the Basin States Program to implement cost-effective salinity control projects in the Colorado River Basin. Reclamation's Western Colorado Area Office is the process of or has recently utilized Salinity Control Program funds for the following salinity control projects in the vicinity of the Project Area (Figure 2, below):

- Bostwick Park Siphon Lateral Piping Project
- C Ditch/Needle Rock Piping Project
- Cattleman's Ditches Piping Project Phases I and II
- Clipper Center Lateral Piping Project and Project A
- Crawford Clipper Ditch Company's Jerdon/West/Hamilton Piping Project

- Eastside Laterals Piping Projects ("UVWUA Project 9" and "UVWUA Project 10")
- Fire Mountain Canal Piping Project
- Forked Tongue/Holman Ditch Piping Project
- Gould Canal Improvement Projects A & B
- Grandview Canal Piping Project (original)
- Upper and Lower Stewart Ditch Piping Projects
- Minnesota Canal Piping Project Phase I and II
- Minnesota L75 Piping Project
- Needle Rock-Lone Rock Piping Project
- North Delta Canal Piping Project
- Orchard Ranch Piping Project
- Pilot Rock Ditch Piping Project
- Short Ditch Extension Piping Project
- Slack and Patterson Lateral Piping Project
- Spurlin Mesa Lateral Piping Project ("Clipper Project 4")
- Turner-Lone Cabin Combination Piping Project
- Waterdog and Shinn Park Laterals Piping Project
- Zanni Lateral Piping Project

1.5.2 – CRSP Funds

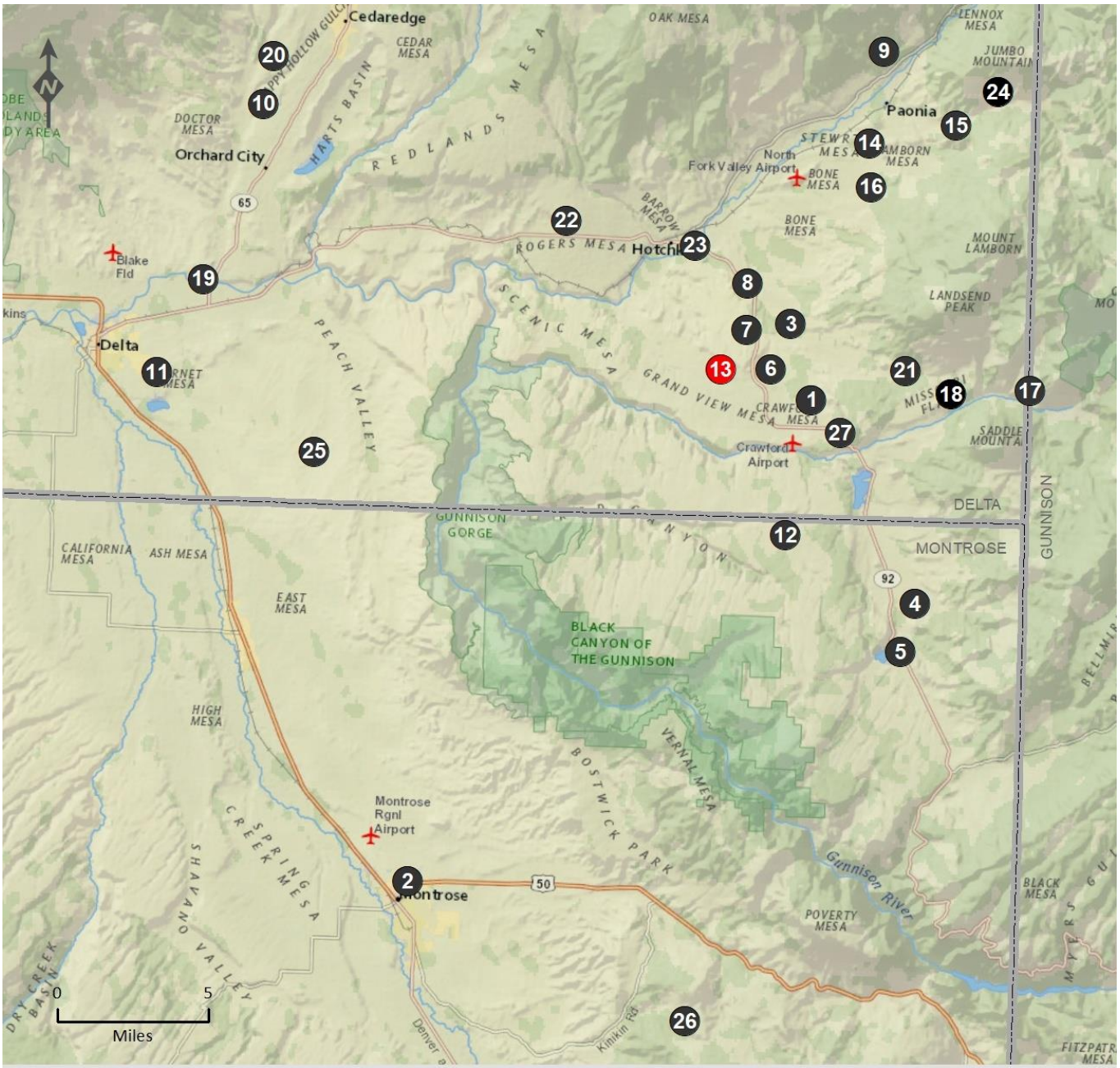
Reclamation's Western Colorado Area Office recently utilized Colorado River Storage Project (CRSP) Funds to implement the Aspen Canal Piping Project and the GK Lateral Piping Project in the vicinity of the Project Area (Figure 2).

1.5.3 – RCPP Funds

The U.S. Dept. of Agriculture Natural Resources Conservation Service (NRCS) issued a Regional Conservation Partnership Program (RCPP) grant administered by the Colorado River Water Conservation District under the Lower Gunnison Watershed Plan. RCPP irrigation infrastructure improvement projects planned in the vicinity of the Project Area include (Figure 2):

- Needle Rock Diversion Project
- Grandview Upper Canal Piping Project
- Crawford Clipper Ditch Upper West Lateral Master Plan Projects (various)

Figure 2. Regional salinity control projects & other related projects.



1 Aspen Canal Piping Project	10 Forked Tongue/Holman Ditch Project	19 North Delta Canal Piping Project
2 Bostwick Park Salinity Control Project	11 GK Lateral Piping Project	20 Orchard Ranch Piping Project
3 C Ditch/Needle Rock Pipeline Project	12 Gould Canal Improvement Projects A & B	21 Pilot Rock Ditch Piping Project
4 Cattlemans Ditches Pipeline Project Phase I	**13 Grandview Canal Piping Projects**	22 Rogers Mesa WDA Slack & Patterson Laterals
5 Cattlemans Ditches Pipeline Project Phase II	14 Lower & Upper Steward Ditch Pipelines	23 Short Ditch Extension Piping Project
6 Clipper Center Lateral Piping Project	15 Minnesota Canal & Reservoir Projects I & II	24 Turner/Lone Cabin Combination Piping Project
7 Clipper Jerdon-West-Hamilton Piping	16 Minnesota L75 Piping Project	25 UVWUA Phases 9 & 10
8 Crawford Clipper Project 4	17 Needle Rock Diversion Project	26 Waterdog & Shinn Park Laterals Piping Project
9 Fire Mountain Canal Piping Project	18 Needle Rock/Lone Rock Piping Project	27 Zanni Lateral Pipeline Project

1.6 – NEPA Sufficiency Review for Certain Project Features

Certain areas and activities have already been analyzed and authorized under the NEPA process for related projects, and are proposed for continuing use under the current Project. These include the Aspen Canal Staging Area, the Spurlin Mesa Staging Area, and the Center Lateral Staging Area (itemized in Table 1, above, and in the following paragraphs). These continuing use areas and related activities are included in the Proposed Action description (Section 2.2), but are not analyzed in Chapter 3 (Affected Environment & Environmental Consequences). Instead, the EAs covering these features and activities are incorporated here by reference. As required by 42 U.S.C. 4336b, Reclamation re-evaluated each of the prior NEPA documents to ensure that the analysis remains valid for the current Project. Reclamation determined that the existing analyses remain valid, with updated information related to species listed under the U.S. Endangered Species Act for each area. Since the times of the original NEPA analyses, the gray wolf and the silverspot have been listed under the U.S. Endangered Species Act. Reclamation determined that none of these continuing use areas include suitable habitat or occurrences of gray wolf or silverspot, and the Applicant does not have a predator management program that would affect gray wolf. Therefore, there would be no potential for Project activities at these continuing use areas to affect gray wolf or silverspot, and the analyses disclosed in the previous NEPA documentation are still adequate.

The Aspen Canal Staging Area was used as a staging area for Reclamation's Aspen Canal Piping Project and is currently proposed for that same use. No change in use would occur under the current Project which would change the environmental analysis contained in the 2019 EA for the Aspen Canal Piping Project (Reclamation 2019a), which is incorporated here by reference. A FONSI was signed by the WCAO on February 27, 2019, documenting that there would be no significant impact resulting from utilizing this area for staging.

The Center Lateral Staging Area was used as a staging area for soil stockpiles generated during the Clipper Center Lateral Piping Project, and these soil stockpiles are currently proposed for use as pipe bedding (if necessary) for the Project. No change in use would occur under the current Project which would change the environmental analysis contained in the Clipper Center Lateral Piping Project EA (Reclamation 2019b), which is incorporated here by reference. A FONSI was signed by the WCAO on October 18, 2019, documenting that there would be no significant impact resulting from utilizing this area for staging.

The Spurlin Mesa Staging Area was used as a staging area for Clipper Irrigation Salinity Control Project 4 and the Clipper Center Lateral Piping Project, and is currently proposed for that same use. No change in use would occur under the current Project which would change the environmental analysis contained in the 2014 EA for the Clipper Irrigation Salinity Control Project 4 (Reclamation 2014) or the Documentation of NEPA Adequacy for the Clipper Center Lateral Piping Project (Reclamation 2019c) which are incorporated here by reference. A FONSI was signed by the WCAO on April 25, 2014, documenting that there would be no significant impact resulting from utilizing this area for staging.

1.7 - Scoping

Scoping for this EA was completed by Reclamation, in consultation with the following agencies and organizations, during the planning stages of the Project to identify the potential environmental and human environment issues and concerns associated with implementation of the Proposed Action and No Action Alternatives:

- U.S. Bureau of Land Management, Uncompahgre Field Office, Montrose, CO
- Colorado State Historic Preservation Office, Denver, CO
- U.S. Army Corps of Engineers, Northwestern Colorado Branch, Grand Junction, CO
- Southern Ute Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)
- U.S. Fish & Wildlife Service, Ecological Services, Grand Junction, CO
- Colorado Parks & Wildlife, Grand Junction, CO

Concerns raised during public comment periods on recent similar projects and related informal consultations with Colorado Parks and Wildlife, Gunnison, Colorado, also helped identify potential concerns for the Project.

Resources analyzed in this EA are discussed in Chapter 3. The following resources were identified as ***not present or not affected***, and are not analyzed further in this EA[2]:

[2] Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The [bureau] verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. The [bureau] has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

Table 2. Resources Eliminated from Further Analysis

Resource	Rationale for Elimination from Further Analysis
Indian Trust Assets and Native American Religious and Cultural Heritage Concerns	No Indian trust assets have been identified within the Project Area. No Native American sacred sites were identified within the Project Area. Therefore, neither the No Action Alternative, nor the Action Alternatives, would affect Indian trust assets, Native American sacred sites, or Native American ways of life or cultural heritage and practices, including traditional land and water use and practices. To confirm this finding, Reclamation provided the Ute Mountain Ute Tribe, the Ute Indian Tribe (Uintah and Ouray Reservation), and the Southern Ute Indian Tribe with a description of the Project and a written request for comments regarding any potential effects on Indian trust assets or Native American sacred sites. No comments were received.
Wild & Scenic Rivers, Land with Wilderness Characteristics, or Wilderness Study Areas	No Wild and Scenic Rivers, land with wilderness characteristics, or Wilderness Study Areas exist in the Project Area. Therefore, neither the No Action Alternative nor the Action Alternatives, would have an effect on these resources.
Public lands grazing and recreation	No public lands are involved with the Project. Therefore, neither the No Action Alternative, nor the Action Alternatives, would have an effect on public lands grazing or recreation. There is no recreation authorized in the Grandview Canal, and therefore there are no recreational properties that rely on the Grandview Canal for recreational opportunities.
Products produced or extracted from Federal lands or the Outer Continental Shelf	No Federal lands or lands in the Outer Continental Shelf are involved with the Project. Therefore, neither the No Action Alternative, nor the Action Alternatives, would affect access to products produced or extracted there.
Property damage from prairie dogs	Prairie dogs are present in and around the Project area, on both sides of the canal. Therefore the canal does not present a barrier to prairie dog movement, and the piping of the canal would not change the potential for prairie dogs to move across the landscape and colonize new areas.

CHAPTER 2 - ALTERNATIVES

Alternatives evaluated in this EA include the No Action Alternative, the Piping Alternative (aka "Project," the Preferred Alternative), and the Lining Alternative.

2.1 – No Action Alternative

Under the No Action Alternative, Reclamation would not approve funding for the Project. The ditches proposed for piping would continue to flow in open, earthen ditches, and the resultant salt loading to the Lower Gunnison Basin and the Colorado River Basin would continue at the current rate. Without a change in the existing environment (i.e. *an action*, such as other remedial measures with the potential to reduce salt loading associated with the ditches), salt loading associated with the ditches proposed for piping would continue at the current rate. There are no known actions/remedial salinity control measures planned to occur which would impact the salt loading associated with the ditches proposed for piping at this time, and therefore the No Action Alternative does not include other potential salinity control measures in the area.

2.2 – Piping Alternative – Preferred Alternative

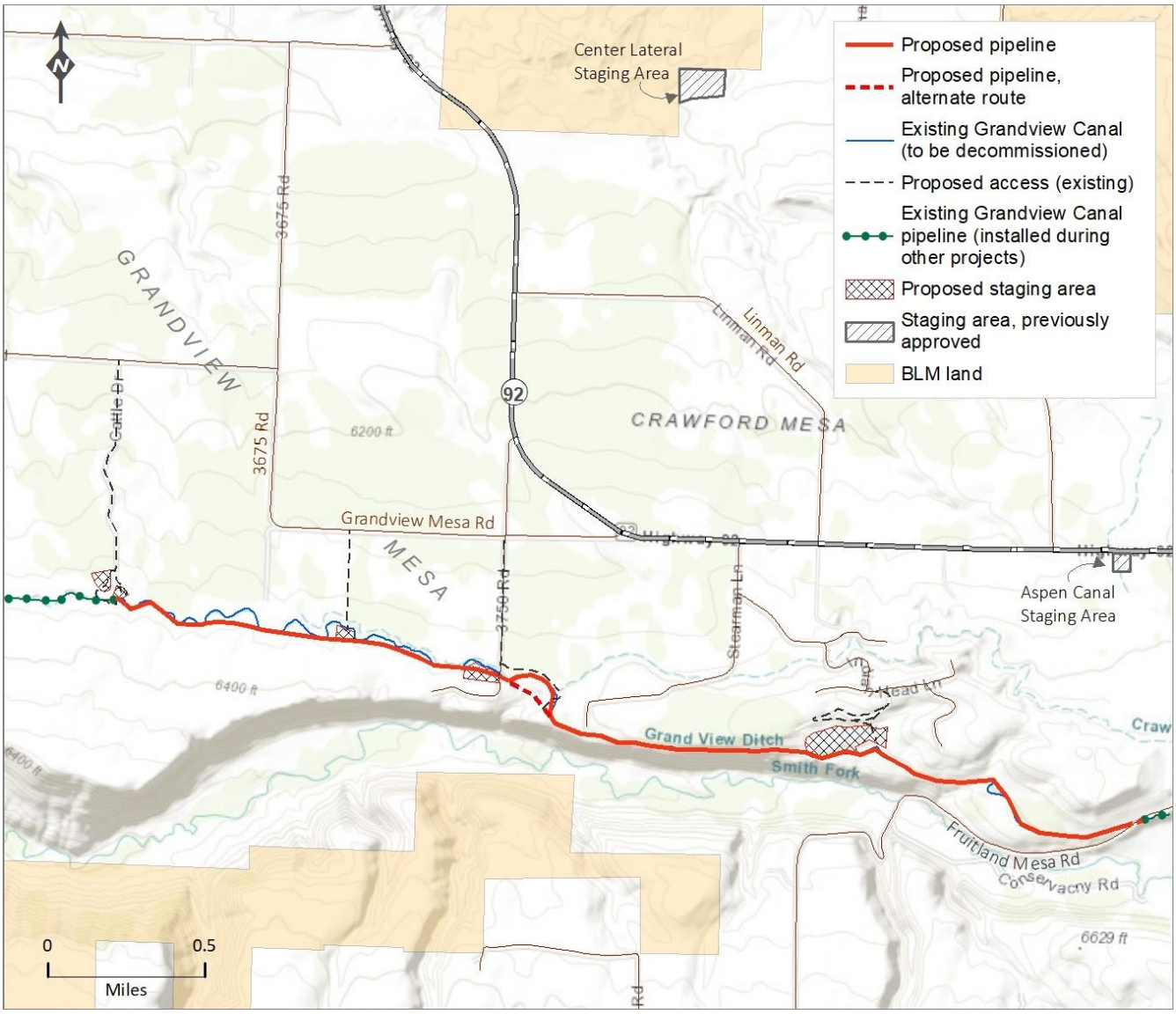
Under the Proposed Action, Reclamation would authorize funding to the Applicant to implement the Grandview Canal Middle and Lower Piping Project ("Project") as the Preferred Alternative. The Project would include converting approximately 4 miles of open irrigation ditch to buried pipeline (the "piping component"). The proposed pipeline is sketched on (Figure 3), along with proposed construction access routes and staging areas.

Overall, approximately 3.7 miles of buried pipeline would result from the Project. The proposed pipeline would follow the existing ditch prism in most locations, and would be realigned outside the ditch prism in some areas to shorten the piped distance. A total of approximately 1.5 miles of existing ditch segments would be abandoned.

The upstream (east) connection of the current Project would connect to piping installed in 2021 as part of the Upper Grandview Piping Project funded by RCPP, and the downstream (west) end of the current Project would connect to piping installed in 2012 at a point 4 miles west of Crawford for the original Grandview Canal Piping Project (Figure 3).

The Project would start about 200 feet east of where the Grandview Canal crosses under Fruitland Mesa Road and proceed west. The first 200 feet of the pipeline would consist of dual 42-inch pipes (to match the existing upstream pipe) installed in the existing canal prism. Just upstream of the Fruitland Mesa Road crossing, the dual pipes would end and a concrete box would be installed allowing water to flow open beneath the Fruitland Mesa Road bridge for a length of about 80 feet (40 feet on either side of the road's centerline). West of the Fruitland Mesa Road bridge, a concrete box and cleanout structure would be installed, and the canal would transition to a single 60-inch diameter pipe.

Figure 3. Main project area plan.



The 60-inch diameter pipe would continue mostly in the existing canal prism for about 2.1 miles, contouring along the south-facing slope of Smith Fork canyon to the southwest edge of Crawford Mesa. There, the existing canal makes a sharp turn to the north and drops in elevation in the "waterfall area," marking the transition to Grandview Mesa, and the Middle Section to the Lower Section of the Project. The existing canal in the "waterfall area" is about 600 feet in length, and bordered by riparian vegetation. The pipeline would bypass the "waterfall area," using one of two proposed routes. A flush valve would be installed to release water as needed to the "waterfall area," to maintain the existing riparian vegetation at that location. Overflow from a nearby existing pond would also continue to contribute water to the "waterfall area." Flow in the "waterfall area" would be slowed and pooled using rock structures and any remaining tail water would be ditched a short distance southwest to a natural ephemeral drainage. The pipeline bypass around the "waterfall area" would either parallel the south side of the existing ditch prism in a broad arc, or follow a straighter

alternate route that is approximately 400 feet shorter in length (Figure 3), but with a drop in elevation that would require a sediment flush valve at the low point.

The Lower Section of the pipeline would extend west about 1.8 mile to the end of the Project, transitioning from a 60-inch diameter pipe down to two smaller diameter pipes installed in the same trench. One pipe would be fitted with outlets for the shareholders on the Project's Lower Section. The second pipe would extend to the Project terminus. Along the Lower Section, the piped corridor would be straightened and would deviate from the existing canal prism in several locations (Figure 3). This deviation would be for ease of construction and integrity of the pipe.

At the west (terminal) end of the Project (about 4 miles west of Crawford), the second pipe (mentioned above) would enter a concrete hydraulic lift box. The hydraulic lift box would be constructed to tie into an existing concrete structure and the section of pipeline installed in 2012 during the original Grandview Canal Piping Project.

The pipeline would be constructed of high-performance polypropylene storm construction pipe or poly-vinyl chloride (PVC). A variety of control structures (valves, air vents, meters, etc.) and outlets (farm turnouts), as well as an emergency overflow structure (that would release water to the Smith Fork), would be installed on the pipeline. No pump stations, compressor stations, or new irrigated farm areas would be associated with the Proposed Action.

Table 3, below, is a summary of project elements (distances and estimated acreages involved are approximate). Distances of pipeline given in Table 3 are disturbance footprints, not linear distances of pipelines, because in some areas, multiple pipes (main pipes along with shareholder delivery lines) would be installed in the same trench. These elements were compiled from a review of the engineer's construction design drawings and a GIS analysis using Esri® ArcGIS Desktop software.

Table 3. Summary of Significant Project Elements

Element	Total Area Involved	Comment
Ditch sections involved with the Project	4.0 mi	A 4-mile portion of the Grandview Canal (aka "Middle" and "Lower" Sections, for the purposes of the current Project).
Total pipeline alignments to be installed (disturbance footprint)	3.7 mi (26.8 acres)	Pipelines would be installed directly in approximately 2.5 miles of the existing ditch prism, and approximately 1.2 miles of pipeline alignments would be installed outside the existing ditch prism. The width of the construction footprint would vary from approximately 30 to 60 feet depending on site characteristics (disturbance footprint acreage is based on the maximum disturbance footprint width of 60 feet).

Element	Total Area Involved	Comment
Concrete structures	0.30 acre	At Project's terminal end, a hydraulic lift concrete box with the dimensions 15 feet by 20 feet by 16 feet deep would be installed. An approximately 45-foot construction buffer would be required around this structure. Concrete box structures would be installed either side of the Fruitland Mesa Road crossing. The disturbance footprint for these structures would overlap with the pipeline disturbance footprint.
Existing ditch to be abandoned & decommissioned	1.5 mi (10.9 acres)	This is the total distance of ditch/prism sections proposed for abandonment and decommissioning because of realignments. The involved acreage estimate is based on a maximum disturbance footprint width of 60 feet (although the disturbance width could be as narrow as 30 feet). Note that some of the disturbance acreage for abandoned ditch sections will overlap with the pipeline's disturbance buffer.
Staging areas (6 proposed areas plus 3 previously-approved areas)	39.5 acres total	There are six dedicated staging areas proposed for the Project, totaling approximately 21.3 acres. Five staging areas are along the piped corridor, and one staging area ("LeValley Pipeyard") is about 3 miles northwest of the Project Area. Three additional, previously-approved staging areas (the Spurlin Mesa Staging Area [7.6 acres], the Center Lateral Staging Area [8.5 acres] and the Aspen Canal Staging Area [2.1 acres]) were formerly used for related projects (see Section 1.6) and would be used as needed.
Access routes	3 mi	The construction corridor would be directly accessed from county roads including Fruitland Mesa Road (Middle Section), the Crawford Airport and 3750 Road (Middle Section), and Grandview Mesa Road/East Road (Lower Section). Scenic Mesa Road and 3455 Road would be used to access the LeValley Pipeyard area. Within the construction corridor, a total of approximately 3 miles of existing private access roads would be improved if necessary (see Figure 3).

The following subsections explain the construction methods and describe other aspects (staging, schedule, post-construction activities) of the Project. For all aspects of the Project, Best Management Practices (BMPs) would minimize impacts of the Project on the human and ecological environments. BMPs and other protective measures are incorporated as part of the Project, are described and analyzed as part of the Project in CHAPTER 3 (Affected Environment & Environmental Consequences), and are summarized in 0 (Environmental Commitments).

2.2.1 – Pipeline Installation

Pipeline installation would first involve using trackhoes and bulldozers to grub ditch bank vegetation. Woody vegetation on the side-slopes of ditch prisms, especially in natural areas, would be left intact as much as possible. Grubbed shrubs, trees and stumps would be cut, chipped, or burned onsite or at one of the staging areas, or hauled to a local landfill.

Following grubbing, trackhoes and bulldozers would be used to reserve existing topsoil or subsurface soil, depending on the post-construction revegetation method (see Section 2.2.6) and fill the existing ditch with material from the existing ditch prism. An excavator would then trench to the appropriate depth in the prism, adjacent to the previous location of the ditch, and prepare the pipe bed. Following installation of the pipe, an excavator would backfill the pipe trench and a dozer would grade the pipe alignment to match the surrounding land contours and restore drainage patterns to help prevent erosion. Appropriately-sized culverts would be placed at drainage crossings. Alternatively, low water crossings and/or rolling dips would be installed where appropriate, instead of culverts. A one-lane dirt maintenance road or ATV trail would remain on the pipe alignment following construction. Revegetation would be in accordance with Section 2.2.6.

Pipe and supplies would be transported to the construction corridor on flatbed trucks (or similar) and unloaded with front end loaders with pallet forks. A trackhoe would position the pipe in the trench, and segments of pipe would be fused or joined together in place or alongside the prepared pipe trench. The pipe would be bedded and buried with fill material from within the ditch prism or, if necessary, with bedding or fill obtained from soil piles staged at the Center Lateral Staging Area. As a last option, fill or bedding material would be obtained from a commercial sand and gravel pit. The pipeline burial depth would be below the frost line.

There is the possibility of encountering large boulders or bedrock in pipe trenches that cannot be moved with excavating equipment. In this case, conventional blasting would be used to break rock into pieces manageable with heavy equipment. Blasting would be performed by a state-permitted blasting contractor. Blasting would entail drilling a hole or holes in the (below grade) rock, placing a charge and detonator in each drill hole, and detonating the charge. The blasting activity would take place below grade entirely within the pipeline trench.

As mentioned previously, the Project would cross Fruitland Mesa Road on the east end near the start of the Project. This crossing would be trenched and open for approximately 80 feet (40 feet on either side of centerline), with concrete aprons on either end. Road surfaces that may be damaged during construction would be restored to their preexisting condition, per Delta County Road and Bridge District #3 following construction.

2.2.2 – Abandoned Ditch Segments Decommissioning

For those ditch segments that would be abandoned because of realignment paths (where the pipe alignment departs from the existing ditch prism [see Figure 3]), an excavator would be used to fill the abandoned ditch with material from the existing ditch prism, then a trackhoe would contour the filled ditch alignment to match the surrounding land, including natural drainage patterns that cross the alignment. In farmed areas, these segments would be finished with retained topsoil and revegetated using methods described in Section 2.2.6. In natural areas or unfarmed areas, the finishing method would be the sterile topsoiling and natural revegetation method, unless reseeding is requested by the landowner. Seed mixes are described in Section 2.2.6. No maintenance access road or trail would remain in these areas.

2.2.3 – Access

All access ways for construction of the Project would be on the existing ditch prisms, in the proposed new pipe corridors, on existing private roads, or directly to these areas from public roads (Figure 3). Some proposed access ways on existing private roads would require improvement (minor grading, smoothing, and widening up to 15 feet wide) in order to accommodate pipe hauling. Accessways and road crossings would be returned to the same or better condition than they were prior to construction. The access ways authorized for the Project would be clearly marked on the construction drawings.

The Applicant asserts that the existing ditch alignments involved in the Project are in statutory rights-of-way. The Applicant asserts that a statutory right-of-way "includes the right to construct, operate, clean, maintain, repair, and replace the ditch and appurtenant structures, to improve the efficiency of the ditch, including by lining or piping the ditch, and to enter onto the burdened property for such purposes." Colorado law further states that the holder of the right-of-way has access "for all reasonable and necessary purposes related to the ditch" (C.R.S. § 37-86-102 and 103). All landowners in the footprint of the Project where activities would take place outside the statutory rights-of-way have formally agreed (or will have formally agreed prior to construction) to allow the activities of the Project to be conducted on their lands.

The anticipated average width of the construction area for the Project would be 40 feet, but could be as wide as 60 feet under certain conditions. The width of the construction footprint would depend on site conditions (slope, nearby infrastructure, nearby sensitive resources) and the ability to operate equipment safely. The authorized construction area widths would not be constrained by the existing ditch centerline, but rather would be adjustable to site conditions in order to complete the work safely and with the smallest possible disturbance footprint. Construction footprints would be limited to only those necessary to safely implement the Project. The authorized construction width would not be mechanically cleared to its maximum outer limits as a part of site preparation.

2.2.4 – Staging

Five staging areas have been identified within the pipeline corridor, along with one additional staging area ("LeValley Pipeyard") approximately 1 mile west of the Project. Staging areas in the pipeline corridor are shown on Figure 3 and the location of the LeValley Pipeyard is shown on Figure 1. In addition, another three previously approved staging areas (the Spurlin Mesa Staging Area, the Center Lateral Staging Area, and the Aspen Canal Staging Area) could be used for the Project, if needed. Staging area sizes are summarized in Table 3.

The staging areas would be used to store pipe and other Project supplies and equipment. Pipe arriving and leaving the staging areas would be transported on 50-foot flatbed trucks (or similar). Front end loaders with pallet forks would likely be used to handle pipe in the staging areas. Slash (grubbed shrubs, trees and stumps) may be processed by burning or chipping in staging areas. Any burning would be conducted in accordance with Delta County burning ordinances.

To conserve fuel and for the sake of work efficiency, working equipment would remain at active construction locations overnight, on weekends, and during times of brief work gaps due to weather conditions.

2.2.5 – Borrow Activities

The necessary pipe bedding and trench fill would be generated from within the construction footprint. To generate fill material onsite, a screening or portable crusher may be used in the construction footprint to prepare the fill material. If additional fill is required, fill would be obtained from a commercial source, or from the Center Lateral Staging Area (Figure 3), where soil piles generated from a different project are staged. Borrow material may also be used to improve or repair accessways used for the Project. Borrow material would be loaded to end-dump trucks using an excavator and hauled to the construction site via approved access ways.

2.2.6 – Weed Control & Post-Construction Revegetation

To prevent the spread of weeds during construction, all equipment and vehicles would be cleaned prior to arriving on work sites. Woody noxious weeds within the Project Area would be mechanically removed during construction preparation.

Following construction, disturbed ground would be revegetated in one of two ways: the sterile topsoiling/natural revegetation method, or the conventional method.

In the conventional revegetation method, reserved topsoil would be replaced on the prepared ground surface using a trackhoe, without back-dragging the blade (i.e., without smoothing), to create microtopography for reseeding.

In the sterile topsoiling/natural revegetation method, sub-surface soil would be reserved during pipe installation and spread on the surface following construction. Sub-surface soils do not contain a pre-existing weed seed bank, and finishing the construction site with sub-surface soils would therefore help curtail the spread of weeds following construction. Areas finished with sub-surface soils would not be reseeded since conditions for seed germination would be poor. Native plants from surrounding plant communities would naturally colonize the site over time without excessive competition from a pre-existing weed seed bank. The sterile topsoiling and natural revegetation method would be the default method of revegetation in non-farmed disturbed areas unless the underlying landowner specifically requests the conventional revegetation method.

Where conventional revegetation is required or requested, weed-free seed mixes appropriate for the surroundings would be used. For instance, where irrigated lands are revegetated, the seed mix would be a weed-free hay mix (or similar) acceptable to the landowner. Where the disturbed ground is adjacent to natural vegetation and reseeding is requested, the weed-free seed mix would include drought-tolerant and locally ubiquitous native grass such as western wheatgrass. The Project construction drawings would indicate where each revegetation method is to be used, and to specify the seed mix, where appropriate.

2.2.7 – Schedule

Construction in existing ditch alignments would occur during the irrigation off-season, to avoid interrupting irrigation activities of the shareholders. Irrigation off-season varies annually depending on weather patterns, but is typically late September or October through mid-April. Decommissioning of abandoned ditch alignments would not need to avoid irrigation season and could occur during any time of the year. Revegetation activities and weed treatments would occur during seasons when those activities have the best opportunity for success.

Construction would occur incrementally or in a sequenced fashion across the Project Area over a period of approximately two years, mostly during the irrigation off-season. When construction is underway, it would occur during daylight hours (typically 7 am to 4 pm), Monday through Saturday. Weather conditions could cause gaps in activity.

Timing restrictions would apply to certain Project activities and locations, to protect nesting migratory birds and raptors, as explained in the Wildlife Section (Section 3.2.11). The timing restrictions are specified in the Environmental Commitments of this EA (0) and summarized in Table 4. Specific areas with construction timing restrictions, and the nature of those restrictions, would be prominently marked on construction drawings.

Table 4. Project Schedule Timing Restrictions Summary

Location	Activity	Timing Restriction	Reason
All Project Areas	Vegetation grubbing or clearing	Avoid April 1 - July 15	Protect migratory songbirds during their core nesting season
Buffered areas around documented raptor nests	All	Variable, between February 15 - July 31 See species-specific requirements in Section 3.2.11.	Protect nesting raptors during their core nesting season (note: location information is restricted from publicly-available maps but would be displayed on construction drawings)

2.2.8 – Habitat Replacement

In accordance with the Colorado River Basin Salinity Control Act, habitat replacement would be required to maintain riparian and wetland habitat affected as a result of the Proposed Action. This would be accomplished by using excess credits created at a habitat replacement site established for the original Grandview Canal Piping Project (Figure 1) in 2012. The habitat replacement site has been continuously maintained by GCIC with wetland enhancements, habitat plantings, and weed control. GCIC is in the process of implementing an addendum (Terra Firma 2025) to their original habitat replacement site plan as part of ongoing maintenance and adaptive management of their habitat replacement site, and no additional work would be completed in that area under the Proposed Action).

2.2.9 – Permits & Authorizations

Agreements & Authorizations

The following interagency agreements or permits would be required prior to Project implementation:

- Memorandum of Agreement executed between Reclamation and the Colorado SHPO.

- Clean Water Act (CWA) Section 404 Regional General Permit 5 for Ditch Related Activities in the State of Colorado: 30-Day Advance of Construction Submittal Package (to include "(1) the respective agency's documentation for compliance with the Endangered Species Act and National Historic Preservation Act and/or the lead Federal Agency NEPA document containing the same, (2) a project description, (3) project plans, and (4) a location map.").

Construction Permits & Plans
The following construction permits and plans would be required prior to Project implementation:

- Stormwater Management Plan, to be submitted to Colorado Department of Public Health & Environment (CDPHE) by the construction contractor prior to construction disturbance.
- CWA Section 402 Storm Water Discharge Permit compliant with the National Pollutant Discharge Elimination System (NPDES), to be obtained from CDPHE by the construction contractor prior to construction disturbance (regardless of whether dewatering would take place during construction).
- Certification under CDPHE Water Quality Division Construction Dewatering Discharges Permit COG070000 (if any dewatering is to take place during construction).
- Spill Response Plan, to be prepared in advance of construction by the contractor for areas of work where spilled contaminants could flow into water bodies.
- Utility clearances, to be obtained by the construction contractor prior to construction activities from local utilities in the area.
- Any construction, access, or use permits which may be required by the Delta County Planning Department, County Engineering and County Road & Bridge District #3 (North Fork Area).
- If blasting is to be conducted during construction, it must be conducted by an individual with a Type I Explosives Permit from Colorado Department of Labor and Employment Division of Oil and Public Safety – Explosives Program.
- If slash burning is to be conducted, an Open Burn/Slash Pile Permit to be obtained by the construction contractor from CDPHE

Compliance with the following federal laws and Executive Orders (E.O.) are required prior to and during Project implementation (this list is not intended to be all-inclusive):

Natural Resource Protection Laws
- Clean Air Act of 1963 (42 U.S.C. § 7401)
- Endangered Species Act of 1973 as amended (16 U.S.C. 1531-1544, 87 Stat. 884)
- Clean Water Act of 1972 as amended (33 U.S.C. 1251 et seq.)
- Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712)
- Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668- 668c)
- Farmland Protection Policy Act (7 U.S.C. 4201, et seq.)

Cultural Resource Laws
- National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.)
- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-470mm et seq.)
- Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 et seq.)
- American Indian Religious Freedom Act of 1978 (42 U.S.C. Public Law 95-341)

- Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (48 FR 44716)

Paleontological Resource Laws

- Paleontological Resources Preservation Act of 2009 [Section 6301-6312 of the Omnibus Land Management Act of 2009 (Public Law 111-11 123 Stat. 991-1456)]

2.3 - Lining Alternative

Under the Lining Alternative, Reclamation would authorize funding to the Applicant to install a liner in the existing open ditch alignment. The Lining Alternative was not proposed by the Applicant, but is analyzed in this EA because it meets the purpose of and need for the Salinity Control Act. The Lining Alternative would involve approximately 4 miles of open irrigation ditch (the same alignment described in Table 3 under "Ditch sections involved with the Project"). The access routes, staging areas, weed control, schedule, and permits & authorizations would be the same as or substantially similar to those described in Section 2.2.

Construction of the ditch liner would involve the following process. First, any existing riprap or sharp rocks would be removed or buried in the ditch (aka canal) bed and vegetation would be grubbed from the canal banks and either hauled to a local county landfill or mulched or burned at one of the proposed staging areas. Soft, unstable soils in the canal would be excavated and replaced with borrow material obtained onsite within the canal prism or from one of the proposed borrow areas, in order to shape the canal to design dimensions. After the canal is shaped, it would be compacted using vibratory plates mounted to excavators, to specifications verified by a geotechnical engineer. The next step is to place the synthetic liner system on the prepared grade. The first layer would consist of a non-woven geotextile that is intended to protect the impermeable layer (a polyvinyl chloride [PVC] membrane) from damage from any remaining sticks or sharp rocks in the subgrade. The PVC membrane (30 mil) would be placed on top of the non-woven geotextile and seams between PVC panels heat-fused together. A final layer of non-woven geotextile would be placed on the PVC membrane in order to provide a bonding surface for shotcrete. A minimum of 3 inches of fiber-reinforced shotcrete would then be sprayed on top of the liner. After the shotcrete has been applied, the synthetic liner system would be horizontally anchored into the canal banks a minimum of 2 feet, and the edges of the liner fabric buried. Equipment required for the canal lining would include the following: a trackhoe or excavator with buckets, conventional loaders, a skid steer loader, a tamper, a grader, an end dump, haul trucks to transport bedding fill material, a concrete truck, and a pneumatic concrete pump for placing shotcrete. Due to the distance and travel time from local concrete sources, it is likely that the shotcrete would be mixed at one of the proposed staging areas rather than hauled in commercially. On-site shotcrete mixing would be accomplished using a portable batch plant, or a mobile mixer truck. Up to approximately 600 truckloads of shotcrete would be required over the course of the Project. Water for mixing the shotcrete would be obtained locally from an irrigation well (or similar) by agreement with a local landowner and hauled in a water truck to the mixing location. Sand and cement required for shotcrete mixing would be purchased by the Applicant, hauled to the mixing location by a commercial provider, and stockpiled and/or siloed in a staging area. The portable batch plant or mobile mixer truck would require diesel fuel, which would be stored in bulk in on of the proposed staging areas (with appropriate spill containment). Fuel would be hauled and transferred to bulk storage by a licensed commercial

provider. Post-construction cleanup would include smoothing of the access road alongside the canal, smoothing access roads as necessary, trash pickup, and weed control. Shareholder turnout structures would be replaced. The new turnouts would consist of precast concrete structures with control gates and punch-plate screens. A PVC pipe would carry water through the lined canal wall through a flow-measuring device that would discharge to the existing water delivery infrastructure at each turnout.

CHAPTER 3 – AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 – Introduction

This chapter discusses resources that may be affected by the two Action Alternatives and the No Action Alternative. For each resource, the affected area and/or interests are identified, existing conditions described, and impacts are disclosed under the No Action, Project (Piping Alternative, the Preferred Alternative), and Lining Alternative. This section concludes with a summary of impacts.

3.2 – Affected Environment & Environmental Consequences

3.2.1 – Water Rights & Use

The geographic scope of the analysis is the Project Area shown on Figure 1, which covers the area of potential effect for this resource by construction of the Project.

The Applicant is a privately owned, non-profit, mutually-funded irrigation company incorporated and operating in Delta County since 1922, with several absolute decreed water rights totaling 38.835 cubic feet per second (cfs), most of which were appropriated between in the late 1800s. The total average rate of annual diversions of irrigation water through Grandview Canal (aka Grandview Ditch) including direct diversion from the Smith Fork River and water called from Crawford Reservoir) is approximately 14,211 acre-feet. The irrigation season is approximately 183 days long, and approximately 4,480 acres of hay crops and pasture on Grandview and Scenic mesas are irrigated with the system. The Grandview Canal originates at a head gate on the Smith Fork River at a location just southeast of the Town of Crawford, and provides shareholders with irrigation water and winter stock water across Grandview Mesa. Late season water called from Crawford Reservoir is also delivered in Grandview Canal. A portion of the irrigation water carried by the Grandview Canal is lost during conveyance in the open, earthen canal due to evaporation and seepage, resulting in less than the full amount of decreed water being delivered to the shareholders. Irrigation is primarily accomplished by sprinkler methods, and to a lesser extent with flood irrigation from ditch laterals and gated pipe. The canal also carries winter stock water (5.2 cfs on average) during the non-irrigation season for an annual average of 182 days; however, delivery of this water is only possible during times when the water is not frozen.

There are other privately-owned adjudicated irrigation water rights that are diverted from streams in the general Project Area or that possess delivery infrastructure in the Project Area. The local area distribution of water is overseen by a Colorado Division of Water Resources Water Commissioner, an official who enforces the priority system of water rights and water laws of the State of Colorado.

No Action Alternative: The No Action Alternative would have no effect on water rights and uses within the Project Area. The canal would continue to function as it has in the past.

Project (Piping Alternative): Under the Piping Alternative, the Applicant would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by improving the system. Winter stock water would be also available during freezing temperatures in the non-irrigation season to shareholders. The new turnout structures would include adequate controls and measuring devices which would further improve water management in the system. By eliminating ditch seepage and evaporative loss from the open ditches, the Project would result in more water (i.e. the saved seepage/evaporation water) delivered per share to irrigated crops—in other words, the full decreed amount of water would be delivered. While not currently planned, the availability of pressurized water to the shareholders would also enable future installation of high-efficiency on-farm sprinklers.

Winter stock water delivery to shareholders would be temporarily affected during construction of the Project. Winter stock water would be provided to affected shareholders (west of 3750 Road along the Lower Section) during the Project construction using water from the Crawford Clipper Ditch system and by agreement with the Crawford Clipper Ditch Company, or by other alternative arrangements. Alternative arrangements for winter stock water are common due to the inability of the ditch system to deliver the stock water when temperatures are low enough that the stock water freezes in the open ditch. Due to the availability of temporary alternative stock water arrangements, the Project's effects on winter stock water would not rise to the level of significant.

Irrigation water rights owned by others in the Project Area would not be impacted by the Project. The Project has been designed such that it would not physically interfere with the diversion, delivery, or use of water rights owned by other entities.

There would be no significant adverse impacts to water rights and use as a result of the Project, because the Project would produce water delivery efficiencies beneficial to the Applicant's shareholders.

Lining Alternative. The impacts to water rights from the Lining Alternative would not differ from the Piping Alternative, as described above, with the following exceptions: Unlike the Piping Alternative, the Lining Alternative would not eliminate evaporative loss from the ditch system, therefore this alternative would produce less delivery efficiency than the Piping Alternative. Unlike the Piping Alternative, winter stock water would not be available to shareholders during freezing temperatures following implementation of the Lining Alternative.

There would be no significant adverse impacts to water rights and use from implementing the Lining Alternative, because the Lining Alternative would produce irrigation water delivery efficiencies beneficial to the Applicant's shareholders, and winter stock water delivery would remain unchanged from pre-construction conditions.

3.2.2 – Water Quality

The geographic scope of the analysis for water quality is the lower Gunnison River and the greater Colorado River Basin, because irrigation practices in the region and in the Project Area are contributing to elevated downstream salinity levels and create an adverse effect on the water quality of the Gunnison River and in the greater Colorado River Basin. In addition, selenium occurs in the region's soils in soluble forms such as selenate, which leaches into waterways by runoff and irrigation practices, and is toxic to living organisms when present beyond trace amounts. There is a regional effort to reduce salinity in the lower Gunnison and Colorado River watersheds, resulting in improved water quality at a basinwide scale (see Section 1.4). There are also ongoing regional efforts to reduce selenium loading in the lower Gunnison and Colorado river basins (SMPW 2011, Reclamation 2020a).

In 2021, the U.S. Army Corps of Engineers (Corps) issued Regional General Permit 5 (RGP-5) for Ditch Related Activities in the State of Colorado. RGP-5 "authorizes discharges into ditches that have minimal individual or cumulative adverse effects on the aquatic environment," and covers construction, realignment, and relocation of existing ditches and conversion of such ditches into pipes or lined conveyances.

No Action Alternative: Under the No Action Alternative, the estimated 4,421 tons of salt annually, described above in Section 1.4.1 (Reclamation 2020a), contributed to the Colorado River Basin from the ditch laterals involved with the Project would continue. Current selenium loading levels would continue.

Project (Piping Alternative): In the long term, the Project would eliminate seepage from the involved ditch sections, reducing salt loading to the Colorado River Basin at an estimated rate of 4,421 tons per year, as described above in Section 1.4.1 (Reclamation 2020a). The Project would also reduce selenium loading into the Gunnison River basin, although the amount of selenium loading reduction that would result from the Project has not been quantified. Improved water quality would benefit downstream aquatic species by reducing salt and selenium loading in the Gunnison River, an important Colorado River Basin tributary. Maintenance or improvement of water quality in the Gunnison River is of high importance to users and to wildlife. The beneficial effects of improved water quality resulting from the Project and other similar projects in the Upper Colorado River region would contribute to the regional efforts underway to reduce salinity and selenium in the lower Gunnison and Colorado River watersheds (see Section 1.4).

The Project would affect waters under the jurisdiction of Clean Water Act (CWA) Section 404 (the ditches themselves) and disturb irrigation-induced wetland and riparian vegetation associated with the ditches. As a "ditch related activity in the State of Colorado" that is "conducted under a binding agreement with the USBR" (Reclamation), the Project would be authorized under RGP-5, by submitting documentation required by RGP-5 to the Army Corps at least 30 days in advance of construction. The required documentation for the Project, as a salinity control project per a binding agreement with Reclamation, is as follows: "(1) the respective agency's documentation for compliance with the Endangered Species Act and National Historic Preservation Act and/or the lead Federal Agency NEPA document containing the same, (2) a project description, (3) project plans, and (4) a location map." RGP 5 includes terms and conditions with which project proponents must comply to ensure their proposed projects will have minimal direct or indirect adverse effects on the aquatic environment. The USACE has the authority to determine if an activity complies with the terms and conditions of an RGP. By authorizing use of RGP 5 for the proposed action, the

USACE has determined that the Project has minimal direct or indirect adverse effects on the aquatic environment. Therefore, there would be no significant impact to waters under the jurisdiction of CWA Section 404.

BMPs would be implemented during construction to minimize short-term erosion and further protect water quality. Project construction would take place in the ditch prism when water is not present. Pipeline crossings of any drainages would be conducted in accordance with CDPHE's Water Quality Control Division Dewatering General Permit to protect water quality in streams. The construction contractor would be required to operate under a Stormwater Management Plan, a Stormwater Discharge Permit, a Spill Response Plan, and a Dewatering Permit (when dewatering is conducted) (see Section 2.2.9 and 0).

There would be no significant adverse impacts to water quality as a result of the Project, because required permits and construction BMPs would be implemented, and because the overall result of the Project would be to improve water quality (reduce salinity) in the Colorado River Basin.

Lining Alternative. The impacts to water quality from the Lining Alternative would not differ from the Piping Alternative, as described above.

There would be no significant short- or long-term adverse impacts to water quality from the Lining Alternative, because required permits and construction BMPs would be implemented, and because the overall result would be to improve water quality (reduce salinity) in the Colorado River Basin.

3.2.3 – Hydrology

Hydrologic resources in the Project Area include surface water and groundwater. The geographic scope of the analysis for surface water is the area of affected environment and general geographic vicinity of connected surface waters related to the ditch segments associated with the Project. These include Grandview Mesa and a part of the lower Smith Fork drainage extending from the initiation point of the Project to a point approximately 2 miles downstream where the existing Grandview Canal contours out of the Smith Fork drainage, and is a total of 5,202 acres. The geographic scope of the analysis for groundwater are the two USGS hydrologic units that intersect the Project Area, where U.S. Geological Survey (USGS) data are available for estimating groundwater recharge.

Surface waters in the geographic analysis area consist of natural waterbodies (streams and natural wetlands) and constructed waterbodies (such as irrigation ditches, reservoirs, stockwater ponds, and anthropogenically-induced wetlands). The geographic analysis area has approximately 33.9 acres of open surface water, consisting of at least 20.3 acres of natural streams and irrigation ditches and 13.6 acres of reservoirs and stockwater ponds (Reclamation 2025a). The ditch sections involved with the Project contribute approximately 3.4 acres of seasonal open water surface area, representing approximately 10 percent of the open water surface area of the geographic analysis area.

According to the National Wetland Inventory, about 287 acres of areas with wetland or riparian hydrology are associated with open surface waters in the geographic area of analysis (Reclamation 2025a). Wetland or riparian hydrology is present where soils are inundated with surface water for a significant part of the growing season, such that riparian and wetland plant communities are supported (see Section 3.2.9). The ditch segments involved with the Project contribute about 1.7 acres of wetland and/or riparian hydrology (ERO 2023), or about 0.6 percent of the total area of wetland and/or riparian hydrology in the geographic analysis area.

There is a regional effort to reduce salinity in the lower Gunnison and Colorado River watersheds, resulting in an ongoing area-wide conversion of areas with artificially-induced riparian and wetland hydrology to uplands. Consistent with the Colorado River Basin Salinity Control Act, habitat replacement projects compensate for the loss of riparian and wetland hydrology values.

Groundwater recharge or deep percolation is the hydrologic process in which surface water infiltrates downward through an unsaturated zone into a subsurface water table or aquifer. Rates of recharge vary regionally, and depend on several major factors, including precipitation (available water), soil and geologic characteristics (substrate permeability), and evapotranspiration of water by plants (which reduces water available for deep percolation). While the USGS has conducted studies on salinity loading in the upper Colorado River basin (see Section 1.4.1), comprehensive studies to determine the characteristics of groundwater and groundwater movement have not been conducted in the Project Area. However, USGS has developed a raster dataset to estimate average annual natural groundwater recharge in the conterminous United States (USGS 2003). The dataset was created by multiplying a grid of base-flow index (BFI) values by a grid of mean annual runoff values. BFI is a measure of the proportion of river runoff that derives from stored sources; the more permeable the rock, superficial deposits and soils in a catchment, the higher the baseflow and the more sustained the river's flow during periods of dry weather. Thus, the BFI is an effective means of indexing catchment geology (UKCEH 2023). Annual runoff is that part of precipitation which appears as a flow of water in surface streams. When considered together, the BFI and annual runoff data that the USGS receives is sufficient for the USGS to produce a dataset containing a reasonable estimate of natural groundwater recharge.

The Project Area falls within the boundaries of two HUC-12 sub-watersheds (HUCs 140200021206/Lower Smith Fork-Gunnison and 140200040508/Alum Gulch-North Fork Gunnison). These two sub-watersheds contain a total of 66.422 acres, and constitute the geographic scope of this analysis, as they are the sub-watersheds with the potential to be impacted by the Project. Watersheds are delineated by the USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions (2-digit), 222 subregions (4-digit), 370 basins (6-digit), 2,270 subbasins (8-digit), ~20,000 watersheds (10-digit), and ~100,000 sub-watersheds (12-digit), or hydrologic units. A hierarchical hydrologic unit code (HUC) consisting of 2 additional digits for each level in the hydrologic unit system is used to identify any hydrologic area. Each hydrologic unit is assigned a 2-digit to 12-digit number that uniquely identifies each of the six levels of classification within six two-digit fields. HUC-12 is the most granular level of sub-watershed classified in the Project Area. The USGS estimates the average annual groundwater recharge rate in the two HUC sub-watersheds in the Project Area to be 110.4 mm/year (USGS 2003).

There is one domestic well (permitted by the State of Colorado to draw on natural sources of groundwater) within 500 feet of the involved ditch sections (Reclamation 2025a), and several other wells in the general areas of Grandview Mesa, the lower Smith Fork drainage, and nearby Crawford Mesa. Irrigation water which has seeped from the canal prism is not a natural source of groundwater. Pursuant to Colorado Revised Statute (C.R.S.) § 37-86-103, "…a ditch right-of-way includes the right to construct, operate, clean, maintain, repair, and replace the ditch and appurtenant structures, to improve the efficiency of the ditch, including by lining or piping the ditch…".

No Action Alternative: Under the No Action Alternative, nothing would occur which would alter the surface hydrology of Grandview Mesa and the affected segment of the lower Smith Fork drainage. Nothing would occur which would alter the BFI or annual runoff of the HUC sub-watershed areas, so there would be no change in the estimated groundwater recharge in the area. Nothing would occur which would affect natural groundwater or domestic well permits. Because the surface hydrology and the estimated amount of groundwater recharge into the two HUC sub-watershed areas would not change, and because there would be no change to the natural groundwater in the Project Area, there would be no significant impacts to surface water, groundwater recharge, or domestic well permits associated with the No Action Alternative.

Project (Piping Alternative): Approximately 10 percent of the existing surface water in the area of geographic analysis (Grandview Mesa and a segment of the lower Smith Fork drainage) would be piped, reducing evaporative loss of this water during transport. Once the water is distributed on the ground surface for irrigation, some of the water would evaporate, some of the water would be taken up by crops, and some water would enter the soil.

The water that currently flows in the ditch sections involved with the Project creates wetland and riparian hydrologic conditions that support a narrow fringe of wetland and riparian vegetation comprising about 0.6 percent of such areas in the geographic analysis area. Piping these ditches would change the surface hydrology along the fringes of these ditches from wetland and riparian hydrology to upland (dry) conditions, or irrigated farmland conditions, depending on the location. The "waterfall area," an approximately 200-foot-long section of the existing canal that transitions from Crawford Mesa to Grandview Mesa, would be abandoned as an open canal, and would still receive some hydrologic input to sustain the cottonwood trees there (as described in Section 2.2). As stipulated by the Salinity Control Act, habitat replacement (Sections 2.2.8 and 3.2.9) must occur for the Project. An existing habitat replacement site developed by GVIC for a previous project generated excess habitat credits above that which was required to replace habitat lost with the previous GIVC project. These excess habitat credits would be used to offset habitat losses associated with the current Project; therefore, there would be no net loss of fish and wildlife values (in this case, riparian and wetland vegetation, and by association, riparian and wetland hydrology) due to implementation of the Project. The timeline for which the habitat replacement project would be required to be maintained would restart with the current Project to ensure that habitat is replaced for the life of the current Project (50 years).

Because there would be no net loss of riparian and wetland hydrology values associated with implementation of the Project, the effects of the loss of riparian/wetland hydrology adjacent to the ditches involved with the Project would be insignificant. The Piping Alternative would contribute to the larger-scale loss of artificially sustained areas of riparian and wetland hydrology collectively resulting from piping projects around the region. Consistent with the Colorado River Basin Salinity Control Act, habitat replacement projects compensate for the loss of riparian and wetland habitat hydrology values.

There would be no change in the inputs utilized by USGS to estimate average annual groundwater recharge (BFI values or mean annual runoff values) as a result of the Project. The same water which currently precipitates into the two HUC-12 sub-watershed areas would continue to precipitate within the area after Project implementation. The portion of the seepage which currently enters the groundwater through the canal prism would be redistributed within the general Project Area. While the specific area where the canal leakage would seep into the groundwater would be redistributed, it

would be redistributed within the irrigated acres related to the canals associated with the Project, and therefore it would remain in the general Project Area within the two HUC-12 sub-watershed area. The redistribution would not alter the BFI or annual runoff of the area, so there would be no change in the estimated groundwater recharge in the area.

Ditch companies have the right to improve the efficiency of their ditches pursuant to C.R.S. § 37-86-103. Consequently, domestic water well owners cannot rely on canal seepage water to recharge domestic water wells. The Project would not alter natural sources of groundwater. Therefore, there would be no significant adverse effect on domestic well permits, which authorize wells to draw on natural sources of groundwater.

Because the estimated amount of groundwater recharge into the two HUC-12 sub-watershed area would not change, there would be no significant impact to groundwater recharge as a result of the Project. Because the wetland and riparian surface hydrology related to the piping component of the Project would be conserved at the existing habitat replacement site, there would be no significant impact to surface hydrology as a result of the Project. Because the Project would not alter natural sources of groundwater, there would be no significant adverse effect on domestic well permits near the Project Area.

Lining Alternative. The impacts to hydrology from the Lining Alternative would not differ from the Piping Alternative, as described above, with the following exception: Under the Lining Alternative, the same area of surface water that would be piped under the Piping Alternative would instead remain open water. Following construction, evaporative loss from the open water of the lined ditches would continue at the pre-construction rate, and because of the lining, the contribution to groundwater recharge would be similar to that of the Piping Alternative.

Because the estimated amount of groundwater recharge into the two HUC-12 sub-watershed areas would not change, there would be no significant impact to groundwater recharge as a result of the Lining Alternative. Because the wetland and riparian surface hydrology related to ditch lining would be maintained at the existing habitat replacement site, there would be no significant impact to surface hydrology from the Lining Alternative. Because the Lining Alternative would not alter natural sources of groundwater, there would be no significant adverse effect on domestic well permits near the Project Area.

3.2.4 – Air Quality

The geographic area of analysis is the airshed of the spatial extents of the Project Area (Figure 1), where people and the environment could potentially be affected by pollution emitted during construction activities. The Clean Air Act regulates emissions of air pollutants from stationary and mobile sources of pollution, and enforcement is at the state level under the Code of Colorado Regulations (CCR) at 5 CCR 1001-5. If the levels of a pollutant in an area are higher than National Ambient Air Quality Standards (NAAQS), the airshed is designated as a "nonattainment area." Areas that meet the NAAQS for criteria pollutants are designated as "attainment areas." The level of analysis for NAAQS airsheds in Colorado is by county. Delta County is in attainment for all criteria (monitored) pollutants (EPA 2025). Impacts to air quality occur from a variety of stationary and mobile pollution sources throughout Delta County. Minor impacts to air quality from routine maintenance of the ditch system involved with the Project include dust and exhaust from occasional travel in light vehicles along the Project corridor, and occasional ditch cleaning and maintenance

activities involving heavy equipment and occasional ditch burning. Together, these impacts have not historically risen to the level of non-attainment in the county.

No Action Alternative: There would be no effect on air quality in the Project Area from the No Action Alternative. The ditches would continue to operate in their current condition and dust, smoke, and exhaust would occasionally be generated by vehicles and equipment conducting routine maintenance and operation.

Project (Piping Alternative): Exhaust and dust from construction activities would have a minor, short-term effect on the air quality in the immediate Project Area. There would be no impact to air quality from blasting, because blasting would be conducted inside the pipeline trench and below grade. There would be no long-term significant impacts to air quality from the Project, as air quality would return to its baseline level and Delta County would remain in attainment for all criteria pollutants. BMPs would be implemented to further minimize dust in the Project Area. Following construction, impacts to air quality from routine maintenance and operation activities along the pipeline corridor would be insignificant, as they would be similar or less in magnitude to those currently occurring for the existing ditch.

There would be no significant adverse impacts to air quality as a result of the Project, because construction activities are short-term and localized, the contractors completing the work would be required to follow State of Colorado air quality regulations established to protect the airshed from significant impacts (5 CCR 1001-5), and Delta County would remain in attainment for all criteria air pollutants.

Lining Alternative. The impacts to air quality from the Lining Alternative would not differ from the Piping Alternative, as described above.

There would be no significant adverse impacts to air quality as a result of the Lining Alternative, because construction activities are short-term and localized, and Delta County would remain in attainment for all criteria air pollutants.

3.2.5 – Access, Transportation, & Safety

The Project Area (Figure 1) is the geographical scope of the access, transportation, and safety analysis, where construction has the potential to affect this resource. The Applicant asserts that it currently operates the ditch within statutory rights-of-way in the Project Area to which it claims to be entitled under Colorado law, which authorizes a right-of-way that "includes the right to construct, operate, clean, maintain, repair, and replace the ditch and appurtenant structures, to improve the efficiency of the ditch, including by lining or piping the ditch, and to enter onto the burdened property for such purposes." Colorado law further states that the holder of the right-of-way has access "for all reasonable and necessary purposes related to the ditch" (C.R.S. § 37-86-102 and 103).

Private and public roads generally provide routes and mobility for residents traveling in and out of the Project Area to access public services, including emergency services, education, or social services. The main public transportation routes that intersect the Project are Fruitland Mesa Road and 3750 Road. Other roads that would be used to reach the Project Area include Grandview Mesa Road, Stearman Lane, Indian Head Lane, French Field Way, Krai Lane, and Cattle Drive. The previously analyzed staging areas are accessed from Spurlin Mesa Road, a BLM route that already serves as a regular Crawford Clipper Ditch Company operating and maintenance route, and

Highway 92. Highway 92 is the main regional route between the towns of Crawford and Hotchkiss and receives moderate to heavy traffic depending on time of day and time of year.

Various overhead or buried utilities are present near some elements of the Project. Various overhead or buried utilities are present near some Project Areas. The utility entities include the Crawford Mesa Water Association (domestic water), Delta Montrose Electric Association (electricity and fiber optic internet), TDS Telecom, and Black Hills Energy (natural gas).

Safety risks are associated with sources of open, moving water. The Project Area is served by the Delta County Sheriff, the Delta County Ambulance District, and the Delta County Fire Protection District 5.

No Action Alternative: There would be no effect to public safety, public services, utility services, transportation, or public access from the No Action Alternative. The ditches would continue to operate in their current condition and the baseline status of access, public safety, transportation routes, and utilities in the vicinity would remain unchanged.

Project (Piping Alternative): All construction activities related to the Project would take place entirely in the approved Project ROWs. The disturbance footprint would not exceed 60 feet wide, but is expected to average approximately 40 feet wide. In all cases, effort would be taken to create the smallest disturbance footprint, including a footprint that remains inside the historical area of surface disturbance if possible, that allows for safe completion of the planned work. However, for safety purposes and to achieve engineering requirements in the easement, the Applicant may, in accordance with C.R.S. §37-86-103, "enter onto the burdened property for such purposes, with access to the ditch and ditch banks, as the exigencies then existing may require, for all reasonable and necessary purposes related to the ditch." No work would occur beyond the right-of-way provided by statute.

There would be no need for construction of new access roads outside of the construction areas. There are no known bridges with weight restrictions that would be used by construction vehicles. Some short-term disruption of traffic at the involved public roads is expected to occur when equipment and materials are hauled into the Project location, and when pipe crossings are constructed across public roads. Appropriate traffic signage would be used to notify drivers of active construction ingress/egress. The construction contractor and/or the Applicant would coordinate with the county and sheriff department if traffic or access would be delayed or substantially re-routed. Due to the temporary nature of the traffic disruptions and the traffic management provided by coordination with the county and sheriff department, the impacts on traffic would not rise to the level of significant.

All utilities would be located and marked and, if necessary, relocated or raised, prior to any construction activities in the Project Area. If relocation or raising of utilities is necessary during construction, a brief interruption of utility services would occur. Due to the temporary nature of the interruptions, the impacts on utilities would not rise to the level of significant.

Under the Proposed Action, the safety risks associated with open, moving water associated with the ditch would no longer occur within the Project Area. The Delta County Sheriff, Delta County Ambulance District, and the Delta Fire Protection District 5 would continue to cover the Project Area for emergency response, and would not be hindered in their response. Any required

construction, access, or use permits would be obtained from the Delta County Planning Department, County Engineering and County Road & Bridge District #3.

Active construction areas would be adequately marked and barricaded to prevent public access. If blasting is necessary during construction, it would be conducted by a blasting contractor under a permit from the Colorado Department of Labor and Employment Division of Oil and Public Safety – Explosives Program. Blasting would be in accordance with State regulations, localized and below-grade, and any potential impacts would not reach beyond the immediate construction area. Potential impacts would not reach beyond the immediate construction area because in accordance with State permit requirements, each blast must be designed and the charge size calculated to ensure that the energy from the blast is directed into breaking up the intended material, rather than being dissipated outward. Trenches left open overnight would be limited to the extent practicable. In the case that a trench is left open overnight, it would be covered to adequately prevent entrapment of people, livestock, or wildlife. Therefore, there would be no significant effect on public safety.

No significant impacts to general access to transportation routes, access to public services or utilities, transportation, and public safety would occur as a result of the Project, because traffic and access disruptions would be short-term and coordinated with authorities, and public safety measures would be implemented in construction areas.

Lining Alternative. The impacts to access, transportation, and safety from the Lining Alternative would not differ from the Piping Alternative, as described above, with the following exception: under the Lining Alternative, the safety risks associated with sources of open, moving water would remain in the Project Area.

No significant impacts to general access to transportation routes, access to public services or utilities, transportation, and public safety would occur as a result of the Project, because traffic and access disruptions would be short-term and coordinated with authorities, public safety measures would be implemented in construction areas. Safety risks associated with open water would remain unchanged from pre-construction conditions.

3.2.6 – Property Values

There are two types of property valuation considered in this analysis: one type of valuation is for tax assessment purposes, the other type is market value. Property values in the Project Area are assessed periodically by the Delta County Assessor for the purpose of calculating property taxes. Valuation for tax assessments include property inspections and interviews, consideration of market value when a property sells, consideration of residential and agricultural improvements (location, size, age, construction, and quality), and consideration of agricultural productivity, with the goal of systematically ensuring fair and equitable property assessment valuations (Colorado Division of Property Taxation 2025). Irrigated agricultural land typically has a higher assessed value and market value per acre than non-irrigated agricultural land in the same economic area; however, the assessed value should not be considered a proxy for market value. The market value of a property is the probable price a property would bring on the open market under normal market conditions, given a willing buyer and a willing seller, both acting prudently and knowledgably. The market value of the property may shift positively or negatively due to the personal preferences of potential buyers. Some people may feel the networks of irrigation ditches in the region that support scattered mature cottonwood trees contribute positively to market value because the trees provide aesthetic interest and cooling shade to the landscape, while others may feel open ditches can be a liability, and modern

irrigation infrastructure (such as piping), which increases efficiency in delivery of agricultural water shares, contributes positively to a property's market value. Positive effects to market value generally stem from enhanced crop or pasture yields (which would also increase the assessed property value for taxation purposes) due to the reduction in water conveyance losses, the more reliable water source, and water quality benefits (Hrozencik et al. 2022, Nicholls & Crompton 2018). Negative effects to market value generally stem from the loss of aesthetic water features (Hubbell 2025; Gibbons et al. 2017; Nicholls & Crompton 2017). Irrigation ditches are not natural waterways, and are subject to cleaning, vegetation clearing, and other maintenance activities which may affect their aesthetic characteristics. Buyers of properties traversed by open irrigation ditches typically receive a seller's disclosure regarding access, restrictions, and the potential for disruptive maintenance and construction activities associated with irrigation ditches.

No Action Alternative: There would be no property assessment value or market value effects from the No Action Alternative. The ditch would continue to operate as an open, unlined ditch in its current condition. The baseline status of scattered cottonwoods along the ditch would remain the same, and the ditch would continue to be subject to potential ditch maintenance activities in the future, including removal of cottonwoods.

Project (Piping Alternative): The Project would result in the loss of certain large cottonwood trees in the construction corridor and the removal of a seasonal flowing open water source on some properties in the Project Area. Changes to subjective aesthetic interest (Section 3.2.8) and cooling shade from cottonwoods (Section 3.2.15) would occur. The application of Grandview Canal water to farmlands, whether via open ditches or piped ditches, produces profitable crops for landowners, while at the same time providing green open space that contributes to the scenic pastoral views enjoyed by the residents around the area.

The impact to value for property taxation purposes depends on the classification of the property. For example, the majority of properties involved in the Project Area are classified as agricultural land in the Assessor's records. Agricultural land is valued solely through the application of the income approach which uses specific income and expense allowances and a statutory capitalization rate to yield a value that is lower than market value. Agricultural land valuation does not take into consideration the presence of piped vs. non-piped ditches on the property and therefore the value would not be changed based on the status of a ditch or canal. Any impact to market value from piping a once-open ditch on a non-agricultural property would need to be quantified for tax valuation using market sales data and would be reviewed on an individual property basis (George 2025).

From a local established realtor's perspective, the loss of the aesthetic of live water on a property resulting from ditch piping could constitute a loss in its open market value of 10 to 30 percent (Hubbell 2025). No significant impacts to open market values of properties would occur as a result of the Project because impacts would be speculative, meaning they would depend on the desire of potential buyers at the individual level and the property-specific level. Some property buyers would find piped ditches advantageous and consider them an added value, whereas other property buyers would find piped ditches a detriment or be indifferent to piped ditches. Because the impact on market value would essentially be speculative and property- and buyer-specific rather than a guaranteed negative impact on properties in the Project Area as a whole, impacts to market value of local properties would not rise to the level of significant.

Lining Alternative. The impacts to market or assessed property values from the Lining Alternative would not differ from the Piping Alternative, as described above.

3.2.7 - Noise

The geographic scope of analysis for noise is the Project Area (Figure 1), where people and wildlife could potentially be affected by Project construction noise. A moderate baseline level of noise occurs in the Project Area, associated with farming and ranching activities, regular traffic on public roads, county and state highway maintenance activities, and the Applicant's operation and routine maintenance of the ditch system. Operation and maintenance involve the use of light-duty trucks, all-terrain vehicles and, occasionally, heavy equipment. Farming and ranching activities involving the use of farming equipment, light vehicles, all-terrain vehicles, and occasionally heavy equipment are ongoing in the immediate area and surroundings of the Project.

No Action Alternative: There would be no effect from the No Action Alternative, because there would be no construction noise related to ditch piping or ditch lining in the Project Area. Noise related to ditch operation and maintenance activities would continue as it has in the past.

Project (Piping Alternative): Project construction activities would generate a temporary source of noise audible to residents near the piping component of the Project. Sources of noise would include heavy equipment moving earth or crushing rock, trucks hauling pipe and other materials, and heavy equipment grubbing vegetation. As explained in Section 2.2.1, blasting may also be required to help prepare the pipe trench if bedrock is encountered. Blasting would occur inside the trench and below grade. The noise associated with such blasting would resemble a muffled "pop" from a firearm. These disturbances would occur during daylight hours (typically 7 am to 4 pm), Monday through Saturday, on a sequenced basis along the ditch section involved with the Project.

No significant impacts to noise would occur as a result of the Project, because noise associated with construction of the Project would be short-term and would not raise the noise level of the area above the moderate noise baseline; therefore, the short-term increase in noise would not be significant.

Lining Alternative. The impacts to noise from the Lining Alternative would not differ from the Piping Alternative, as described above.

No significant impacts to noise would occur as a result of the Lining Alternative, because noise associated with construction would be short-term and would not raise the noise level of the area above the moderate noise baseline; therefore, the short-term increase in noise would not be significant.

3.2.8 – Visual Resources

The geographic scope of analysis is the south part of Crawford Mesa, the south part of Grandview Mesa, and part of the Smith Fork canyon. These areas encompass the general area where the Project is located, and the local viewshed of residents around the Project Area. These areas possess pastoral beauty, with a pleasing array of colors and textures across the relatively open landscape—a mosaic of irrigated agricultural fields, rural residential areas, natural shrublands, woodlands, and rocky slopes, scattered cottonwoods around residences and other developed areas, and natural wooded riparian

corridors—against a backdrop of near and distant foothills and mountains. The ditch sections that traverse the area are linear features, often bermed and with an attendant access road and soil spoil piles remaining alongside or on the bermed area (ditch prism). The ditch sections support bands of shrub willows and occasional mature cottonwood trees which are visible on the relatively open and gently-rolling landscape or canyon-side landscape. Some residents in the area enjoy viewing wildlife associated with irrigation ditches and consider wildlife a part of the visual aesthetic of the ditches.

A baseline level of visual disturbance occurs in the Project Area, associated with local ranching and farming, local construction projects, and the Applicant's operation and routine maintenance of the ditch system. These activities can involve vehicles, machinery, earth moving, field and ditch burning, and can generate dust and smoke.

No Action Alternative: There would be no visual impacts from the No Action Alternative. The baseline level of visual disturbance in the Project Area associated with residential and farmstead developments, local ranching and farming activities, local construction projects, and the Applicant's operation and routine maintenance of the ditch sections would continue.

Project (Piping Alternative): Temporary impacts related to visual disturbance during and after construction would result from the Project. Machinery would be operating on the open landscape and highly visible from public roads in certain locations on a spatially incremental basis mostly during winter months during construction, and would be utilized sporadically for future maintenance of the pipeline. Following construction in the pipeline and abandoned ditch reaches, the disturbance footprint would be a linear area of bare ground, similar in appearance to its current condition. Within a few growing seasons, revegetation would help the disturbed ground blend with the surroundings. The same wildlife would continue to be in the general vicinity, but may not frequent the precise properties or locations they currently do along the canal as often once piping is complete. These impacts would not rise to the level of significant.

While an estimated 0.52 acre of scattered cottonwoods would be in the construction footprint (ERO 2023), the overall long-term level of change to the visual characteristics of the landscape in and around the Project Area following construction would be minor. The scenic views around the Project Area of the mosaic of irrigated agricultural fields, rural residential areas, natural shrublands and badlands, scattered cottonwoods around residences and other developed areas, and natural wooded riparian corridors—against a backdrop of near and distant foothills and mountains, although slightly different following the Project, would remain intact overall.

No significant impacts to visual resources would occur as a result of the Project, because construction impacts would be temporary and the visual characteristics of the landscape in and around the Project Area during and following construction would be minor and not out of character with the surrounding landforms or with the rural and the open agricultural character of the vicinity. The same wildlife would continue to inhabit the general vicinity as a visual aesthetic, though not in the precise locations or patterns prior to completion of the Project.

Lining Alternative. The impacts to visual resources from the Lining Alternative would not differ from the Piping Alternative, as described above, with the following exception: the visual scar left by the Lining Alternative would include the shotcrete-lined ditch sections rather than the bare and eventually revegetated ground that would result from the Piping Alternative.

No significant impacts to visual resources would occur from implementation of the Lining Alternative, because construction impacts would be temporary and the visual characteristics of the landscape in and around the Project Area during and following construction would be minor and not out of character with the surrounding landforms or with the rural and the open agricultural character of the vicinity.

3.2.9 – Vegetation

The geographic scope of analysis for vegetation is an approximately 5,202-acre area encompassing the general Grandview Mesa area (approximately 4,942 acres) and a portion of the lower Smith Fork drainage (approximately 260 acres). The geographic scope of analysis for vegetation is the context within which physical disturbance or changes to vegetation would take place because of Project construction. Reclamation performed a spatial analysis in GIS (Reclamation 2025a), using publicly-available landcover and irrigated land datasets, to estimate that the geographic area of analysis are a mix of farmlands (approximately 3,315 acres of irrigated hayfields and grass pastures), developed farmstead areas and roads (a total of about 64 acres), natural uplands (about 1,536 acres in mixed saltbush (*Atriplex* spp.), sagebrush (*Artemisia* spp.), or pinyon (*Pinus edulis*)-juniper (*Juniperus osteosperma*) woodlands), and riparian and wetland areas (approximately 287 acres).

The maximum construction footprint of the Project Area contains approximately 15 acres of farmlands and 30 acres of uplands (Reclamation 2025a), as well as approximately 1.7 acres of ditch-bank wetlands and riparian areas (ERO 2023). The ditch banks in the construction footprint support intermittent narrow corridors of irrigation-induced riparian and wetland vegetation, including stands of coyote willow (*Salix exigua*), sedges (*Carex* and *Eliocharis* spp.), and rushes (*Juncus* spp.), occasional cottonwoods, and scattered non-native trees including Russian olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarix* sp.) (ERO 2023). Within this area, cottonwood trees contribute an estimated 0.52 acre of riparian vegetation cover along the ditch sections involved with the Project (ERO 2023). The proposed staging and borrow areas for the Project are on a total of 39.5 acres (Table 3) of farmed or previously disturbed ground with upland vegetation.

Vegetation along the ditch sections involved with the Project is disturbed by routine maintenance, which includes periodic mechanical clearing with heavy equipment and occasional burning or application of herbicides.

There is a regional effort to reduce salinity in the lower Gunnison and Colorado River watersheds, resulting in an ongoing area-wide conversion of artificially-created riparian and wetland habitat to uplands. Consistent with the Colorado River Basin Salinity Control Act, habitat replacement projects compensate for the loss of riparian and wetland habitat values.

No Action Alternative: There would be no effect on existing vegetation (or the passive use of ecosystems, including stewardship, existence values, and bequest values) from the No Action Alternative. The Applicant would continue to occasionally manage vegetation along the ditch, which includes periodic mechanical clearing with heavy equipment, burning, or application of herbicides.

Project (Piping Alternative): The construction of the Project would directly disturb a maximum footprint of approximately 37.7 acres—including approximately 30 acres of upland vegetation (Reclamation 2025a), about 15 acres of farmland (Reclamation 2025a), and approximately 1.7 acres of ditch bank wetland and riparian vegetation (ERO 2023). The impact would be evident in the Project Area as a linear disturbance absent of vegetation for a period of one growing season in

irrigated agricultural areas to several years in natural areas (Section 3.2.8). The impacted upland native vegetation and agricultural types are common and abundant in the surrounding areas. Approximately 20 juniper trees located within the construction footprint would be removed. The surrounding native upland pinyon-juniper woodlands would not be affected by piping of the ditches (removal of the water resource) because they are adapted to arid conditions. Construction activities would also directly disturb the staging areas, which are previously disturbed. Vegetation impacts to the previously-analyzed Aspen Canal, Spurlin Mesa Staging Area, and Center Lateral Staging areas did not rise to the level of significant, as documented in the respective EAs (Reclamation 2014, 2019a, 2019b, 2019c).

During construction, dust from operating equipment and vehicles would also affect nearby vegetation, however increased dust would be minor and temporary, and therefore the impact to nearby vegetation would be minor and temporary. Across the entire Project, vegetation removal and construction footprints would be confined to the smallest portion of the ditch prism or construction ROW necessary for safe completion of the work, and trees would be saved whenever possible. Construction of the Project would follow BMPs to further minimize temporary impacts, to protect water quality, and to further minimize dust and soil erosion.

Following construction disturbance, natural areas would be recontoured and either topsoiled and reseeded with a seed mix appropriate for the surrounding vegetation community (conventional revegetation) or finished with sterile subsurface soil and unseeded (sterile topsoiling/natural revegetation), depending on the wishes of the underlying landowner. Where applicable, the seed mix for the natural areas would be a native drought-tolerant weed-free seed mix approved by Reclamation (Appendix A). Natural colonization of native plants on the reserved unweathered subsurface soil is preferable to reseeding on reserved topsoil in these areas. Redistributed topsoil has a low probability of success in germinating commercial seed mixes following construction, especially in drought conditions, and instead has historically germinated its own existing seed banks of ruderal weeds adapted to ground disturbance. Finishing the ground surface instead with unweathered subsurface soil would help eliminate the weed seed bank in the construction area. In accordance with the principles of ecological succession, surrounding native vegetation, especially forbs, grasses, and shrubs, would colonize the construction corridor over a period of several years as the new topsoil becomes weathered. The establishment of slow-growing juniper trees would require several decades as the ecological succession process occurs. Because the upland native vegetation is abundant in the surrounding areas and would re-colonize the construction corridor, the impact to upland native vegetation would not rise to the level of significant.

Following pipeline construction, farmed areas would be contoured to the surrounding grade and reseeded with compatible hay or pasture seed mixes. Farmed areas would return to a condition similar to or better than their pre-construction condition within a year of construction, because they would be reseeded and integrated into the surrounding irrigation and management regime.

The 1.7 acres of wetland and riparian areas associated with the ditch sections involved with the Project would either be converted to upland vegetation or farmland, depending on their context, following construction. A habitat loss assessment was performed for the Project to quantify the fish and wildlife values that would be lost due to the conversion of these areas to uplands or farmlands by the Project (ERO 2023). The evaluation followed the methodology outlined in *Basinwide Salinity Control Program: Procedures for Habitat Replacement* (Reclamation 2018). In accordance with the protocol, the habitat value is calculated for each affected wetland or riparian habitat area by multiplying its

acreage by its habitat quality score, which is assigned based on evaluation of a series of ten physical and biological criteria. These criteria include vegetative diversity, vegetative stratification, presence of noxious weeds, overall vegetative condition, interspersion of open water with vegetation, connectivity and proximity of other wildlife habitat areas, wildlife use, uniqueness or abundance, water supply, and degree of human-caused alteration. The Project would result in the permanent loss of approximately 1.7 acres of riparian and wetland vegetation associated with the unlined ditches, which when combined with the scores from the 10 habitat quality criteria described above, is the equivalent of 7.4 habitat value units (ERO 2023). As stipulated by the Salinity Control Act, a habitat replacement site was established for the Applicant's previous original Grandview Canal Piping Project, and this site generated excess credit in the amount of 8 habitat value units, enough to cover the 7.4 habitat values units to be lost under the current Project. Therefore, there would be no net loss of fish and wildlife values (in this case, riparian and wetland vegetation) associated with implementation of the Project. Because there would be no net loss of riparian and wetland values associated with implementation of the Project, the effects of the loss of riparian and wetland vegetation would be insignificant from a habitat perspective.

No significant impacts to vegetation (or the passive use of ecosystems, including stewardship, existence values, and bequest values) would occur as a result of the Project, because the construction footprint would be revegetated with upland plants found in the existing well-established adjacent plant communities, farmed areas in the construction footprint would be reseeded and returned to agricultural production, and riparian and wetland values related to the ditch sections involved with the Project would be maintained at the existing habitat replacement site.

The Proposed Action would contribute to the larger-scale loss of artificially sustained riparian and wetland areas collectively resulting from piping projects around the region. Consistent with the Colorado River Basin Salinity Control Act, habitat replacement projects compensate for the loss of riparian and wetland habitat values (see Appendix D).

Lining Alternative. The impacts to vegetation from the Lining Alternative are similar to the Piping Alternative, as described above, except some of the surface area in the construction footprint would remain as open water (lined ditch) following construction.

No significant impacts to vegetation (or the passive use of ecosystems, including stewardship, existence values, and bequest values) would occur from implementation of the Lining Alternative, because the construction footprint would be revegetated with upland plants found in the existing well-established adjacent plant communities, farmed areas in the construction footprint would be reseeded and returned to agricultural production, and riparian and wetland values related to the ditch sections involved with the Project would be maintained at the existing habitat replacement site.

3.2.10 – Noxious Weeds

The geographic scope of analysis for noxious weeds is the approximately 5,202-acre area encompassing Grandview Mesa and a portion of the lower Smith Fork drainage, the context within which Project activities have the potential to affect this resource. The most conspicuous herbaceous noxious weeds present within the Project Area are whitetop (*Lepidium draba*), Russian knapweed (*Acroptilon repens*), and Canada thistle (*Cirsium arvense*) (ERO 2023). Non-native shrubs or trees scattered on the ditch banks include Russian olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarisk* spp.) (ERO 2023). These weeds are common and widespread in the region, in disturbed areas such as roadsides, along ditch banks, in agricultural field margins, and in and around livestock corrals,

feeding areas, and stockwater ponds, etc. Noxious weeds are well-adapted to colonize both newly disturbed soils and historically disturbed soils more quickly than most native plants (Mohler 2001). Flowing water in irrigation ditches, as well as vehicles and livestock, are also vectors for the continued spread of noxious weeds in the Project Area. Although the Applicant occasionally conducts vegetation management along the ditch sections involved with the Project, noxious weeds are persistent in the Project Area, covering an estimated average of about 10 percent of involved ditch bank areas (ERO 2023), or the equivalent of approximately 0.97 acres (based on the 4 miles of involved ditch sections and an estimated average ditch prism width of 20 feet). The same noxious weed species are persistent and scattered across the geographic area of analysis in advantageous (disturbed) locations, along waterways, and in developed and agricultural areas of Delta County at large. The geographic analysis area spans approximately 8 square miles, with nearly the entire area in private agricultural and residential use. As a conservative estimate of the total acreage of noxious weeds in the geographic analysis area, Reclamation conducted the following analysis in GIS (Reclamation 2025a): the geographic analysis area has approximately 12.5 miles of mapped public roads, 41.8 miles of mapped waterways, and 108 separate legal parcels representing approximately separate farms, ranches, and residential properties with private roads, livestock pens, fencelines, crop margins, and other areas of persistent ground disturbance where noxious weeds may proliferate. Assuming 13 percent noxious weed cover within 20 feet of mapped public roads and waterways; assuming 0.5-acre of disturbed ground with 3 percent noxious weed cover associated with each of approximately 108 separate residences and agricultural operations; and assuming 7.5 percent cover of noxious weeds associated with agricultural crops, there are potentially 264 acres of noxious weed cover in the geographic analysis area, or the equivalent of 5 percent noxious weed cover across the approximately 5,202-acre area. Estimated percentages of noxious weed cover for different disturbance types were based on ERO (2023) and Loving (2022).

Delta County has weed control standards and a noxious weed management plan (Delta County 2020), though without an enforcement mechanism that triggers coordinated weed control at the county or local levels. Landowners in the geographic analysis area have varying levels of resources to dedicate to noxious weed management on their lands, and differences exist regarding effectiveness of management methods and which management methods are preferred (for instance, chemical versus biological or mechanical controls).

No Action Alternative: There would be no effect on noxious weeds from the No Action Alternative. Noxious weeds would continue to spread in the Project Area and on Grandview Mesa through common vectors, including flowing water associated with the ditch sections involved with the Project, surface soil disturbances, and vehicles, wildlife, and livestock moving through the Project Area.

Project (Piping Alternative): The piping component of the Project would create a construction footprint wider than the existing ditch prisms in some areas. Noxious weeds in the surroundings would spread opportunistically into these disturbed soils, or ground disturbance would trigger germination of the existing weed seed bank in the soils. A maximum of approximately 38 acres of new ground disturbance could be generated by the Project. If like the surrounding areas, noxious weeds colonize the disturbed ground at a rate of 10 percent cover, this would create an additional approximately 4 acres of noxious weed cover, or an overall equivalent increase of 0.1 percent in noxious weed cover, in the geographic analysis area (Reclamation 2025a). Design features (finishing techniques including the sterile topsoiling natural revegetation method; conventional finishing with reserved topsoil and reseeding; and the use of BMPs such as cleaning equipment prior to bringing it onsite (0), would

help slow or prevent invasive weeds from colonizing areas disturbed by construction activities. After construction and reclamation of the Project Area, noxious weed presence would be managed subject to agreements between the Applicant and individual landowners. While these design features and agreements would help slow the spread of invasive weeds, this analysis is conservative in that it assumes a total lack of weed control post-construction.

While ground disturbance associated with the Project could increase the total overall noxious weed cover in the geographic analysis area by an estimated 0.1 percent, noxious weeds are already present across an estimated 5.2 percent of the area. Removal of the ditch sections involved with the Project either by piping or decommissioning would eliminate segments of flowing open water in the ditch system, a key element of invasive seed transport. Certain segments of the ditch would no longer require regular maintenance, lowering the potential for the continued spread and establishment of weeds by vehicles and surface disturbances. Downgradient herbaceous and woody noxious weeds which rely on ditch seepage would no longer be supported. Despite these beneficial effects to noxious weed presence, noxious weeds would continue to be present, and would continue to have the potential to spread, in the Project Area and in the geographic area of analysis.

Because noxious weeds are currently present and have the continued potential to spread in the Project Area and on Crawford Mesa, their ongoing presence and potential to spread following the Project would not constitute a significant impact. The 0.1 percent overall estimated increase in noxious weed cover in the geographic analysis area as a result of the Project is a conservative estimate, and does not rise to the level of significant; therefore, no significant impacts to noxious weeds would occur as a result of the Project.

Lining Alternative. The impacts to noxious weeds from the Lining Alternative are similar to the Piping Alternative, as described above, except flowing surface water in the lined ditch sections would continue to provide a vector for spreading weed seeds in the area.

Because noxious weeds are currently present and have the continued potential to spread in the area of the involved ditch sections and geographic area of analysis, their ongoing presence and potential to spread following implementation of the Lining Alternative would not constitute a significant impact. A 0.1 percent overall estimated increase in noxious weed cover in the geographic area of analysis from implementing the Lining Alternative is a conservative estimate, and does not rise to the level of significant; therefore, no significant impacts to noxious weeds would occur.

3.2.11 – Wildlife Resources

The geographic scope of analysis for wildlife is the Project Area plus an approximately one mile buffer, the approximate area within which the Project has the potential to affect this resource. The riparian vegetation supported by the open ditches, in association with nearby irrigated land, and surrounding uplands with native shrublands and woodlands, provide nesting, breeding, foraging, cover, and movement corridors for an array of wildlife.

The Project Area falls within overall range of elk, mule deer, mountain lion, and black bear in CPW Game Management Unit 63. Grandview Mesa's array of irrigated agricultural lands and water resources (creeks, ditches, ponds) are attractive to deer and elk, especially during winter. The entire Project Area falls within elk severe winter range mapped by Colorado Parks and Wildlife (CPW 2025). The entire Project Area is within a CPW-mapped mule deer resident and year-round concentration area, and severe winter range (CPW 2025). The Grandview Mesa area of the Project is

also in a mule deer winter concentration area. Mule deer are relatively common and present year-round in the area, whereas the local elk herd is present only during winter.

A variety of small mammals, reptiles, amphibians, and birds inhabit the general Project Area (Armstrong et al. 2011; Hammerson 1999; Kingery 1998). The ditch sections in the Project Area create microclimate differences (Section 3.2.15) that support wetland and riparian vegetation, which in turn support a variety of wildlife dependent on wetland or riparian areas for some or all of their life cycle. Those that would be likely to use the ditch corridor or adjacent areas include small ground-dwelling mammals, such as badger, white-tailed prairie dog, cottontail rabbit, white-tailed jackrabbit, woodrat, several species of lizards, mice, voles, and shrews. Striped skunk, raccoon, red fox, coyote, bobcat, beaver, muskrat, western terrestrial garter snake, smooth green snake, Woodhouse's toad, northern leopard frog, several species of bats, and tiger salamander could also be using the ditch and the surrounding area. The most common raptors in the area are red-tailed hawk, northern harrier, golden eagle, and bald eagle. Red-tailed hawks and bald eagles roost in large cottonwoods along the ditches and around homes in the area. Red-tailed hawk nests are common across Grandview Mesa. Water birds, such as mallard ducks, teal, Canada geese, and great blue herons, use open water in the Project Area, and may occasionally chose ditch banks for nest sites. Wild turkey are in the area, and roost in cottonwoods and other tall trees overnight. Fish (non-native trout species) are occasionally observed in the ditch segments involved with the Project.

The primary nesting season for migratory songbirds in the Project Area is April 1 through July 15. The core nesting season for raptors in the area is also April 1 through July 15; however, individuals—especially red-tailed hawk and great-horned owl—may begin courtship and nest construction as early as February 15 (CPW 2020). Golden eagles nest between December 15 and July 15, and bald eagles nest between October 15 and July 31 (CPW 2020). The entire Project Area lies within CPW-mapped bald eagle winter foraging range and the Smith Fork corridor is a bald eagle winter concentration area (CPW 2025). A nesting raptor survey conducted for the Project Area during Spring of 2020 and the Spring of 2023 identified three red-tailed hawk nests within 1/3 mile of the construction areas (the protective buffer distance recommended by CPW (CPW 2020).

Wildlife in the Project Area experiences a baseline level of disturbance from farming and ranching activities, rural residential activities, domestic dogs, and people and vehicles traveling on public and private roads. Agriculture, including farming and livestock grazing, are the primary land uses in the Project Area. The ditch sections are in a mix of residential and agricultural settings.

No Action Alternative: There would be no effect on wildlife resources from the No Action Alternative. Wildlife would continue to use the habitat and water resources in the area as in the past. Salt and selenium loading from the area would continue to affect aquatic dependent species.

Project (Piping Alternative): Construction would create incremental activity and ground disturbance in the Project Area, resulting in minor temporary impacts to mule deer and elk that may be present. There would be a short-term loss of vegetative cover in big game severe winter habitat until the areas are revegetated. However, the construction footprint of the Project represents less than approximately 0.06 percent of the total amount of elk and mule deer critical winter habitat in Game Management Unit 63, and this temporary loss of vegetative cover would result in negligible effects to big game critical winter habitat. Additionally, given the existing level of human disturbance and development (winter livestock feeding, other agricultural activities, residential activities, and road traffic) in the Project Area, big game would be somewhat habituated to the Project disturbances.

Furthermore, severe winter conditions (e.g., snow cover, extreme cold temperatures, excessively muddy conditions) would preclude construction activities during times when big game is most vulnerable. After implementation of the Project, water resources for big game and other wildlife would continue to exist in the Project Area at a rate of more than 4 sources per square mile (the rate recommended in CPW's comments on the nearby Crawford Clipper Ditch Company's Jerdon/West/Hamilton Piping Project). The sources include on-farm irrigation ditch laterals, ponds, and streams. Since irrigated agricultural crops and water resources are major drivers of big game presence in the Project Area, the Project would not result in a long-term change in big game use or migratory patterns in the Project Area.

Construction impacts to small animals, especially burrowing reptiles, and burrowing small mammals, could include direct mortality and displacement during construction activities. However, these species and habitats are relatively common throughout the area. Based on the principles of ecological succession, small animals in the surrounding areas would recolonize the construction footprint following the disturbance, and population-level significant impacts would not occur. Fish occasionally finding their way in to the ditch system from the natural water sources diverted to the ditch may still find their way into the system; because this already occurs, there would be no change in fish entering the system.

There would be no direct effect to nesting songbirds in the Project footprint since pre-construction vegetation grubbing would occur outside the primary nesting season (potential nesting habitat including shrubs and trees along the ditch would be grubbed and removed outside the period of April 1 through July 15). Vegetation grubbing timing restrictions would be clearly noted on the Project construction drawings. Some cottonwood trees would die or be taken down as a result of the Project, which would remove some potential roosting habitat for wild turkeys, and roosting and nesting habitat for raptors and other birds. As discussed in Section 2.2.8, habitat values would be maintained due to the habitat credits generated at GCIC's habitat replacement site. Because the value of this habitat would be maintained, these impacts would not rise to the level of significant.

There would be no effect to the three red-tailed hawk nests identified near the Project Area as they would be avoided with sensitive area buffers and construction timing restrictions per CPW recommendations (CPW 2020). Construction activities would not occur within 1/3 mile of an active red-tailed hawk nest from February 15 through July 15, with the following exceptions: 1) pipeline construction within 1/3 mile of a nest could begin during the period of February 15-July 15 so long as the construction activities were initiated prior to February 15, and operated on a daily basis until completion (it is assumed that red-tailed hawks that initiate nesting during ongoing construction activities are tolerant to such activities), or 2) a Reclamation-approved biologist determines that the nest is not active that breeding season. These timing restrictions and sensitive areas would be noted on Project construction drawings (see 0). If a new active raptor nest is discovered within 1/3 mile of the Project during construction, construction would cease until Reclamation could complete evaluations and consultations with FWS and CPW.

Bird, bat, reptile, and amphibian species dependent on wetland and riparian habitats for some or all of their life cycles would experience a long-term (greater than five years) loss of habitat due to the Project. Based on the principles of ecological succession, these species would continue to propagate in the region and population-level significant impacts would not occur. The habitat value associated with the lost wetland and riparian habitat, including microclimate benefits, would be fully maintained at the existing habitat replacement site for the life of the project (50 years) (Sections 2.2.8, 3.2.9, and

3.2.15). Because the value of these species' habitat would be fully maintained in the general geographic area, there would not be a significant impact to bird, bat, reptile, and amphibian species resulting from the loss of the ditch-induced wetland and riparian habitat.

The existing habitat replacement site is near the Project Area and in the same watershed where the ditch system involved with the Project originates, contains a stream corridor, connects to other areas that have wildlife habitat value, and is consistent with the *Salinity Control Program Fish and Wildlife Habitat Evaluation Procedures* (Reclamation 2018). The ranges of many wildlife species in the area, including the local deer and elk herds, encompass both the Project Area and the existing habitat replacement site.

To further reduce the potential for effects to wildlife, pipeline trenches left open overnight during construction would be kept to a minimum and covered to reduce potential for entrainment of deer, elk, and other wildlife. Covers would be secured in place and strong enough to prevent wildlife from falling through. Where trench covers would not be practical, wildlife escape ramps would be utilized.

No significant impacts to wildlife resources would occur as a result of the Project, because construction impacts would be temporary and relatively small in comparison with surrounding available habitat, timing restrictions would protect nesting birds during sensitive periods, disturbed upland habitats would be revegetated, adequate wildlife watering resources would still exist in the area, and wetland and riparian habitat values would be maintained at the existing habitat replacement site.

Lining Alternative. The impacts to wildlife resources from the Lining Alternative would not differ from the Piping Alternative, as described above, with the following exception: Hooved animals such as deer may be unable to escape a lined irrigation canal due to the depth and steepness of its sides.

No significant impacts to wildlife resources would occur as a result of the Lining Alternative, because construction impacts would be temporary and relatively small in comparison with surrounding available habitat, timing restrictions would protect nesting birds during sensitive periods, disturbed upland habitats would be revegetated, , and wetland and riparian habitat values would be maintained at the existing habitat replacement site.

3.2.12 – Threatened & Endangered Species

The species listed or proposed for listing as threatened or endangered under the Endangered Species Act of 1973, as amended, with the potential to be affected by the Project are the four listed Colorado River basin fish species: bonytail chub (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), the humpback chub (*Gila cypha*), and the razorback sucker (*Xyrauchen texanus*), Gunnison sage-grouse (*Centrocercus minimus*), silverspot (*Speyeria nokomis nokomis*), and gray wolf (*Canis lupus*), as well as the proposed-for-listing monarch butterfly (*Danaus plexippus*).

Other listed species identified by FWS as having the broad potential for their range to intersect the general Project Area are Mexican spotted owl (*Strix occientalis lucida*), yellow-billed cuckoo (*Coccyzus americanus*), and Suckley's cuckoo bumble bee (*Bombus suckleyi*). These species were dismissed from analysis because there have been no documented occurrences in the Project Area, and/or there is no suitable habitat for these species in the Project Area.

None of the four listed Colorado River fishes occur in the Project Area and the Project Area does not occur within or adjacent to designated critical habitat. However, because water depletions in the Gunnison Basin diminish backwater spawning areas for the Colorado River endangered fishes in downstream designated critical habitat, impacts to the listed fishes result from continuing irrigation practices in the Gunnison Basin. The total average historic depletion rate from the Applicant's system operations is estimated as 5,455 acre-feet per year.

The Upper Colorado River Endangered Fish Recovery Program ("Recovery Program") is a partnership of public and private organizations (including Reclamation) working since 1988 to recover the four species while allowing continued water uses and future water development. Recovery strategies include conducting research, improving river habitat, providing adequate stream flows, managing non-native fish, and raising endangered fish in hatcheries for stocking. In 2009, Reclamation completed a consultation for changes in operation (aka "reoperation") of the Aspinall Unit (the three dams on the Gunnison River in the upper part of the Black Canyon of the Gunnison) in coordination with other federal water project dams in the Gunnison watershed to address the needs of the downstream endangered fishes by creating a flow regime that more closely represents the natural conditions. The consultation considered all other federal and non-federal existing water depletions in the Gunnison River Basin (an estimated annual average of 602,700 acre-feet per year), along with projected new future depletions of up to 37,900 acre-feet per year. Following the consultation, FWS issued the 2009 Gunnison River Basin Programmatic Biological Opinion (2009 PBO)(FWS 2009). The 2009 PBO found that although the reoperation of the Aspinall Unit and the continued operation of other federal and non-federal operations in the Gunnison Basin may adversely affect the endangered fishes and their critical habitat, the ongoing Recovery Program remains the reasonable and prudent alternative to avoid jeopardy to the endangered Colorado River fishes and avoid adverse modification of designated critical habitat. On an annual basis, the FWS determines whether the Recovery Program continues to make "sufficient progress to be the reasonable and prudent alternative to avoid the likelihood of jeopardy to the endangered fishes, and to avoid destruction or adverse modification of their critical habitat" for "existing depletions" (FWS 2024). Non-federal existing depletions such as those depletions from the operations of the Applicant are not required to consult with FWS under Section 7 of the ESA regarding the listed fishes until there is a "federal nexus" (e.g. a federally-funded project requiring the NEPA process and the analysis of impacts). At that time, a consultation with FWS is completed to consider whether the related depletions fit under the umbrella of the 2009 PBO and the Recovery Program. FWS notified Reclamation on June 25, 2024, that Reclamation-funded salinity control projects involving existing depletions perfected prior to 1988 and covered under the PBO are not required to further consult with FWS under Section 7 of the ESA regarding the listed fishes (FWS 2024). The Project involves both federal project water and an existing non-federal depletion perfected prior to 1988.

The Project Area is not within or near the occupied habitat of the Crawford sub-population of Gunnison sage-grouse (Reclamation 2025b). Designated critical habitat for the Crawford sub-population is roughly delineated on the north by the northern edge of Fruitland Mesa, and on the west and south by the north rim of the Black Canyon of the Gunnison, and on the east by the foothills of the West Elk Mountains (Figure 3). Designated critical habitat has two classifications: occupied or unoccupied by the grouse. That part of the designated critical habitat extending from the northern edge of Fruitland Mesa roughly to Red Canyon to the south, is classified as unoccupied by sage-grouse. The east end of the Project intersects a small area of mapped unoccupied critical habitat in the Smith Fork Canyon.

The Project Area is mapped within the overall range of the silverspot (a butterfly) listed as threatened under the U.S. Endangered Species Act in February 2024. No documented populations of silverspot occur in or near the Project Area (FWS 2023). Reclamation conducted an informal technical consultation with FWS to confirm that the silverspot's larval host plant, bog violet, is not present in the Project Area (Reclamation 2025b).

The gray wolf is a wide-ranging habitat generalist and keystone predator that requires landscape-scale areas of minimal human disturbance and a sufficient prey base of large ungulates. Historically, wolves occurred across the state, but were extirpated (exterminated) from Colorado in the 1940s, mainly to protect domestic livestock. Documented reports of lone wolves sporadically dispersing into northern Colorado began in 2004, following the re-establishment of populations in Idaho, Montana, and Wyoming. In 2020, CPW confirmed an active pack of 6 wolves in northwestern (Moffat County) Colorado. In 2020, Colorado citizens voted to restore the gray wolf in Colorado by the end of 2023. In 2023, the U.S. Fish & Wildlife Service designated the Colorado wolf population as "experimental" under the U.S. Endangered Species Act, to provide management flexibility to CPW. CPW completed the first re-introduction of wolves in northern Colorado (Grand and Summit counties) in December 2023. The primary threats to wolves are vehicle collisions, illegal poaching, or accidental take (such as by poisoning targeted to other livestock predators such as coyote). The Project Area is not in gray wolf designated critical habitat.

While western Colorado has not been home to large numbers of monarch butterflies relative to other areas in its range, this proposed threatened species occurs in the Project Area during the warm season where milkweed plants are available in riparian areas, wetlands, irrigated pastures, and roadsides. Due to occasional ditch maintenance activities, riparian vegetation along ditches is occasionally cleared.

No Action Alternative: There would be no effect on Endangered Species Act-listed or species proposed for listing from the No Action Alternative. Historic depletions and salt and selenium loading from the Project Area would continue to affect the four Colorado River Basin listed fishes and their critical habitat downstream. Ditch maintenance activities would potentially continue to affect milkweed habitat, the larval host plant of the proposed threatened monarch butterfly.

Project (Piping Alternative): No change to the Applicant's historic annual consumptive use rate or historic water depletions from operations of their systems within the Colorado River Basin would occur as a result of the Project. Based on previously issued biological opinions, including the 2009 PBO, that all depletions within the Upper Colorado River Basin may adversely affect the four listed fish species and their critical habitat, it is determined that the Project may adversely affect the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker and their critical habitat. However, the Recovery Program ensures impacts to listed fishes or adverse modification of their designated critical habitat resulting from projects covered under the 2009 PBO would not result in jeopardy to the species. Reclamation previously consulted with FWS on the Applicant's total historical annual depletion rate in 2010 for the original Grandview Canal Piping Project (ES/GJ-6-CO-09-F-001-GP003 TAILS 65413-2010-F-0110). To ensure the Applicant's depletions were covered under the 2009 PBO, the Applicant executed a Recovery Agreement with FWS in May 2010. Because the Applicant's depletions are covered under the 2009 PBO, the Project would not result in jeopardy to the species, and there would be no significant impact to the listed fishes or their designated critical habitat.

There would be no effect to Gunnison sage-grouse, because the Project does not overlap with the documented occupied range of Gunnison sage-grouse. The east end of the Project intersects a small area of mapped unoccupied critical habitat in the Smith Fork Canyon. The estimated construction footprint in this area is 3.6 acres. The construction footprint contains the existing ditch prism (with a margin of riparian vegetation dominated by coyote willow), and crosses an area vegetated with pinyon-juniper woodlands and an irrigated pasture on a relatively steep canyon slope and bench. The landcover composition in this area does not meet the physical and biological feature requirements of Gunnison sage-grouse critical habitat described at 79 FR 69311-69363. Following construction, the 3.6-acre area would be revegetated as upland woodlands and irrigated pasture, in a similar condition to its current condition. Therefore, there would be no adverse effect on critical habitat as a result of the Project.

Direct effects to individual monarch butterflies in larval or chrysalis stages on milkweed plants could occur during construction. Because the Project Area is not within a core migration area or core population area for the monarch butterfly, direct effects would not rise to the level of significant. The existing habitat replacement site would preserve host plant (milkweed) habitat, maintaining monarch butterfly habitat in the area. Therefore, the Project would not adversely or significantly affect the monarch butterfly's habitat or population in western Colorado. Proposed critical habitat for monarch butterfly is not in or near the Project Area.

There would be no effect to silverspot from the Project because the Project does not overlap with the documented population occurrences of silverspot, and its host plant is not present in the Project Area.

Given the current understanding that wolves are not present or documented in the Project Area, the Project would have no effect on the gray wolf. If wolves dispersed into or near the Project Area during construction of the Project, the Project activities would not measurably affect wolves, because the Project does not include a predator management program, and wolves could disperse away from the Project Area. Since the Project is not in gray wolf designated critical habitat, there would be no effect to gray wolf critical habitat.

No significant impacts to threatened and endangered species and their critical habitat would occur as a result of the Project, because the previous execution of a 2010 Recovery Agreement in accordance with the 2009 PBO ensures the Project has no significant impact on the Upper Colorado River listed fishes or their designated critical habitat; and because habitat for the monarch butterfly (proposed for listing) would be conserved at the existing habitat replacement site.

Lining Alternative. The impacts to threatened and endangered species from the Lining Alternative would not differ from the Piping Alternative, as described above.

No significant impacts to threatened and endangered species and their critical habitat would occur from the Lining Alternative, because the execution of a 2010 Recovery Agreement in accordance with the 2009 PBO ensures there is no significant impact on the Upper Colorado River listed fishes or their designated critical habitat; and because habitat for the monarch butterfly (proposed for listing) would be conserved at the existing habitat replacement site.

3.2.13 – Cultural Resources

Cultural resources are defined as physical or other expressions of human activity or occupation. Such resources include culturally significant landscapes, prehistoric and historic archaeological sites, isolated artifacts or features, traditional cultural properties, Native American and other sacred places, and artifacts and documents of cultural and historical significance.

Section 106 of the National Historic Preservation Act (NHPA) of 1966, mandates that Reclamation consider the potential effects of a proposed Federal undertaking on historic properties. Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

The affected environment for cultural resources is identified as the area of potential effects (APE), in compliance with the regulations to Section 106 of the NHPA (36 CFR 800.16). The APE is defined as the geographic area within which Federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this Proposed Action includes the maximum limit of disturbance that could be physically affected by any of the proposed Project alternatives.

Alpine Archaeological Consultants conducted Class III cultural resource inventories of the Project Area. The geographic area of analysis for these inventories were the ditches and potential ground disturbance areas involved with the Project, plus a 100-foot buffer (e.g. the Area of Potential Effect). All ditch sections involved with the Project were inventoried, as well as access routes, borrow areas, and staging areas. The inventories resulted in the documentation of two ditches within the Project Area that are eligible for listing in the National Register of Historic Places (NRHP).

There is an ongoing trend of piping earthen irrigation ditches in the region (see Figure 2), many of which are eligible for listing in the NRHP. This conversion is typically viewed as an adverse effect on the eligible cultural resource.

No Action Alternative: The No Action Alternative would have no effect on cultural resources, including impacts to education and knowledge, learning and interpretation, and research opportunities. The cultural resources documented as eligible for listing in the NRHP would continue to exist in their current condition on the landscape.

Project (Piping Alternative): As a result of the Class III cultural resources inventory of the Project Area, and in consultation with the Colorado State Historic Preservation Officer (Colorado SHPO), Reclamation has determined that the Project would have an adverse effect on the Grandview Canal, which is a historic property eligible for listing in the NRHP. A Memorandum of Agreement (MOA) has been executed between Reclamation and the Colorado SHPO, with the Applicant participating as an invited party, regarding the management of cultural resources related to the Project. The MOA outlines stipulations designed to maintain the cultural heritage of irrigation history through public interpretation and/or documentation (Appendix B). An amendment to the MOA (Appendix B) has also been executed between Reclamation and the Colorado SHPO to extend the deadline to complete the MOA requirements in Stipulations I.A.c and III. Maintaining the cultural heritage of irrigation history would ensure that piping the ditches would not result in the loss of knowledge of early irrigation systems, their design, or reduce the ability to gain knowledge of early irrigation systems into the future. Because the value of the cultural resources related to the Project would be

conserved, there would be no significant impacts to cultural resources as a result of implementing the Proposed Action.

No significant impacts to cultural resources would occur as a result of the Project, including impacts to education and knowledge, learning and interpretation, and research opportunities, because the cultural heritage of irrigation history would be maintained.

Lining Alternative. The impacts to cultural resources from the Lining Alternative would not differ from the Piping Alternative, as described above.

No significant impacts to cultural resources would occur as a result of the Lining Alternative, because the cultural heritage of irrigation history would be maintained.

3.2.14 – Soils & Farmlands of Agricultural Significance

The Project Area (Figure 1) is the geographic scope of analysis for soils and farmlands of agricultural significance, the context within which Project activities have the potential to affect this resource. The soils units mapped by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) in the Project Area are generally clay loams that have Mancos shale parent material and are a source of salinity in irrigation water in the region. Several soils in the Project Area are agriculturally significant since they are classified by NRCS (NRCS 2022) as "prime farmland if irrigated," "farmland of unique importance," or "farmland of statewide importance" under the Farmland Protection Policy Act.

Soils in the area are also highly prone to erosion, especially where irrigation ditches contour through Mancos shale-derived soils and along slope faces.

No Action Alternative: The No Action Alternative would have no effect on soils characterized by NRCS as agriculturally significant. Farmlands in the Project Area would continue to produce as in the past. Salinity loading from irrigation water contact with saline soils in the involved ditches would continue as it has in the past.

Project (Piping Alternative): Under the Piping Alternative, installation of the buried pipelines would temporarily disturb soils in the construction footprint. Staging activities would take place on existing irrigated pastures or existing disturbed areas. Project activities would cause temporary disturbance to soils that are either not in irrigated agricultural production, or soils directly adjacent to irrigated agricultural lands, or soils of irrigated lands. Some currently farmed agriculturally significant soils would be temporarily directly disturbed by the Project, but would be put back into production prior to the following irrigation season. No farmlands would be permanently altered or removed from production as a result of the Project, and no interruption to agricultural production would occur. Therefore, there would be no significant impact to soils, farmlands, or agricultural production as a result of implementing the proposed action.

The ditch sections involved with the Project also convey irrigation water to agriculturally significant soils downstream of the Project Area; however, no change to or effect on the configuration of irrigated lands would occur because of the Project. No part of the irrigation season would be lost during implementation of the Project.

Soil erosion from irrigation water conveyances would be substantially reduced where ditch reaches are proposed for replacement with buried pipe. Therefore, no adverse effects on soil erosion would occur due to implementation of the Project.

Following piping, wetland and riparian microclimate conditions in the soils adjacent to the ditches involved with the Project would be converted to upland conditions (Section 3.2.15). Wetland and riparian microclimate conditions are conserved at the existing habitat replacement site (Section 3.2.9). Because there would be no net loss of wetland and riparian soil microclimate conditions associated with implementation of the Project, the effects of the loss of these microclimate conditions in the Project Area would be insignificant.

No significant impacts to soils & farmlands of agricultural significance would occur as a result of the Project, because no soils or farmlands of agricultural significance would be permanently removed from production. Soils affected by construction would be protected from erosion with BMPs and agricultural soils returned to production the following growing season.

Lining Alternative. The impacts to soils and farmlands of agricultural significance from the Lining Alternative would not differ from the Piping Alternative, as described above.

No significant impacts to soils & farmlands of agricultural significance would occur as a result of the Lining Alternative, because no soils or farmlands of agricultural significance would be permanently removed from production. Soils affected by construction would be protected from erosion with BMPs and agricultural soils returned to production the following growing season.

3.2.15 – Microclimate

The geographic scope of analysis for microclimate is Grandview Mesa and a part of the lower Smith Fork drainage extending from the initiation point of the Project to a point approximately 2 miles downstream where the existing Grandview Canal contours out of the Smith Fork drainage, and is a total of 5,202 acres. This area is the context within which physical disturbance or changes to microclimate could take place because of Project construction.

There are differences in soil moisture content between soils in the saturation zone of irrigation ditches and other water bodies and surrounding uplands. Saturated soils along ditch margins and other waterbodies, and the wetland or riparian vegetation types they support, create a microclimate that is different than surrounding uplands, with higher humidity and cooler air and soil temperatures. These conditions in turn provide habitat for species requiring wetland and/or riparian habitat for all or parts of their life cycles (Section 3.2.11). Riparian and wetland vegetation, including cottonwoods, provide localized shade and cooling effects from evapotranspiration. The geographic analysis area has approximately 287 acres of wetland and riparian areas (Sections 3.2.3 and 3.2.9), and the Project Area has about 1.7 acres of wetland and riparian areas—including about 0.52 acres of cottonwood canopy (ERO 2023).

Agricultural irrigation has significant microclimate effects in arid and semi-arid regions. "In warm, dry regions, irrigation increases the amount of water available for plants to release into the air through a process called evapotranspiration. When the soil is wet, part of the sun's energy is diverted from warming the soil to vaporizing its moisture, creating a cooling effect" (Puma & Cook 2010). As such, irrigated hay meadows and grass pastures (as well as irrigated grass lawns) create a

microclimatic moderating or cooling effect during the warm season. The geographic analysis area has approximately 3,315 irrigated acres (Section 3.2.9).

No Action Alternative: The No Action Alternative would have no effect on microclimate. Surface hydrology (including irrigation), soil, and vegetation aspects of microclimate would continue to function as they have in the past within the Project Area.

Project (Piping Alternative): The Project would affect 1.7 acres of wetland and riparian vegetation and soils related to Grandview Canal in the geographic analysis area. To contextualize the vegetation impact of the Project on the microclimate of the area, Reclamation performed a spatial analysis in GIS (Reclamation 2025a) using publicly-available landcover and irrigated land datasets. The geographic analysis area encompasses approximately 287 acres of riparian and wetland landcover types, constituting 5.5 percent of the area. By contrast, the agricultural landcover type (irrigated croplands and pastures) is estimated as 3,315 acres, or nearly 64 percent of the landcover in the geographic analysis area. Because irrigated hay meadows and pastures function similarly to wetlands and riparian areas in terms of evapotranspiration and wetted soil cooling effects (Puma & Cook 2010), this analysis suggests that irrigated agricultural lands are contributing the majority of the microclimate cooling effect to geographic analysis area, rather than the approximately 287 acres of wetland and riparian vegetation or the 1.7 acres of wetland and riparian vegetation associated with the Project's construction corridor.

The 1.7 acres of wetland and riparian vegetation, including the 0.52 acre of cottonwood trees (ERO 2023), that would be impacted by the Project, constitute approximately 0.03 percent of the geographic analysis area. Approximately 1/3 of this area would be converted to irrigated farmland, and approximately 2/3 of this area portion would be converted to uplands, resulting in a loss of microclimate benefits to habitat in particular spatial locations. These microclimate habitat benefits lost in the Project Area would be maintained at the existing habitat replacement site.

Because the preponderance of microclimate benefits in the geographic analysis area are provided by irrigated agricultural lands, and no irrigated agricultural lands would be lost as a result of the Project (Section 3.2.14), impacts to microclimate would not rise to the level of significant. The loss of microclimate benefits in the Project Area from loss of riparian and wetland vegetation due to the Project would not create a significant impact to microclimate because those benefits would be maintained at the existing habitat replacement site.

Lining Alternative. The impacts to microclimate from the Lining Alternative would not differ from the Piping Alternative, as described above.

Because the preponderance of microclimate benefits in the geographic analysis area are provided by irrigated agricultural lands, and no irrigated agricultural lands would be lost as a result of the Lining Alternative (Section 3.2.14), impacts to microclimate would not rise to the level of significant. The loss of microclimate benefits in the Project Area from loss of riparian and wetland vegetation due to the Lining Alternative would not create a significant impact to microclimate because those benefits would be maintained at the existing habitat replacement site.

3.3 – Summary

Table 5 provides a summary of environmental impacts, including cumulative impacts, for each the resources evaluated in this EA. Resource impacts are outlined for both the No Action and the two Action Alternatives. As described throughout Chapter 3, environmental impacts of the Action Alternatives were not determined to be significant.

Table 5. Summary of Impacts for the No Action Alternative and the Action Alternatives.

Resource	**Impacts: No Action Alternative**	**Impacts: Action Alternatives**
Water Rights and Use (Section 3.2.1)	No Effect; neither Action Alternative would be completed, and ditch seepage and irrigation inefficiencies would continue as they have in the past, and winter stock water would continue to be undeliverable during freezing weather conditions.	With either Action Alternative, the Applicant would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by improving the system. Winter stock water would be unavailable for some shareholders for part of one winter season during construction. Following construction of the Project (Piping Alternative), winter stock water would be delivered to shareholders throughout the winter season, including during periods of freezing weather. Following construction of the Lining Alternative, winter stock water would not be delivered during periods of freezing weather. The Action Alternatives contribute to the growing amount of piped and lined irrigation conveyances in the region, which are collectively reducing water seepage and improving irrigation water delivery efficiency on a larger scale.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Water Quality (Section 3.2.2)	No Effect; neither Action Alternative would be completed, and salt and selenium loading from the Project Area would continue to affect water quality in the Colorado River Basin.	An estimated salt loading reduction of 4,421 tons per year to the Colorado River Basin would result from implementation of either of the Action Alternatives. Both Action Alternatives would reduce selenium loading into the Gunnison River (the amount has not been quantified). Improved water quality would benefit downstream aquatic species by reducing salt and selenium loading in the Gunnison and Colorado rivers. The beneficial effects of improved water quality resulting from either of the Action Alternatives would contribute to the regional efforts underway to reduce salinity and selenium in the lower Gunnison and Colorado River watersheds. Both Action Alternatives would affect waters under the jurisdiction of CWA Section 404 (the ditches themselves) and disturb irrigation-induced wetland and riparian vegetation associated with the ditch sections. Both action alternatives would contribute to ongoing regional efforts to improve water quality and reduce salinity basinwide.
Hydrology (Section 3.2.3)	No Effect, because nothing would occur which would alter the surface hydrology, estimated groundwater recharge, or domestic well permits in the area.	The distribution of surface water would change in the Project Area as a result of implementing either of the Action Alternatives. Because the excess credits at the existing habitat replacement site would ensure no net loss of riparian and wetland values associated with implementation of either of the Action Alternatives, the effects of the loss of riparian/wetland hydrology adjacent to the involved ditches would be insignificant. Because the estimated amount of groundwater recharge into the two HUC-12 sub-watershed areas in the vicinity would not change, there would be no significant impact to groundwater recharge as a result of implementing the either Action Alternative. Because neither Action Alternative would alter natural sources of groundwater, there would be no significant adverse effect on domestic well permits near the Project Area. Either Action Alternative would contribute to a regional trend resulting in relocation of artificially-created riparian and wetland hydrology values from earthen irrigation conveyances to habitat replacement sites.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Air Quality (Section 3.2.4)	No Effect; neither Action Alternative would be completed and the ditch sections would continue to operate in their current condition and dust and exhaust would occasionally be generated by vehicles and equipment conducting routine maintenance and operation.	Exhaust and dust from construction activities would have a minor, short-term effect on the air quality in the immediate area. Following construction of either Action Alternative, impacts to air quality from routine maintenance and operation activities along the pipeline or lined ditch corridors would be similar or less in magnitude to those currently occurring for the existing ditch. If other construction projects occur concurrently with either Action Alternative, the cumulative impact on air quality in the area would be temporary, the contractors completing the work would be required to follow State of Colorado air quality regulations established to protect the airshed from significant impacts (5 CCR 1001-5), and the area would remain in attainment for any criteria pollutants in Delta County.
Public Access, Transportation & Safety (Section 3.2.5)	No Effect; neither Action Alternative would be completed and the ditches would continue to operate in their current condition and the baseline status of public safety, transportation routes, utilities, and public access in the vicinity would remain unchanged.	Some short-term disruption of traffic at the involved public roads would occur for either Action Alternative when equipment and materials are hauled into the Project location, and when piped crossings are constructed across public roads. These public roads provide access to public services, including emergency services, education, or social services, and the Applicant would coordinate with the county and sheriff if traffic or access would be delayed or substantially re-routed. If relocation or raising of utilities is necessary during construction, a brief interruption of utility services would occur. Under the Lining Alternative, the safety risks associated with sources of open, moving water would remain following implementation.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Property Values (Section 3.2.6)	No Effect; neither Action Alternative would be completed and the ditch sections would continue to operate in their current condition, with no impact to assessed property values or property market values.	Impacts to assessed property values would not rise to the level of significant as a result of either Action Alternative, because 1) Agricultural land tax valuation does not take into consideration the presence of piped vs. non-piped ditches on the property and therefore the assessed value would not change based on the status of a ditch or canal, and 2) For non-agricultural land tax valuation, the market value impact of piped vs. non-piped ditches would need to be quantified for tax valuation purposes using sales data and would need to be reviewed on an individual property basis. Impacts to open market value of properties involved with either Action Alternative would not rise to the level of significant because the impact on open market value would essentially be speculative and property- and buyer-specific rather than a guaranteed negative impact on properties in the Project Area as a whole.
Noise (Section 3.2.7)	No Effect; there would be no construction noise related to ditch piping or lining in the Project Area, and noise related to ditch operation and maintenance activities would continue as it has in the past.	Project construction activities under either Action Alternative would generate a temporary source of noise audible to residents near the area. If other construction projects occur concurrently with either Action Alternative, the incremental impact on noise in the area would be short-term would not raise the noise level of the area above the moderate noise baseline.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Visual Resources (Section 3.2.8)	No Effect; the baseline level of visual aesthetics and visual disturbance in the Project Area associated with residential and farmstead developments, wildlife, local ranching and farming activities, local construction projects, and the Applicant's operation and routine maintenance of the ditch sections would continue.	Machinery would be operating on the landscape and highly visible from public roads in certain locations on a spatially incremental basis during construction of either Action Alternative. Following construction of the Piping Alternative, the disturbance footprint would be a linear area of bare ground, rather than an open earthen ditch. Following construction of the Lining Alternative, the disturbance footprint would be the shotcrete-lined ditch sections, with shotcrete edges visible alongside the open water of the ditch. Within a few growing seasons, revegetation would help the disturbed ground blend with the surroundings. Overall, the long-term level of change to the visual characteristics of the landscape in and around the Project Area during and following construction of either Action Alternative would be minor and not out of character with the surrounding landforms or with the rural and agricultural character of the vicinity. The same wildlife providing visual aesthetics in the area would continue to be in the general vicinity, but may not frequent the precise properties or locations they currently do along the canal as often once piping is complete. These impacts would not rise to the level of significant.
Vegetation (Section 3.2.9)	No Effect; the Applicant would continue to routinely manage vegetation along the ditch sections, which includes periodic mechanical clearing with heavy equipment, burning, or application of herbicides.	Construction of either Action Alternative would result in a temporary minor impact to upland native vegetation located within the construction corridor. The impact would be evident in the Project Area for a period of several years. Either Action Alternative would result in the permanent loss of approximately 1.7 acres of riparian and wetland vegetation associated with the unlined ditch sections. The value of the habitat loss which would occur is 7.4 habitat units (ERO 2023). The existing habitat replacement site would fully maintain the value of the fish and wildlife values to be lost as a result of either of the Action Alternatives. The Proposed Action would contribute to a regional trend resulting in relocation of artificially-created riparian and wetland values from earthen irrigation conveyances to habitat replacement sites. The construction of either Action Alternative would not significantly affect the passive use of ecosystems, including stewardship, existence values, and bequest values.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Noxious Weeds (Section 3.2.10)	No Effect; neither Action Alternative would be completed and noxious weeds would continue to exist in the general area, and flowing water in the irrigation ditch sections, along with animals traveling along the ditch corridor would continue to serve as vectors for the spread of noxious weeds in the area.	The Piping Alternative would remove segments of open water, a key element of invasive seed transport. Under the Piping Alternative, finishing the ground surface with subsurface soil would help eliminate the weed seed bank in the construction area. Piped sections of the ditch would no longer require regular maintenance, lowering the potential for the continued spread and establishment of weeds. Under both Action Alternatives, downgradient herbaceous and woody noxious weeds which rely on ditch seepage would no longer be supported. Under either Action Alternative, noxious weeds would continue to be present throughout the Project Area. The Piping Alternative, along with other salinity control piping projects in the region, would remove an important vector of weed seed transport in the vicinity—open water. Under both Action Alternatives, seeps from the earthen ditch sections that currently support herbaceous and woody noxious weeds would be dried and the cumulative ability of the environment to support these weeds would be diminished.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Wildlife Resources (Section 3.2.11)	No Effect; neither Action Alternative would be completed and wildlife would continue to use the area as in the past. Salt and selenium loading from the Project Area would continue to affect aquatic dependent species.	Construction of either Action Alternative would create incremental activity and ground disturbance throughout the Project Area, resulting in minor temporary impacts to mule deer and elk. There would be a short-term loss of vegetative cover in big game critical winter habitat until the areas are revegetated. Construction impacts to small animals, especially burrowing amphibians, reptiles, and small mammals, would include direct mortality and displacement during construction activities. Bird, bat, reptile, and amphibian species dependent on wetland and riparian habitats would experience a long-term (greater than five years) loss of habitat due to either Action Alternative. However, the habitat value associated with the lost wetland and riparian habitat would be fully maintained at the existing habitat replacement site. After implementation of the Project, water resources for big game and other wildlife would continue to exist in the Project Area at a rate of more than 4 sources per square mile Hooved animals such as deer may be unable to escape a lined irrigation canal due to the depth and steepness of its sides. Both Action Alternatives would contribute to a regional trend resulting in the relocation of artificially-created riparian and wetland values from earthen irrigation conveyances to habitat replacement sites.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Threatened & Endangered Species (Section 3.2.12)	Neither Action Alternative would be completed, and historic salt and selenium loading from the Project Area would continue to affect the four Colorado River basin listed fishes and their critical habitat downstream.	Both Action Alternatives may adversely affect the bonytail chub, Colorado pikeminnow, humpback chub, and razorback sucker and their critical habitat. However, the Applicant's historic depletions are covered under the 2009 PBO following the execution of a 2010 Recovery Agreement between the Applicant and FWS for a different project. The Recovery Program ensures impacts to listed fishes or adverse modification of their designated critical habitat resulting from projects covered under the 2009 PBO would not result in jeopardy to the species. The reduction in selenium loading to the Colorado River and Gunnison River basins resulting from both Action Alternatives would contribute incrementally to the beneficial effects of the Gunnison Basin Selenium Management Program in improving water quality within designated critical habitat for the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail throughout the Colorado River and lower Gunnison River basins.
Cultural Resources (Section 3.2.13)	No Effect: neither Action Alternative would be completed, and the cultural resources documented as eligible for listing in the NRHP would continue to exist in their current condition on the landscape.	Both Action Alternatives would have an adverse effect on NRHP eligible cultural resources. An MOA (Appendix B) between Reclamation, and the Colorado SHPO, with the Applicant participating as an invited party, outlines stipulations designed to conserve the value of the eligible cultural resources. Both Action Alternatives would contribute to an area-wide adverse effect on NRHP eligible cultural resources. The value of the eligible cultural resources in the area which have been or may be affected due to federally-funded irrigation piping and ditch lining projects have been and would continue to be maintained due to the Project stipulations developed with the Colorado SHPO. Therefore, no significant impacts to cultural resources would occur as a result of the Project, including impacts to education and knowledge, learning and interpretation, and research opportunities, because the cultural heritage of irrigation history would be maintained.

Resource	Impacts: No Action Alternative	Impacts: Action Alternatives
Soils & Farmlands of Agricultural Significance (Section 3.2.14)	No Effect; neither Action Alternative would be completed and soils and farmlands of significance in the Project Area would continue to produce as in the past. Salinity loading from deep percolation of irrigation water through saline soils along the ditches would continue.	The construction of either Action Alternative would temporarily disturb soils in or near the previously-disturbed ditch prisms. Construction activities would cause temporary disturbance to soils that are either not in irrigated agricultural production, or soils directly adjacent to irrigated agricultural lands, or irrigated lands. Some currently farmed agriculturally significant soils would be temporarily directly disturbed by either Action Alternative, but would be put back into production prior to the following irrigation season. No farmlands would be permanently altered or removed from production as a result of either Action Alternative, and no interruption to agricultural production would occur. Soil erosion from irrigation water conveyances would be substantially reduced where ditch reaches are either piped or lined. Either Action Alternative would contribute to the growing amount of piped or lined irrigation conveyances in the region, which are collectively having a beneficial effect on the reduction of soil erosion on a larger scale.
Microclimate (Section 3.2.15)	No Effect; neither Action Alternative would be completed and the surface hydrology, soil, and vegetation aspects of microclimate would continue to function as they have in the past within the Project Area.	Conversion of the open, earthen ditches to pipelines or lined ditches would convert areas with wetland or riparian soils, hydrology, and vegetation (elements contributing to microclimate differences) to irrigated farmlands or uplands. The open water aspect of the ditches would remain following the Lining Alternative. However, the preponderance of microclimate benefits in the Project Area and on Grandview Mesa and in the lower Smith Fork drainage are provided by irrigated agricultural lands. Because no irrigated agricultural lands would be lost as a result of either of the Action Alternatives, there would be no significant impact to microclimate.

CHAPTER 4 ENVIRONMENTAL COMMITMENTS

This section summarizes the design features, BMPs, conservation measures, and other requirements (collectively, "Environmental Commitments") developed to further lessen the potential adverse insignificant effects of the Project. The actions in the following environmental commitment list would be implemented as an integral part of the Project and shall be included in any contractor bid specifications.

Note that in the event there is a change in the Project description, or any construction activities are proposed outside of the inventoried Project Area or the planned timeframes outlined in this EA, additional environmental review by Reclamation would be required to determine if the existing surveys and information are adequate to evaluate the changed project scope. Additional NEPA documentation may be required.

Table 6. Environmental Commitments

Type	Environmental Commitment	Affected Resource	Authority
Construction Contractor Plan or Certification Requirement	A Spill Response Plan shall be prepared in advance of construction by the contractor for areas of work where spilled contaminants could flow into water bodies.	Water Quality	Clean Water Act of 1972 as amended
Construction Contractor Plan or Certification Requirement	A Stormwater Management Plan shall be prepared and submitted to CDPHE by the construction contractor prior to construction disturbance.	Water Quality	Clean Water Act of 1972 as amended
Construction Contractor Plan or Certification Requirement	A CWA Section 402 Storm Water Discharge Permit compliant with the National Pollutant Discharge Elimination System (NPDES) shall be obtained from CDPHE by the construction contractor prior to construction disturbance (regardless of whether dewatering would take place during construction).	Water Quality	Clean Water Act of 1972 as amended
Construction Contractor Plan or Certification Requirement	Certification under CDPHE Water Quality Division Construction Dewatering Discharges Permit COG070000 shall be obtained by the construction contractor prior to any dewatering activities related to construction.	Water Quality	Clean Water Act of 1972 as amended

Type	Environmental Commitment	Affected Resource	Authority
Construction Contractor Plan or Certification Requirement	Any construction, access, or use permits required by the Delta County Planning Department, County Engineering and County Road & Bridge District #3, shall be obtained in advance of road crossings.	Access, Transportation & Safety	County Ordinances and Regulations
Construction Contractor Requirement	Required (if any) air quality emissions inventories, record-keeping, or reporting for construction equipment shall be on file with CDPHE prior to commencing construction.	Air Quality	Clean Air Act of 1963 and 5 CCR 1001-5 Part I.B.10 (Allowable Emissions), Part II.A (Air Pollutant Emission Notices for New, Modified, and Existing Sources), Part II.D (Exemptions from Air Pollutant Emission Notice Requirements
General NEPA Compliance	To satisfy the requirements of RGP-5, submit the following package to the Army Corps at least 30 days in advance of construction: (1) documentation for compliance with the Endangered Species Act and National Historic Preservation Act and/or the lead Federal Agency NEPA document containing the same, (2) a project description, (3) project plans, and (4) a location map."	Wetlands	RGP-5, Section 404, Clean Water Act of 1972 as amended
General BMP 1	Construction limits shall be clearly flagged or marked onsite to avoid unnecessary plant loss or ground disturbance. No grading or blading shall occur inside the Project ROW other than that necessary within the actual construction footprint.	Vegetation, Weeds, Habitat, Wildlife	Delta County Weed Management Plan (Delta County 2020

Type	Environmental Commitment	Affected Resource	Authority
General BMP 2	All equipment shall be cleaned before it is brought to the construction area, to minimize transport of new weed species to the construction area.	Vegetation, Weeds, Habitat, Wildlife	Delta County Weed Management Plan (Delta County 2020
General BMP 3	Prior to construction, vegetative material shall be removed by mowing or chopping, and either reserved for mulch onsite, or hauled to the County landfill or to a staging area to be burned, chipped, and/or mulched. Stumps shall be grubbed and hauled to the County landfill or a proposed staging area to be burned.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020
General BMP 4	Vegetation removal shall be confined to the smallest portion of the Project Area necessary for completion of the work.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020
General NEPA Requirement	Tree grubbing and vegetation removal in the Project Area shall avoid the primary nesting season of migratory birds (April 1 – July 15). This timing restriction shall be noted on Project construction drawings.	Wildlife	Migratory Bird Treaty Act of 1918
General BMP 5	Where required, topsoil, or top material, shall be stockpiled and then redistributed as top dressing after completion of construction activities.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020
General BMP 6	Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used to prevent erosion from entering water bodies during construction.	Water Quality	Clean Water Act of 1972 as amended

Type	Environmental Commitment	Affected Resource	Authority
General BMP 7	Any concrete pours shall occur in forms and/or behind cofferdams to prevent discharge into waterways. Any wastewater from concrete-batching, vehicle wash down, and aggregate processing shall be contained and treated or removed for off-site disposal.	Water Quality	Clean Water Act of 1972 as amended
General BMP 8	The construction contractor shall transport, handle, and store any fuels, lubricants, or other hazardous substances involved with the Project in an appropriate manner that prevents them from contaminating soil and water resources.	Water Quality, Soil	Clean Water Act of 1972 as amended
General BMP 9	Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.	Water Quality, Soil	Clean Water Act of 1972 as amended
General BMP 10	Ground disturbances and construction areas shall be limited to only those areas necessary to safely implement the Project.	Soil, Vegetation, Weeds, Habitat, Wildlife	Archaeological Resources Protection Act of 1979; Paleontological Resources Preservation Act of 2009
General BMP 11	Pipeline trenches left open overnight shall be kept to a minimum and covered to reduce potential for hazards to the public and to wildlife. Covers shall be secured in place and strong enough to prevent people, livestock, or wildlife from falling through. Where trench covers would not be practical, wildlife escape ramps shall be used.	Wildlife, Public Safety	C.R.S. 33-1-101 to 125 Parks and Wildlife Article 1: Wildlife
General BMP 12	Typically, 30 to 500 feet of trench would be left open overnight during construction. Each evening, the end of the trench would be sloped to create an escape ramp for wildlife.	Wildlife, Public Safety	C.R.S. 33-1-101 to 125 Parks and Wildlife Article 1: Wildlife

Type	Environmental Commitment	Affected Resource	Authority
General NEPA Compliance	A barricade shall be placed between the construction zone and a sensitive historical structure identified during a cultural resources survey for the Project. The location of the sensitive historical structure shall be clearly marked on the construction drawings.	Cultural Resources	National Historic Preservation Act of 1966
General NEPA Compliance	If previously undiscovered cultural or paleontological resources are discovered during construction, construction activities must immediately cease in the vicinity of the discovery and Reclamation must be notified. In this event, the SHPO shall be consulted, and work shall not be resumed until consultation has been completed, as outlined in the Unanticipated Discovery Plan in the MOA (see Appendix B of the EA). Additional surveys shall be required for cultural resources if construction plans, or proposed disturbance areas are changed.	Cultural Resources	National Historic Preservation Act of 1966 Archaeological Resources Protection Act of 1979 Paleontological Resources Preservation Act of 2009
General NEPA Compliance	In the event that previously undocumented threatened or endangered species are encountered during construction, the contractor shall stop construction activities until Reclamation has consulted with FWS to ensure that adequate measures are in place to avoid or reduce impacts to the species.	Threatened & Endangered Species	Endangered Species Act of 1973 as amended
General NEPA Compliance	Construction activities shall take place only in accordance with the schedule restrictions outlined in the EA.	Wildlife	Migratory Bird Treaty Act of 1918; Bald and Golden Eagle Protection Act of 1940

Type	Environmental Commitment	Affected Resource	Authority
General NEPA Compliance	To avoid disturbance to nesting raptors, construction activities within species-specific CPW-recommended (CPW 2020) buffer distances are time-restricted as follows: Red-tailed hawk: no construction activity within 1/3 mile of a nest February 15 through July 15, with the following exceptions: 1) pipeline construction within 1/3 mile of a nest could begin during the period of February 15-July 15, so long as the construction activities were initiated prior to February 15, and operated on a daily basis until completion (it is assumed that red-tailed hawks that initiate nesting during ongoing construction activities are tolerant to such activities), or 2) a Reclamation-approved biologist determines that the nest is not active that breeding season. These timing restrictions and sensitive areas shall be noted on Project construction drawings.	Wildlife	Migratory Bird Treaty Act of 1918 Bald and Golden Eagle Protection Act of 1940
General NEPA Compliance	If a previously unknown active raptor nest is discovered within 1/2 mile of the Project Area during construction, construction shall cease until Reclamation can complete consultations with FWS and CPW.	Wildlife	Migratory Bird Treaty Act of 1918 Bald and Golden Eagle Protection Act of 1940
General NEPA Compliance	The raptor nest survey shall be repeated in Spring 2026 for construction work anticipated to continue past October 15, 2026, and on a three-year cycle thereafter. The survey must only be repeated for the remaining construction areas, within the required buffer distances explained in CPW 2020.	Wildlife	Migratory Bird Treaty Act of 1918

Type	Environmental Commitment	Affected Resource	Authority
General BMP 13	Following construction, except where other finishing techniques indicated on the construction drawings, all disturbed areas shall be smoothed with tracked equipment (without back dragging blade), shaped, and contoured to as near to their pre-project conditions as practicable.	Soil, Vegetation, Weeds, Habitat	Clean Water Act of 1972 as amended
Design Feature	All drainage patterns that intersect the ditch shall be shaped to their natural flow patterns following ditch piping.	Soil, Vegetation, Habitat	Clean Water Act of 1972 as amended
General BMP 14	All equipment shall be cleaned before it is transported to another job site, to avoid introducing weed species from the construction area to another job site.	Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020
General BMP 15	Re-seeding, where conducted in areas surrounded by native vegetation, shall occur following construction at appropriate times and with appropriate methods, using a drought tolerant, weed-free seed list approved by Reclamation (see Appendix A of the EA). The Applicant shall coordinate with private landowners to reseed any disturbances to irrigated areas.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020
General BMP 16	Weed control shall be implemented by Applicant or its contractor in accordance with any agreements with individual landowners.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (Delta County 2020

CHAPTER 5 – CONSULTATION AND COORDINATION

5.1 – Introduction

Reclamation's public involvement process presents the public with opportunities to obtain information about a given project, and allows interested parties to participate in the project through written comments. This chapter discusses public involvement activities taken to date for the Proposed Action.

5.2 – Public Involvement

Notice of the public review period and availability of the Draft EA was distributed to private landowners adjacent to the Project, and the organizations and agencies listed in Appendix C. Reclamation notified 28 interested parties and 32 landowners adjacent to the Project area of the availability of the Draft EA public comment period through a mailed distribution letter. Reclamation develops landowner distribution lists based on the names and addresses on file with the county's accessors office. The general public review period extended from April 24 to May 27, 2025 (a total of 33 days). During this period, it was identified that one landowner was inadvertently left off of the distribution list, and two other landowners requested an extension of the opportunity to comment. Comments were accepted through July 25 to ensure all interested parties had an opportunity to comment. In the end, Reclamation received a total of 12 comment documents from seven commenters. A summary of the comments and Reclamation's responses to the comments are provided in Appendix E, along with a copy of the comment documents.

5.3 – Distribution

The publicly-available electronic version of this EA is available on Reclamation's website, and meets the technical standards of Section 508 of the Rehabilitation Act of 1973, so that the document can be accessed by people with disabilities using accessibility software tools.

CHAPTER 6 – PREPARERS

The following list contains the individuals who participated in the preparation of this EA.

Table 7. List of Preparers

Name	Agency	Title	Areas of Responsibility
Jennifer Ward	Reclamation	Environmental Group Chief	EA review, general authorship, cultural resources
Dawn Reeder	Rare Earth Science (Consultant to the Applicant)	Principal Biologist	General authorship, mapping
Cassandra Shenk	Consultant to the Applicant	NEPA Specialist	Project Description

CHAPTER 7 – REFERENCES

Armstrong, D.M., J.P. Fitzgerald, and C.A. Meany. 2011. Mammals of Colorado. 2nd Ed. Boulder, Colorado: Univ. Press of Co. 620 pp.

Bovee, B. 2017. How do you value a water right? Colorado Real Estate Journal. February 27. https://crej.com/news/value-water-right/

Colorado Division of Property Taxation. 2025. Classification and Valuation of Agricultural Property in Colorado. A Brochure. January. https://dpt.colorado.gov/

CPW (Colorado Parks and Wildlife). 2025. Public Species Activity Mapping Data Layer accessed in ArcGIS from the ArcGIS online server. Last updated by CPW in January 2025.

CPW. 2020. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. https://cpw.widencollective.com/assets/share/asset/fqmg4ds76b

Delta County. 2020. Delta County Noxious Weed Management Plan. Adopted April 8, 2020. https://www.deltacounty.com/DocumentCenter/View/1013/Delta-County-2020-Noxious-Weed-Management-Plan?bidId=

EPA (U.S. Environmental Protection Agency). 2025. Current nonattainment counties for all criteria pollutants, updated January 31. https://www3.epa.gov/airquality/greenbook/ancl.html.

ERO (ERO Resources Corporation). 2023. Habitat Loss Assessment: Grandview Canal Middle and Lower Pipeline Project, Delta County Colorado. Prepared for Grandview Canal and Irrigation Company. September 28. 38 pp.

FWS (U.S. Fish and Wildlife Service). 2024. Memorandum re: 2023 Assessment of Sufficient Progress for the Upper Colorado River Endangered Fish Recovery Program in the upper Colorado River basin. https://coloradoriverrecovery.org/uc/wp-content/uploads/sites/2/2024/11/2023-UCRRP-Sufficient-Progress-Memo-and-Supporting-RAP-and-PBO-Reviews_AMMsigned.pdf

FWS 2023. Species status assessment report for *Speyeria nokomis nokomis*, Version 1.1. March 2023. Grand Junction, Colorado. 80 pp.

FWS. 2009. Gunnison Basin Programmatic Biological Opinion. December 4. Memorandum to Area Manager, Western Colorado Area Office, Bureau of Reclamation, Grand Junction, Colorado from Colorado Field Supervisor, Ecological Services, Lakewood, CO. https://coloradoriverrecovery.org/uc/wp-content/uploads/sites/2/2021/09/GUPBO.pdf

Gibbons, S., C. Peng, & C. K. Tang. 2021. Valuing the Environmental Benefits of Canals and Canal Restoration Using House Prices. Land Economics Nov 2021, 97 (4) 858-874; DOI: 10.3368/le.97.4.031420-0038R1. https://le.uwpress.org/content/wple/97/4/858.full.pdf

George, Jolene (Delta County Assessor). 2025. Personal communication (telephone) with D. Reeder (Rare Earth Science on behalf of Reclamation) and Jennifer Ward (Reclamation). June 3 and October 9.

Hammerson, G.A. 1999. Amphibians & Reptiles in Colorado. 2nd Ed. Boulder: Univ. Press of Colorado. 484 pp.

Henneberg, M.F., 2021, Dissolved-Selenium Concentrations and Loads in the Lower Gunnison River Basin, Colorado, as Part of the Selenium Management Program (ver. 2.0, September 2022): U.S. Geological Survey data release, https://doi.org/10.5066/P92UIS8X.

Hrozencik, R.A., N.A. Potter, & S. Wallander. 2022. The Cost-Effectiveness of Irrigation Canal Lining and Piping in the Western United States. In: American Agriculture, Water Resources, and Climate Change. Eds. Libecap, G. and A. Dinar. U. of Chicago Press.

Hubbell, G. 2025. Email correspondences to Jennifer Ward, U.S. Bureau of Reclamation Re: Draft EA – Grandview Canal Middle and Lower Piping Project. May 20, May 27, July 16.

Kingery, H.E. (Editor). 1998. Colorado Breeding Bird Atlas. Denver: Co. Bird Atlas Partnership & Co. Division of Wildlife. 636 pp.

Linard, J.I., 2013, Ranking contributing areas of salt and selenium in the Lower Gunnison River Basin, Colorado, using multiple linear regression models: U.S. Geological Survey Scientific Investigations Report 2013–5075, 35 p., http://pubs.usgs.gov/sir/2013/5075/

Loving, B. (Montezuma County Noxious Weed Department). 2022. Economic Assessment of Noxious Weeds in Montezuma County. https://montezumacounty.org/wp-content/uploads/2023/02/Economic_Assessment_of_Noxious_Weeds_in_Montezuma_County.pdf

Mohler, C. L. 2001. Weed life history: Identifying vulnerabilities. p. 40–98. In M. Liebman et al. Ecological management of agricultural weeds. Cambridge University Press, New York.

Nicholls, S., & Crompton, J. 2018. A Comprehensive Review of the Evidence of the Impact of Surface Water Quality on Property Values. Sustainability, 10(2), 500. https://doi.org/10.3390/su10020500

Nicholls, S., & Crompton, J. 2017. The effect of rivers, streams, and canals on property values. https://college.agrilife.org/rptsweb/wp-content/uploads/sites/21/2015/05/The-Effect-of-Rivers-Streams-and-Canals-on-Property-Values.pdf

NRCS (U.S. Department of Agriculture Natural Resources Conservation Service). 2022. Gridded Soil Survey Geographic (gSSURGO) for Colorado. USDA GeoSpatial Data Gateway.

Puma, M.J., and B.I. Cook, 2010: Effects of irrigation on global climate during the 20th century. J. Geophys. Res., 115, D16120, doi:10.1029/2010JD014122.

Reclamation (U.S. Bureau of Reclamation). 2025a. Summary of GIS Analysis Noxious Weed, Landcover, and Hydrologic Features, and Estimated Impact from the Proposed Action Alternative for the Grandview Canal Middle Lower Piping Project. March.

Reclamation. 2025b. Threatened & Endangered Species Inventory for the Grandview Canal Middle and Lower Piping Project. Prepared by Rare Earth Science, LLC, for the U.S. Bureau of Reclamation, Environmental Planning Group of the Western Colorado Area Office, Upper Colorado Region. April.

Reclamation. 2025c. Internal e-mail correspondences: "Notice - Ethernet Network Issues," May 20, 2025 and "Phones Down," May 16, 2025.

Reclamation. Quality of Water – Colorado River Basin Progress Report No. 27. https://www.usbr.gov/uc/progact/salinity/pdfs/ProgressReports/20230900-QualityWaterColoradoRiverBasin-ProgressReport27-508-UCRO.pdf

Reclamation. 2022. Selenium Management Program, Gunnison River Basin 2021 Annual Progress Report. Bureau of Reclamation. https://www.usbr.gov/uc/DocLibrary/Reports/SeleniumManagementProgram/20221100-SeleniumManagementProgram-2021Report-508-WCAO.pdf

Reclamation. 2020a. Funding Opportunity Announcement (FOA) No. BOR-UC-20-F001 – Colorado River Basinwide and Basin States Salinity Control Programs – Salt Load Reduction Estimate for the Grandview Canal & Irrigation Co. Extensions, Diversion, Upper Middle & Lower Project. Letter from Kib Jacobson, Colorado River Basin Salinity Control Program Manager to Mark LeValley, President, Grandview Canal & Irrigation Company, from the Upper Colorado Regional Office, Salt Lake City. May 12.

Reclamation. 2020b. Selenium Management Program, Gunnison River Basin 2020 Annual Progress Report. Selenium Management Program, Upper Colorado Basin, Western Colorado Area Office. 41 pp. https://www.usbr.gov/uc/DocLibrary/Reports/SeleniumManagementProgram/20210800-SeleniumManagementProgram-2020Report-508-WCAO.pdf

Reclamation. 2019a. Environmental Assessment and Finding of No Significant Impact: Aspen Canal Piping Project. Prepared by the U.S. Dept. of the Interior Bureau of Reclamation, Upper Colorado Region, Wester Colorado Area Office, Grand Junction, Colorado (FONSI signed on 2/27/19). https://www.usbr.gov/uc/envdocs/ea/20190200-AspenCanalPipingProject-FinalEAandFONSI-508-WCAO.pdf

Reclamation. 2019b. Environmental Assessment and Finding of No Significant Impact: Crawford Clipper Ditch Company Clipper Center Lateral Pipeline Project. Prepared by the U.S. Dept. of the Interior Bureau of Reclamation, Upper Colorado Region, Wester Colorado Area Office, Grand Junction, Colorado (WCAO-GJO-FONSI-19-02). https://www.usbr.gov/uc/envdocs/ea/20191000-CrawfordClipperDitchCompanyClipperCenterLateralPipelineProject-FinalEAandFONSI-508-WCAO.pdf

Reclamation. 2019c. Documentation of NEPA Adequacy for Clipper Center Lateral Pipeline Project – Proposed Pipeyard at Spurlin Mesa Road. Prepared by the U.S. Dept. of the Interior Bureau of Reclamation, Upper Colorado Region, Wester Colorado Area Office, Grand Junction, Colorado. December.

Reclamation. 2018. Basinwide Salinity Control Program: Procedures for Habitat Replacement. 14 pp. May.

Reclamation. 2014. Final Environmental Assessment: Clipper Irrigation Salinity Control Project 4, Smith Fork Project, Delta County, Colorado. Prepared for the U.S. Bureau of Reclamation by Rare Earth Science, LLC. https://www.usbr.gov/uc/envdocs/ea/clipperIrrig/final-EA.pdf. FONSI (WCAO-GJ-FONSI-14-01): https://www.usbr.gov/uc/envdocs/ea/clipperIrrig/fonsi.pdf

Reclamation. 2010. Environmental Assessment: Grandview Canal Piping Project. June. 69 pp.

Richards, R.J., Linard, J.I., and Hobza, C.M., 2014, Characterization of salinity loads and selenium loads in the Smith Fork Creek region of the Lower Gunnison River Basin, western Colorado, 2008–2009: U.S. Geological Survey Scientific Investigations Report 2014–5101, 34 p., https://pubs.usgs.gov/sir/2014/5101/pdf/sir2014-5101.pdf

Schaffrath, K.R., 2012, Surface-water salinity in the Gunnison River Basin, Colorado, water years 1989 through 2007: U.S. Geological Survey Scientific Investigations Report 2012–5128, 47 p. https://pubs.usgs.gov/sir/2012/5128/

SMPW (Selenium Management Program Workgroup). 2011. Selenium Management Program: Program Formulation Document, Gunnison River Basin, Colorado. Compiled by U.S. Bureau of Reclamation. http://www.usbr.gov/uc/wcao/progact/smp/docs/Final-SMP-ProgForm.pdf

Terra Firma (Terra Firma Land Stewardship, LLC). 2025. ADDENDUM to the Habitat Plan for Crawford State Park Site Dated July 26, 2012, Grandview Canal and Irrigation Company, Delta County, Colorado.

UKCEH (UK Centre for Ecology & Hydrology). 2023. Derived flow statistics from the National River Flow Archive. UK Centre for Ecology & Hydrology. https://nrfa.ceh.ac.uk/derived-flow-statistics.

USGS (U.S. Geological Survey). 2003. Estimated mean annual natural ground-water recharge in the conterminous United States. U.S. Geological Survey Open-File Report 03-311. Last Updated: August 2021. Accessed on: March 15, 2023. https://water.usgs.gov/lookup/getspatial?rech48grd and raster dataset at https://water.usgs.gov/GIS/metadata/usgswrd/XML/rech48grd.xml

CHAPTER 8 – ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Definition
BLM	U.S. Bureau of Land Management
BMP	Best management practice
CAA	Clean Air Act
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
CPW	Colorado Parks and Wildlife
C.R.S.	Colorado Revised Statute
CRSP	Colorado River Storage Project
CWA	Clean Water Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
E.O.	Executive Order
EPA	Environmental Protection Agency
ESA	U.S. Endangered Species Act
FOA	Funding Opportunity Announcement
FONSI	Finding of No Significant Impact
FWS	U.S. Fish & Wildlife Service
HDPE	High-density polyethylene
Interior	U.S. Department of the Interior

Abbreviation or Acronym	Definition
mi	mile
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NCA	National Conservation Area
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NRHP	National Register of Historic Places
PBO	Programmatic Biological Opinion
PM	Principal meridian
PVC	Polyvinylchloride
RCPP	Regional Conservation Partnership Program
Reclamation	U.S. Bureau of Reclamation (also USBR)
ROW	Right-of-way
SHPO	State Historic Preservation Officer
SMPW	Selenium Management Program Workgroup
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
U.S.C.	United States Code
USDA	U.S. Department of Agriculture

APPENDIX A – SEED LIST

The following certified weed-free seed mix is approved by Reclamation and suitable for uplan, non-irrigated areas. The recommended seeding rate is 40 seeds per square foot, and the pounds of live seed (PLS) per acre are calculated on published data for seeds per pound of the recommended species.

Code	Common Name	Suggested Cultivar	Genus	Species	Mix Proportion	PLS/acre
PASM	Western wheatgrass	X-ARRIBA	*Pascopyrum*	*smithii*	25%	3.5
ELTR	Slender wheatgrass	White River	*Elymus*	*trachycaulus*	25%	3
POSE	Sandburg bluegrass	UP	*Poa*	*secunda*	40%	0.75
POFE	Muttongrass	UP/Ruin Canyon	*Poa*	*fendleriana*	10%	0.2
				TOTAL		**7.45**

APPENDIX B – CULTURAL RESOURCE COMPLIANCE DOCUMENTATION

MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

WHEREAS, the Bureau of Reclamation (Reclamation) and the Grandview Canal and Irrigation Company (GCIC) plan to pipe 3.9 miles of the Grandview Canal (Project); and

WHEREAS, Reclamation plans to fund GCIC to pipe 3.9 miles of the Grandview Canal, as authorized by the Basinwide Program under the Colorado River Basin Salinity Control Program, thereby making the Project a federal undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108, and its implementing regulations, 36 CFR Part 800; and

WHEREAS, in accordance with 36 CFR Part 800.2(a)(2), Reclamation is the lead agency for Section 106 responsibilities; and

WHEREAS, Reclamation has defined the undertaking's Area of Potential Effects (APE) as contained within a 200-foot wide corridor centered on approximately 3.9 miles of the Grandview Canal, the pipeline alignment, and access roads, and within a 100-foot wide buffer around three staging areas, as depicted in Attachment A; and

WHEREAS, Reclamation as lead Federal agency has determined, in consultation with the Colorado State Historic Preservation Officer (SHPO), that the Grandview Canal (5DT1780) is eligible for inclusion on the National Register of Historic Places (NRHP) under Criterion A, and that the Project will result in an adverse effect to the historic property; and

WHEREAS, the GCIC, as the sponsor of the Project, has been invited to participate in this Agreement as an invited signatory, and has chosen to participate in the consultation; and

WHEREAS, Reclamation consulted with the Southern Ute Indian Tribe, the Ute Indian Tribe of the Uintah and Ouray Reservation, and the Ute Mountain Ute Tribe via an October 14, 2021 letter inviting the tribes to participate in the development of this memorandum of agreement (Agreement) as concurring parties. The Southern Ute Indian Tribe, the Ute Mountain Ute Tribe, and the Ute Indian Tribe of the Uintah and Ouray Reservation have not responded as of the signing of this Agreement; and

WHEREAS, Reclamation consulted with the Delta County Commissioners, the Delta County Historic Landmarks Board, and the Hotchkiss Crawford Historical Museum via an October 14, 2021 letter to invite the local governments and other potentially interested entities to participate in the development of this Agreement as concurring parties. The Delta County Commissioners,

the Delta County Historic Landmarks Board, and the Hotchkiss Crawford Historical Museum have not responded as of the signing of this Agreement; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), Reclamation has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii);

NOW, THEREFORE, pursuant to Section 106 of the NHPA, Reclamation and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect on historic properties.

STIPULATIONS

Reclamation shall ensure that the following measures are carried out:

I. MITIGATION

A. The GCIC will develop content on Grandview Canal segment 5DT.1780.9 for the Natural Resources Conservation Services (NRCS) interactive Colorado Irrigation Ditches and Canals ArcGIS Storymap (Storymap) Grandview Canal website that presents a visual narrative about the history of the GCIC system, the Grandview Canal, and the role of irrigation in the development of the Crawford area. The Storymap will broadly describe early irrigation projects in the Crawford area and focus largely on the Grandview Canal (5DT1780).

   a. The Storymap will include photographs and interactive maps that allow the viewer to explore common features along the canal, learn about the canal's history, its significance, the contributions of the canal to the development of the local communities and economies, and view historical maps. The Grandview Canal segment (5DT1780.9) will be presented on the platform, along with a brief history and description of the canal, representative photographs, historic records, historic maps, videos, and/or scaled drawings to provide the user with sufficient information to understand the importance of the canal and how it served and continues to serve the people of the Crawford area.

   b. Prior to any modification of the Grandview Canal (5DT1780), Reclamation shall ensure that necessary information for the development of the Storymap is collected, including but not limited to additional research and scanning of images and documents held by GCIC.

   c. Reclamation will submit a draft outline and text of the Storymap to all signatories to this Agreement within two (2) years of the execution of this agreement. The signatories shall review and provide comments, if they have any, within thirty (30) calendar days of receipt of the draft. Reclamation shall consider signatory

comments and revise the draft accordingly. Once a draft is agreed to by the signatories, Reclamation will finalize the Storymap for public use.

d. A link to the Storymap will be uploaded to Reclamation's cultural resources webpage (webpage). The link will remain on the webpage for a period of no less than 5 years.

II. GENERAL REQUIREMENTS AND STANDARDS

A. Reclamation will provide a link to the Storymap to all signatory parties within three (3) years of the execution of this Agreement. A letter containing a link to the Storymap will also be sent to the Delta County Commissioners, Delta County Historic Landmarks Board, Hotchkiss Crawford Historical Museum, Crawford Public Library, Colorado Archaeological Society, and the Colorado Council of Professional Archaeologists.

B. The activities prescribed by the stipulations of this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at minimum, the *Secretary of the Interior's Historic Preservation Professional Qualification Standards* (48 FR 44716, September 29, 1983, and 62 FR 33708, June 20, 1997) (PQS) in the appropriate discipline. This does not preclude the use of properly supervised persons who do not meet the PQS.

III. DURATION

This Agreement shall expire if its terms are not carried out within three (3) years from the date of its execution. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation VII below.

IV. POST-REVIEW DISCOVERIES

If potential historic properties are discovered or unanticipated effects on historic properties found, the GCIC on behalf of Reclamation shall implement the discovery plan included as Attachment B of this Agreement.

V. MONITORING AND REPORTING

No later than December 31st of each year following the execution of this Agreement until its stipulations are carried out, it expires, or is terminated, GCIC on behalf of Reclamation shall provide all parties to this Agreement a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in GCIC's efforts to carry out the terms of this Agreement.

The signatories may monitor activities pursuant to this Agreement, and the ACHP will review such activities if so requested by a party to this Agreement. Reclamation will cooperate with the signatories in carrying out their review and monitoring responsibilities.

VI. DISPUTE RESOLUTION

Should any signatory or concurring party to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, Reclamation shall consult with such party to resolve the objection. If Reclamation determines that such objection cannot be resolved, Reclamation will:

A. Forward all documentation relevant to this dispute, including Reclamation's proposed resolution, to the ACHP. The ACHP shall provide Reclamation with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, Reclamation shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. Reclamation will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, Reclamation may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, Reclamation shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the Agreement, and provide them and the ACHP with a copy of such written response.

C. Reclamation's ability to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged.

VII. AMENDMENTS

This Agreement may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

VIII. TERMINATION

If any signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate this Agreement upon written notification to the other signatories.

Once the Agreement is terminated, and prior to work continuing on the undertaking, Reclamation must either (a) execute an Agreement pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Reclamation shall notify the signatories as to the course of action it will pursue.

Execution of this Agreement by GCIC, Reclamation, and SHPO and implementation of its terms evidence that Reclamation has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

LIST OF ATTACHMENTS

Attachment A: Area of Potential Effects and Site Locations
Attachment B: Unanticipated Discovery Plan

SIGNATORIES:

Colorado State Historic Preservation Office
Bureau of Reclamation, Western Colorado Area Office

INVITED SIGNATORIES: Grandview Canal Irrigation Company

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Colorado State Historic Preservation Office

By: Dr. Holly Kathryn Norton Digitally signed by Dr. Holly Kathryn Norton Date: 2022.04.27 10:38:27 -06'00' Date:_____

Dawn DiPrince, State Historic Preservation Officer

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Bureau of Reclamation, Western Colorado Area Office

By:  Digitally signed by Ed Warner
Date: 2022.04.26 13:45:57 -06'00' Date:_____

Ed Warner, Area Manager

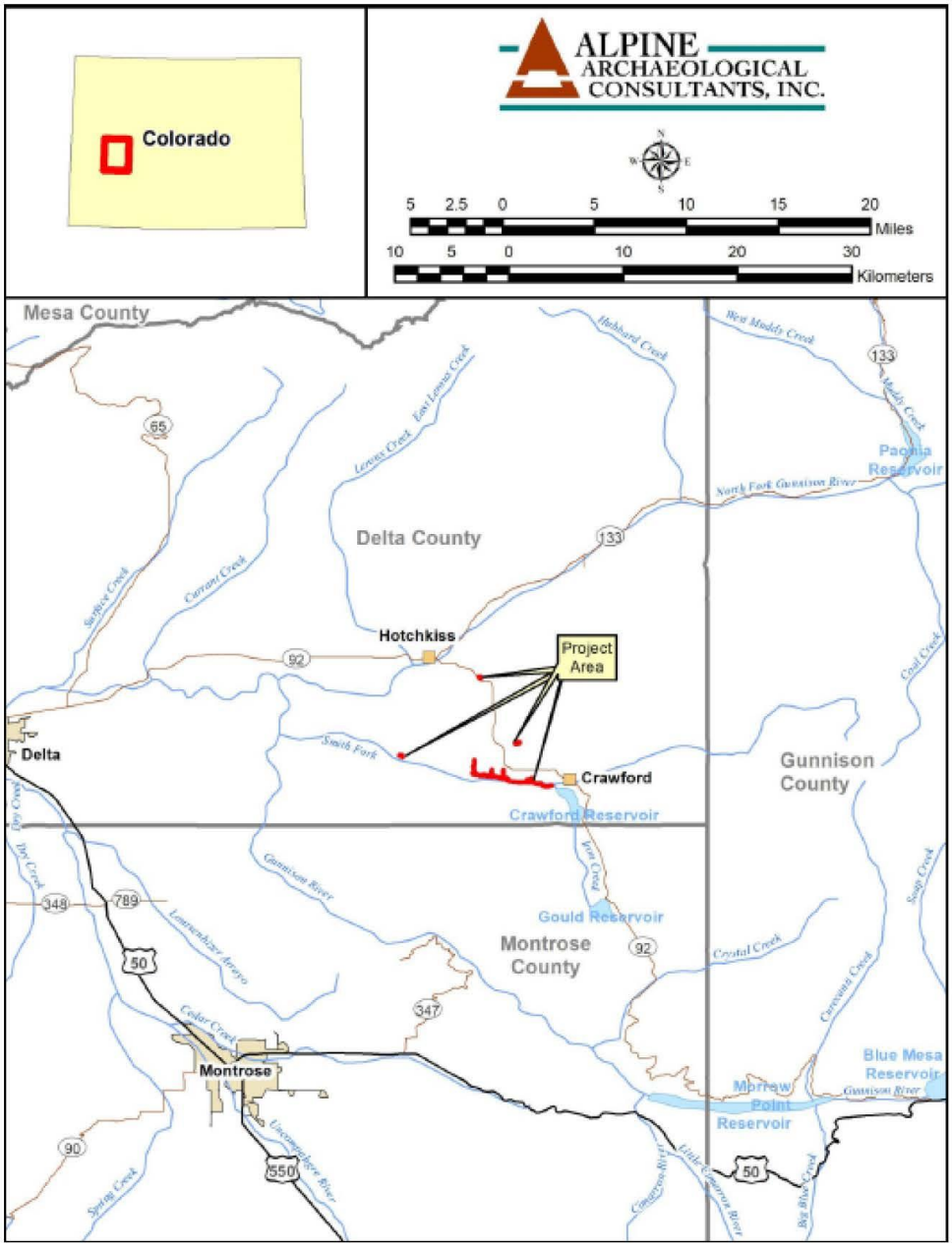
SIGNATORY PAGE

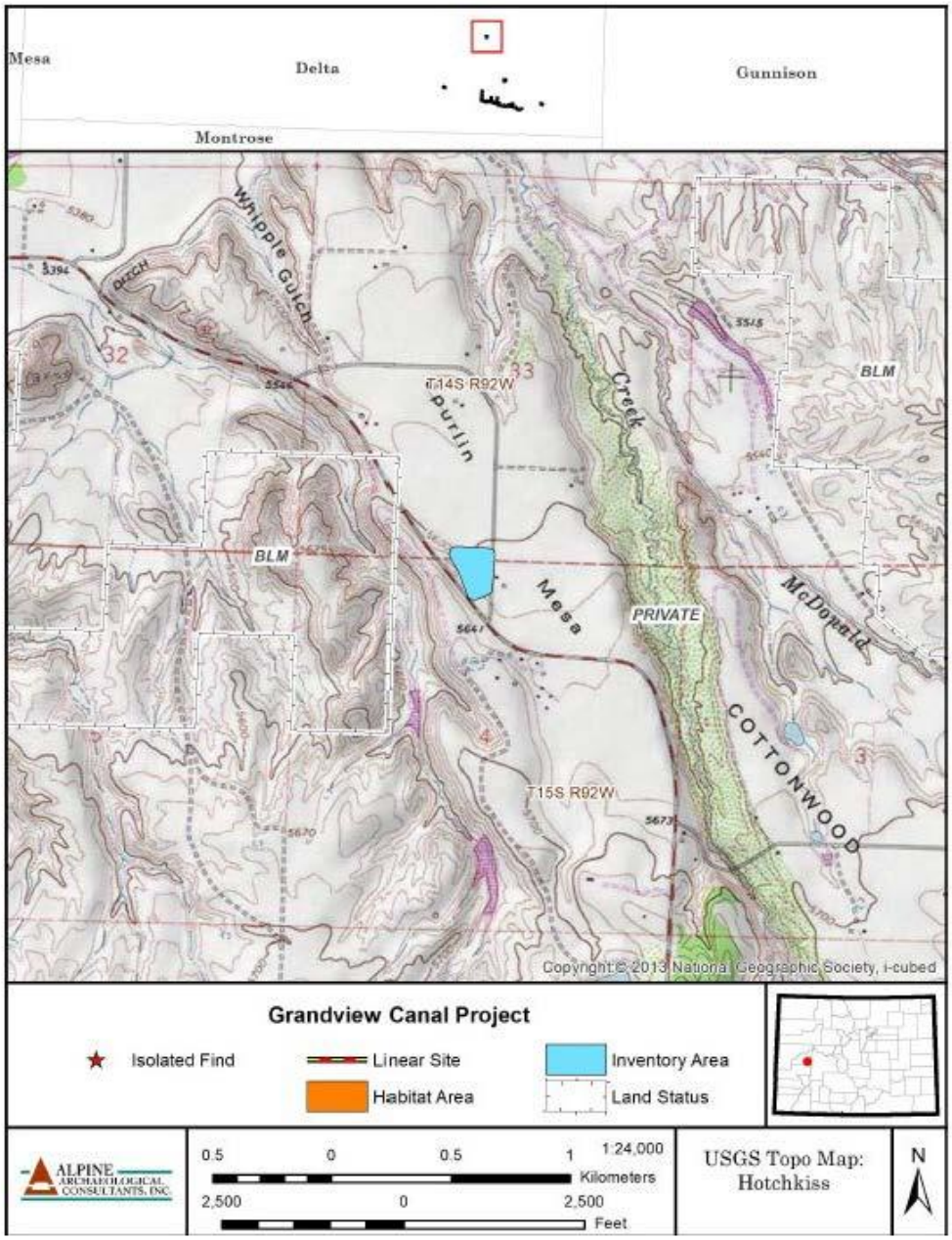
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

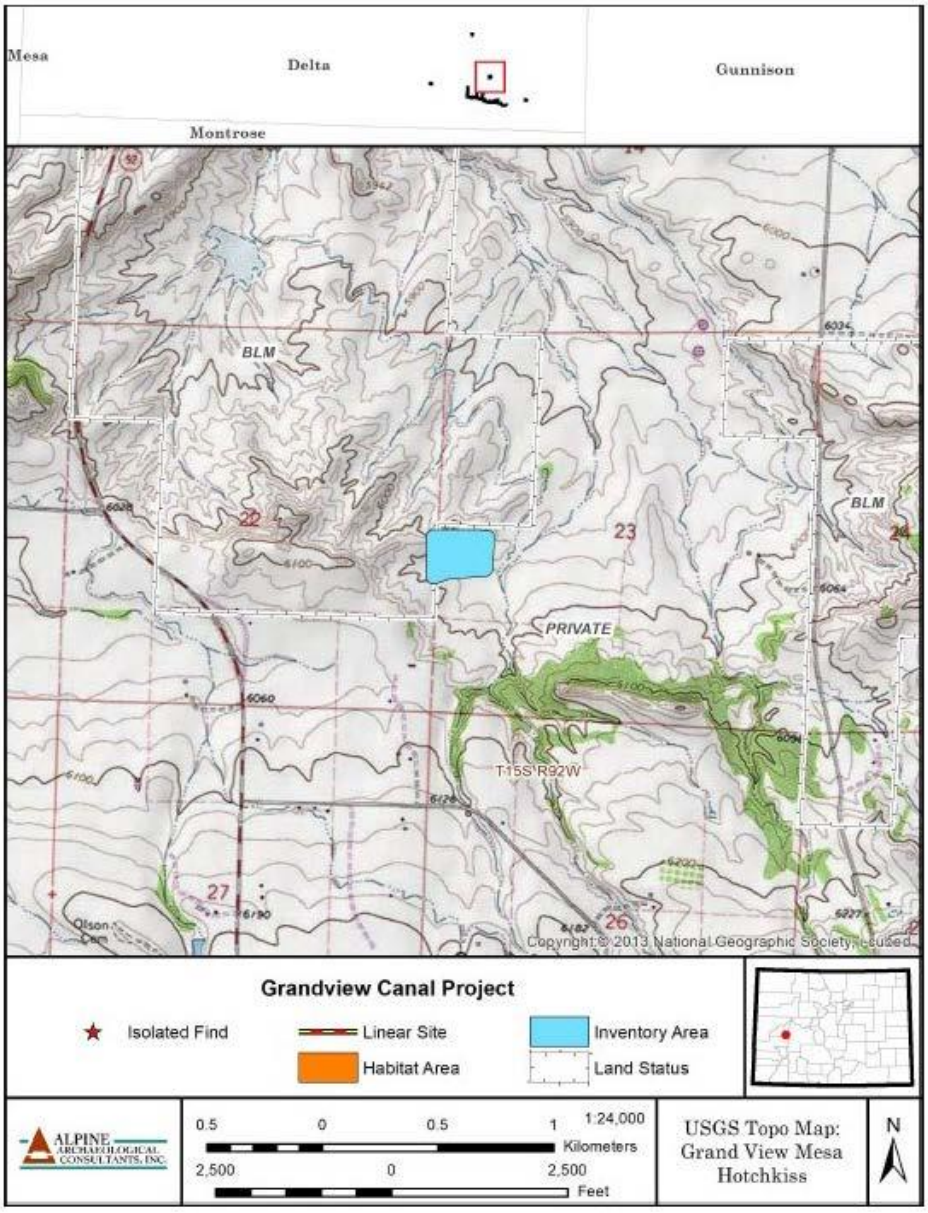
The Grandview Canal Irrigation Company

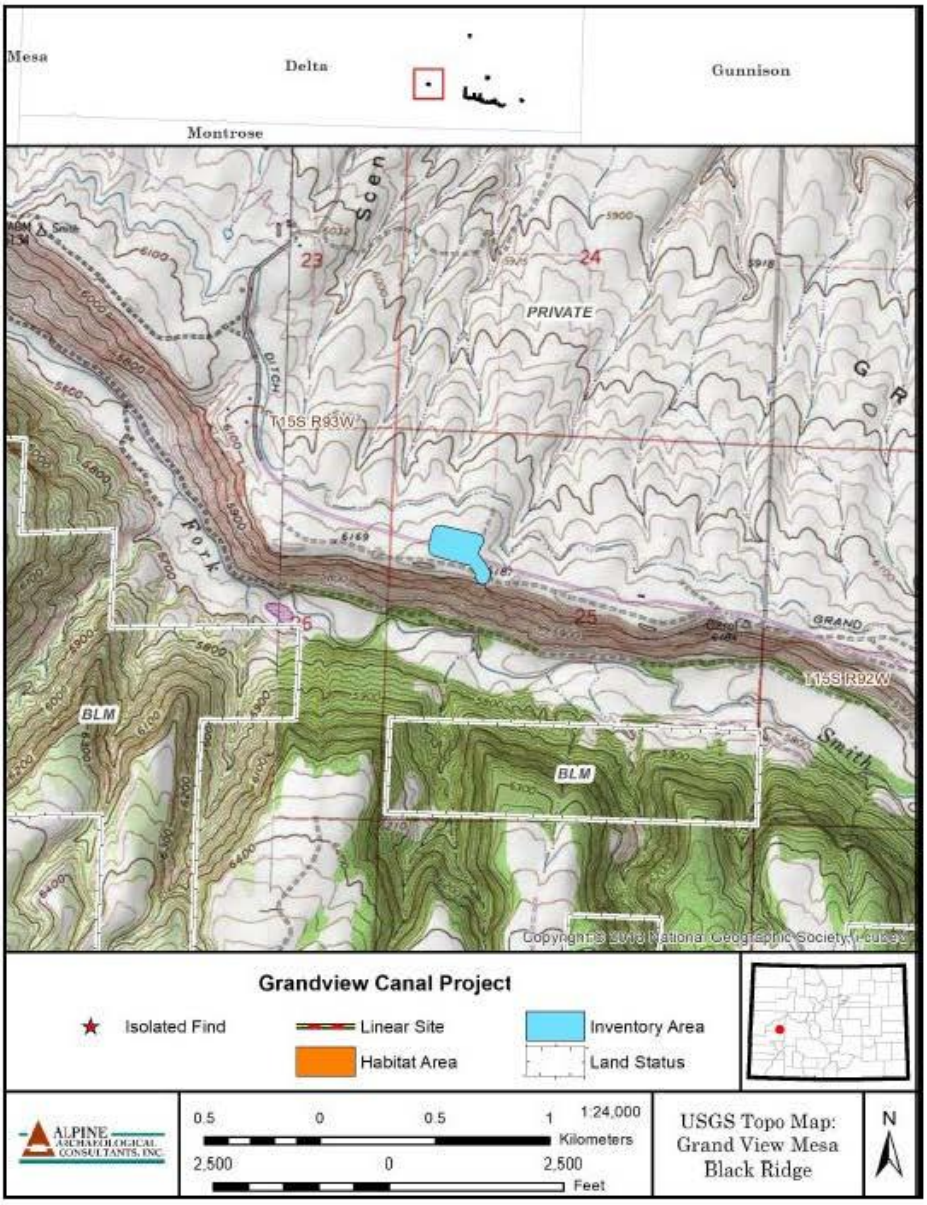
By: Mark LaValley Date: 5-4-22
Mark LaValley, President

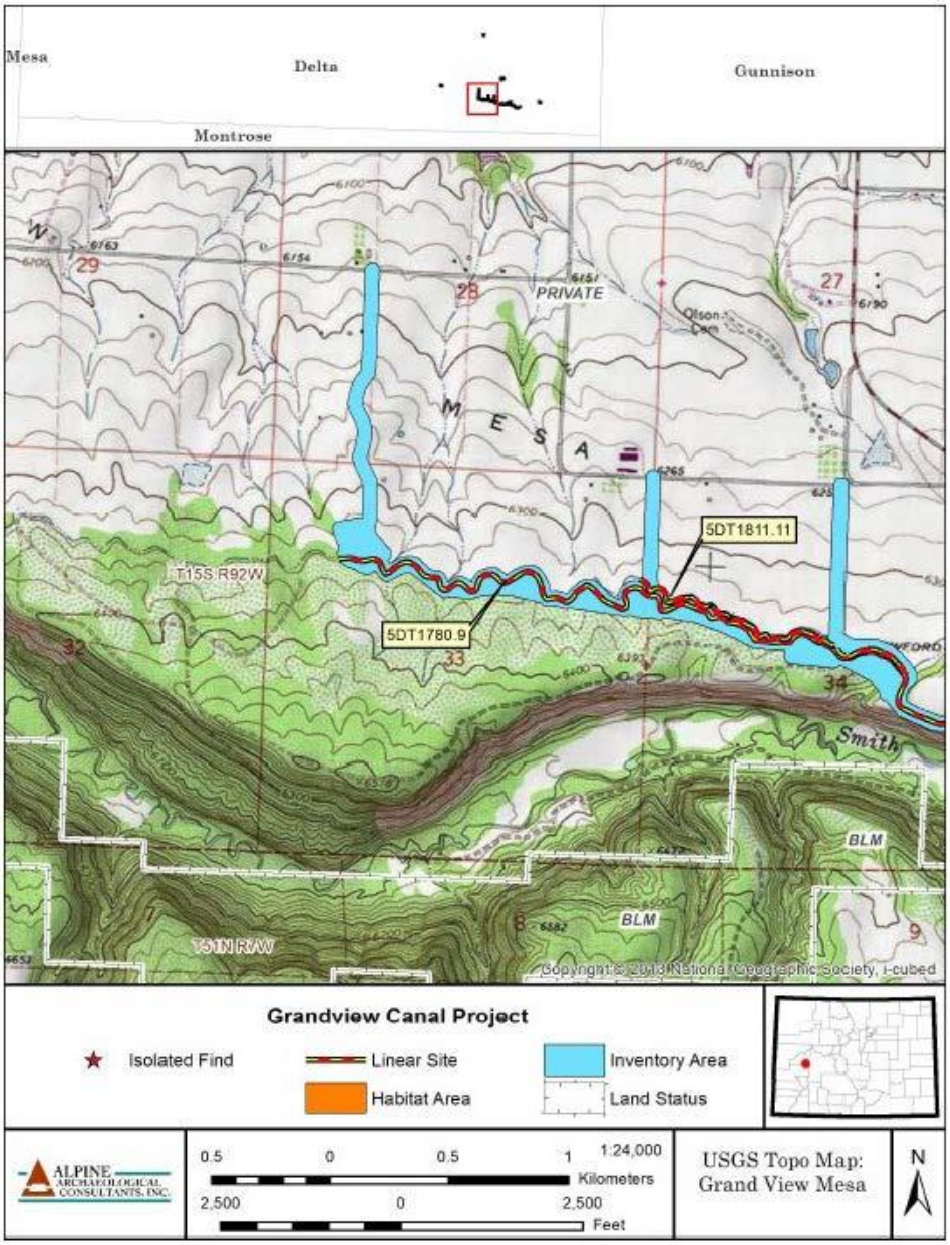
ATTACHMENT A – AREA OF POTENTIAL EFFECTS



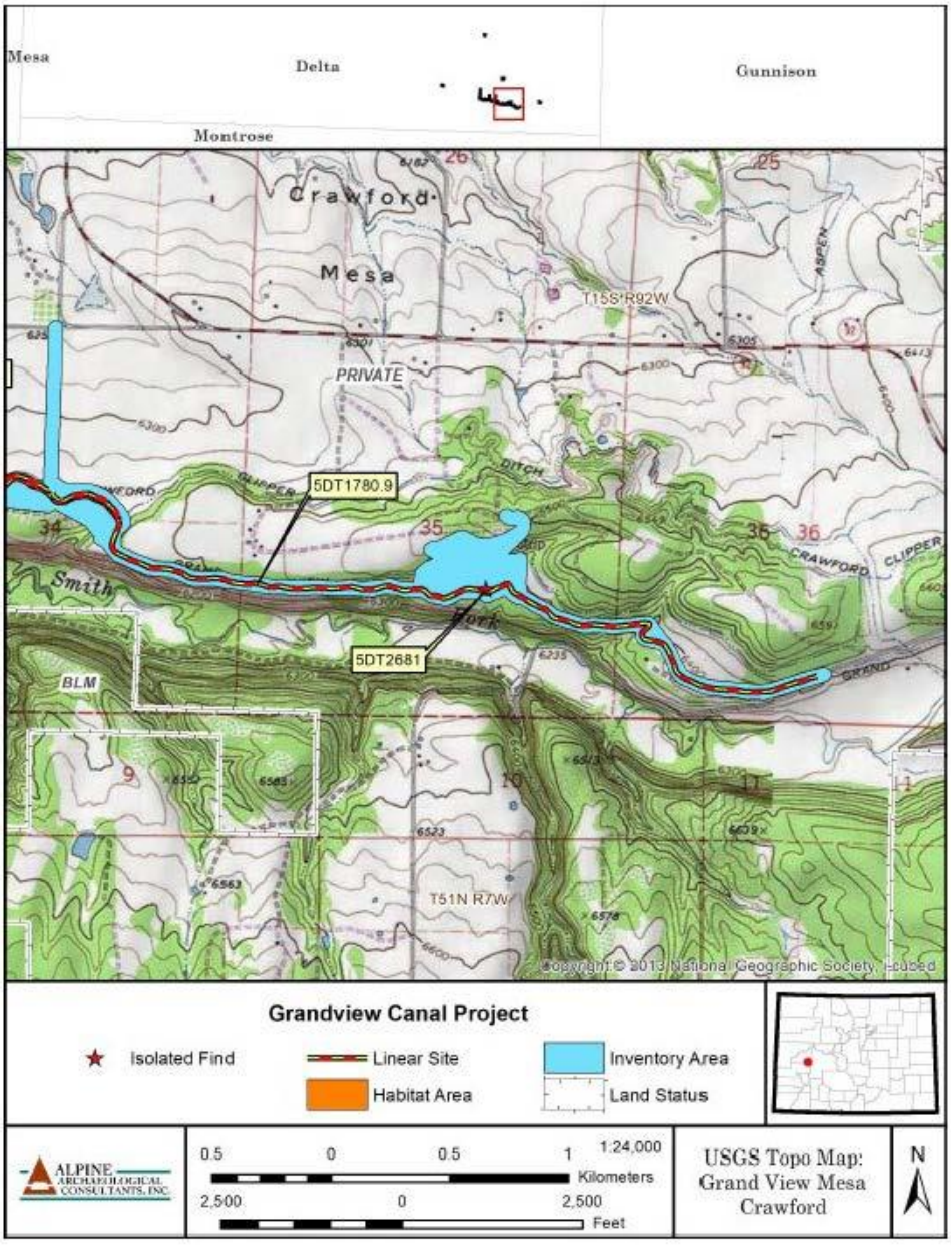

Mesa
Delta
Gunnison
Montrose
Whipple Gulch
Ditch
32
33
T14S R92W
Purlin
Creek
BLM
BLM
Mesa
PRIVATE
McDonald
COTTONWOOD
T15S R92W
Copyright © 2013 National Geographic Society, i-cubed
Grandview Canal Project
Isolated Find
Linear Site
Inventory Area
Habitat Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map:
Hotchkiss
N

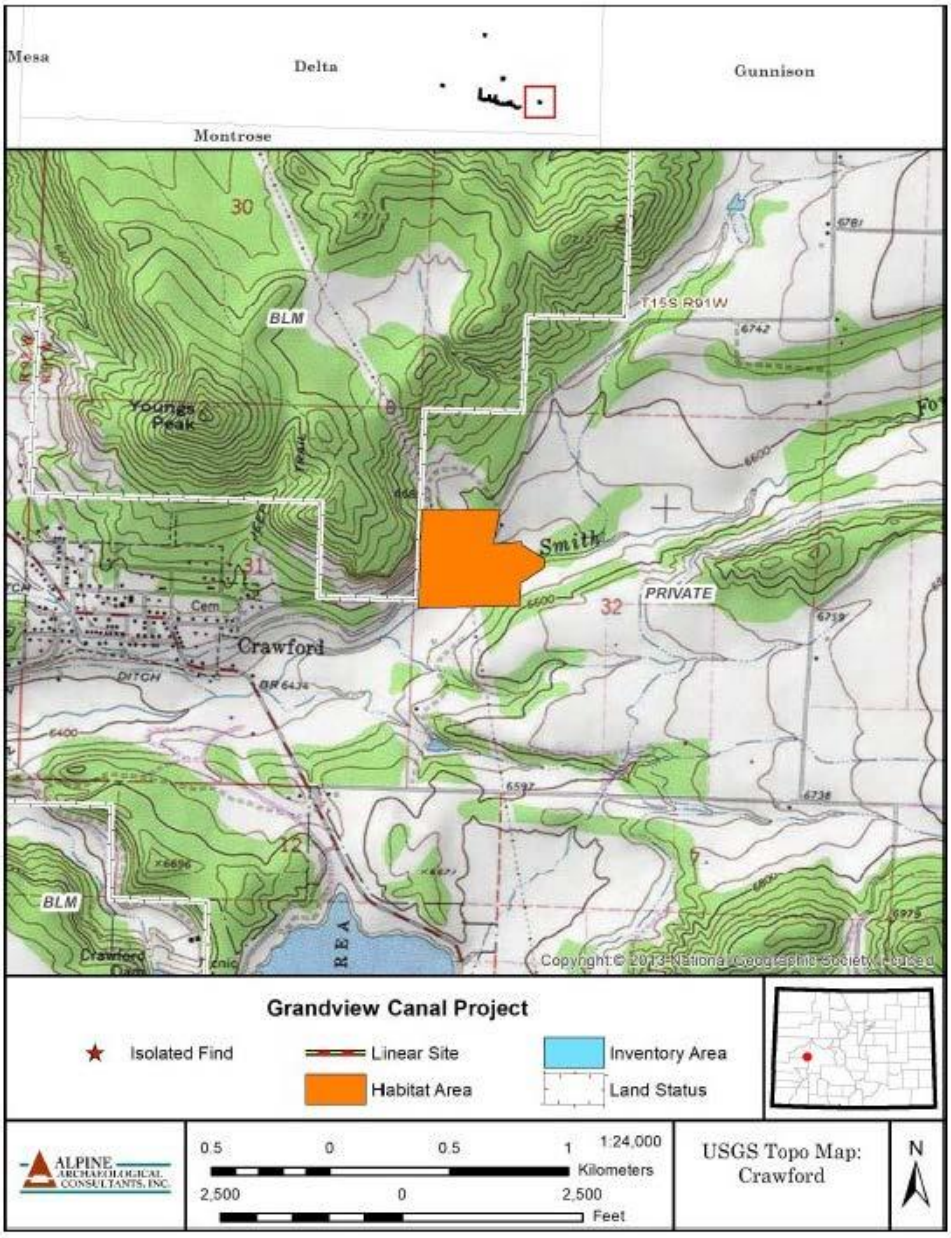

Mesa
Delta
Gunnison
Montrose
BLM
BLM
22
23
24
PRIVATE
T15S R92W
27
26
Olson Cem
Copyright © 2013 National Geographic Society, i-cubed
Grandview Canal Project
Isolated Find
Linear Site
Inventory Area
Habitat Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map:
Grand View Mesa
Hotchkiss
N


Mesa
Delta
Gunnison
Montrose
Scen
23
24
PRIVATE
T15S R93W
Fork
25
GRAND
T15S R92W
BLM
BLM
Smith
Grandview Canal Project
Isolated Find
Linear Site
Habitat Area
Inventory Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map:
Grand View Mesa
Black Ridge
N


Mesa
Delta
Gunnison
Montrose
PRIVATE
M E S A
5DT1811.11
5DT1780.9
T15S R92W
T51N R/W
BLM
BLM
Smith
Copyright © 2013 National Geographic Society, i-cubed
Grandview Canal Project
Isolated Find
Linear Site
Inventory Area
Habitat Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map:
Grand View Mesa
N

13


Mesa
Delta
Gunnison
Montrose
Crawford
Mesa
T15S R92W
PRIVATE
5DT1780.9
5DT2681
BLM
Smith
Fork
CRAWFORD
CLIPPER
DITCH
ASPEN
GRAND
T51N R7W
Copyright © 2013 National Geographic Society, i-cubed
Grandview Canal Project
Isolated Find
Linear Site
Habitat Area
Inventory Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map:
Grand View Mesa
Crawford
N


Mesa
Delta
Gunnison
Montrose
30
BLM
T15S R91W
6742
Youngs Peak
Smith
31
32
PRIVATE
Cem
Crawford
DITCH
6400
6738
12
BLM
REA
Copyright © 2013 National Geographic Society, i-cubed
Grandview Canal Project
Isolated Find
Linear Site
Inventory Area
Habitat Area
Land Status
ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.
0.5 0 0.5 1 1:24,000
Kilometers
2,500 0 2,500
Feet
USGS Topo Map: Crawford
N

ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

THE GRANDVIEW CANAL IRRIGATION COMPANY
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
SALINITY CONTROL PROGRAM,
DELTA COUNTY, COLORADO

1. INTRODUCTION

The Grandview Canal Irrigation Company (GCIC) plans to pipe 3.9 miles of the Grandview Canal. The purpose of this project is to reduce the salt load in the Colorado River Basin. The following Unanticipated Discovery Plan outlines procedures to follow, in accordance with state and federal laws, if archaeological materials are discovered.

2. RECOGNIZING CULTURAL RESOURCES

A cultural resource discovery could be prehistoric or historic. Examples include, but are not limited to:

- An accumulation of shell, burned rocks, or other food related materials
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e. an arrowhead, or stone chips),
- Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years,
- Abandoned mining structures and features (i.e. mine shafts or adits, head frames, processing mills, or tailings and waste rock piles),
- Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

STEP 1: STOP WORK. If any GCIC employee, contractor or subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work adjacent to the discovery must immediately stop. The discovery location should be secured at all times.

STEP 2: NOTIFY BUREAU OF RECLAMATION. Contact the Reclamation Cultural Resources Manager (CR Manager) at the Bureau of Reclamation immediately upon becoming aware of the discovery:

Project Manager:	CR Manager:
Mark LaValley	Kristin Bowen
970-210-1000	970-385-6540
levalleyranch59@gmail.com	kbowen@usbr.gov

The CR Manager will make all other calls and notifications.

If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call 911 or speak with the media. The CR Manager will contact the county coroner and sheriff. Do not take, or allow anyone to take, any photographs of human remains at any time.

4. FURTHER CONTACTS AND CONSULTATION

A. Project Manager's Responsibilities:

- Protect Find: The GCIC Project Manager is responsible for taking appropriate steps to protect the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material as set forth in this document.

- Contact CR Manager: If the CR Program Manager at the Bureau of Reclamation has not yet been contacted, the Project Manager will do so.

B. CR Manager's Responsibilities

- Notify SHPO: The CR Manager will notify the Colorado State Historic Preservation Office (SHPO) within 48 hours of the discovery.

  Colorado State Historic Preservation Office:
  Dr. Holly Norton
  Deputy State Historic Preservation
  Officer and State Archaeologist
  History Colorado
  1200 Broadway
  Denver CO, 80203
  (303) 866-2736

- Direct Construction Elsewhere On-site: The CR Manager may direct construction away from cultural resources to work in other areas prior to contacting the concerned parties.

- Identify Find: The CR Manager will ensure that a qualified professional archaeologist examines the find to determine if it is archaeological.

    - If a qualified archaeologist determines that the discovery is not archaeological, work may proceed with no further delay.

    - If a qualified archaeologist determines the discovery to be archaeological, the CR Manager will continue with notification.

    - If the discovery may represent human skeletal remains or associated funerary objects, the CR Manager will immediately notify the county coroner and the sheriff or police chief. If the county coroner and local law enforcement determine that the skeletal remains are human remains, the procedure described in Section 5 will be followed.

C. Further Activities

- Archaeological discoveries will be documented as described in Section 6.
- Construction in the discovery area may resume as described in Section 7.

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect.

The project is located on private lands, and the Unmarked Human Graves Colorado Statute (CRS 24-80-1301-1305) applies if the human remains are discovered.

In the event possible human skeletal remains are discovered, work in that portion of the project shall stop immediately. The remains shall be covered and/or protected in place in such a way that minimizes further exposure of and damage to the remains, and Reclamation shall immediately notify the Delta County Coroner and the Delta County Sheriff. If the remains are found to have no forensic value and are located on private land, the coroner shall notify the state archaeologist, in accordance with CRS 24-80-1302. A plan of action shall be developed by the state archaeologist in consultation with the appropriate Indian tribes the Colorado Commission of Indian Affairs and the landowner following the Process for Consultation, Transfer, and Reburial of Culturally Unidentifiable Native American Human Remains and Associated Funerary Objects Originating from Inadvertent Discoveries on Colorado State and Private Lands. If the remains are not Native American, and are otherwise unclaimed, the appropriate local authority shall be consulted to determine final disposition of the remains.

Avoidance and preservation in place are the preferred option for treating human remains.

GCIC and the CR Manager will comply with the procedures outlined, and will coordinate with the following contacts:

CR Manager
Kristin Bowen
(970) 385-6540

Delta County Coroner
(970) 874-5918

Delta County Sheriff
(970) 874-2000

Colorado Deputy State Historic Preservation Officer and State Archaeologist
Holly Norton
(303) 866-2736

A. Further Activities:

When consultation and documentation activities are complete, construction in the discovery area may resume as described in Section 7.

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

The CR Manager will ensure the proper documentation and assessment of any discovered cultural resources in consultation with Reclamation, SHPO, affiliated tribes, and a contracted consultant (if any). All prehistoric and historic cultural material discovered during project construction will be recorded by a professional archaeologist in accordance with all state and federal laws and Stipulation II B above.

7. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A professional archaeologist must determine the boundaries of the discovery location. In consultation with SHPO and affiliated tribes, the CR Manager will determine the appropriate level of documentation and treatment of the resource.

Construction may continue at the discovery location only after the process outlined in this plan is followed and GCIC, Reclamation, and SHPO determine that compliance with state and federal laws is complete.

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

WHEREAS, the Agreement was executed on May 5, 2022; and

WHEREAS, an additional six months is needed to complete the Grandview Canal Middle and Lower Piping Project draft Storymap as outlined in Stipulation I of the Agreement; and

WHEREAS, the Reclamation will send a copy of this executed amendment to the Advisory Council on Historic Preservation (ACHP); and

NOW, THEREFORE, in accordance with Stipulation VII of the Agreement, Reclamation, and the SHPO agree to amend the Agreement as follows:

1. Amend Stipulation I.A.c to read as follows:

Reclamation will submit a draft outline and text of the Storymap to all signatories to this Agreement within two and a half (2.5) years of the execution of this agreement. The signatories shall review and provide comments, if they have any, within thirty (30) calendar days of receipt of the draft. Reclamation shall consider signatory comments and revise the draft accordingly. Once a draft is agreed to by the signatories, Reclamation will finalize the Storymap for public use.

2. Amend Stipulation III to read as follows:

This Agreement shall expire if its terms are not carried out within three and a half (3.5) years from the date of its execution. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation VII below.

SIGNATORY PAGE

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Colorado State Historic Preservation Office

By: Patrick A. Eidman Digitally signed by Patrick A. Eidman Date: 2024.04.04 10:40:38 -06'00' Date: _____

Dawn DiPrince, State Historic Preservation Officer

SIGNATORY PAGE

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Bureau of Reclamation, Western Colorado Area Office

By:_____ Ed Warner 2024.04.11 06:12:53 -06'00' Date:_____
Ed Warner, Area Manager

SIGNATORY PAGE

AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM, LOCATED
IN DELTA COUNTY, COLORADO

Grandview Canal Irrigation Company

By: Mark LaValley President Date: 3/28/24
Mark LaValley, President

SECOND AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

WHEREAS, the Agreement was executed on May 5, 2022; and

WHEREAS, an additional six months was needed to complete the Grandview Canal Middle and Lower Piping Project draft Storymap as outlined in Stipulation I of the Agreement so the MOA was amended with a six month extension; and

WHEREAS, the mitigation has not been completed and an additional six months is needed to complete the Grandview Canal Middle and Lower Piping Project draft Storymap as outlined in Stipulation I of the Agreement; and

WHEREAS, the Reclamation will send a copy of this executed amendment to the Advisory Council on Historic Preservation (ACHP); and

NOW, THEREFORE, in accordance with Stipulation VII of the Agreement, Reclamation, and the SHPO agree to amend the Agreement as follows:

1. Amend Stipulation I.A.c to read as follows:

Reclamation will submit a draft outline and text of the Storymap to all signatories to this Agreement within three (3) years of the execution of this agreement. The signatories shall review and provide comments, if they have any, within thirty (30) calendar days of receipt of the draft. Reclamation shall consider signatory comments and revise the draft accordingly. Once a draft is agreed to by the signatories, Reclamation will finalize the Storymap for public use.

2. Amend Stipulation III to read as follows:

This Agreement shall expire if its terms are not carried out within four (4) years from the date of its execution. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation VII below.

SIGNATORY PAGE

SECOND AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Colorado State Historic Preservation Office

By: Patrick A. Eidman Digitally signed by Patrick A. Eidman Date: 2024.10.31 11:54:18 -06'00' Date: _____

Dawn DiPrince, State Historic Preservation Officer

SIGNATORY PAGE

SECOND AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE GRANDVIEW CANAL AND IRRIGATION COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
GRANDVIEW CANAL MIDDLE AND LOWER PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO

Bureau of Reclamation, Western Colorado Area Office

By: Ed Warner 2024.11.04 09:26:55 -07'00' Date: _____

Ed Warner, Area Manager

SIGNATORY PAGE

SECOND AMENDMENT TO
MEMORANDUM OF AGREEMENT
AMONG
THE BUREAU OF RECLAMATION WESTERN COLORADO AREA OFFICE,
THE BUREAU OF LAND MANAGEMENT UNCOMPAHGRE FIELD OFFICE,
THE NEEDLE ROCK DITCH COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
NEEDLE ROCK DITCH AND LONE ROCK DITCH PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA AND MONTROSE COUNTIES, COLORADO

Grandview Canal Irrigation Company

By: Mark LaValley Date: 10-29-24
Mark LaValley, President

APPENDIX C – DISTRIBUTION LIST

All landowners adjacent to the Project
Black Hills Energy
Citizens for a Healthy Community
Colorado Department of Transportation
Colorado Office of Archaeology and Historic Preservation
Colorado Parks and Wildlife
Colorado River Water Conservation District
Colorado Water Conservation Board
Crawford Mesa Water Association
Delta Montrose Electric Association
Delta County Commissioners
Delta County Road & Bridge Department
Delta County Planning & Community Development Department
Delta County Independent
TDS Telecom
Southern Ute Indian Tribe
Trout Unlimited
U.S. Army Corps of Engineers
U.S. Bureau of Land Management, Uncompahgre Field Office
U.S. Department of Agriculture Natural Resources Conservation Service
U.S. Fish and Wildlife Service
Ute Indian Tribe – Uintah and Ouray Reservation
Ute Mountain Ute Tribe
Western Slope Conservation Center

APPENDIX D – SUMMARY OF HABITAT REPLACEMENT ACCOUNTING FOR SALINITY CONTROL PROJECTS IN THE REGION

Salinity Project	Status	Habitat Units Lost	Habitat Credits Created
Bostwick Park Siphon Lateral Piping Project and Waterdog & Shinn Park Laterals Piping Project	Past	32.1	32.4
C Ditch/Needle Rock	Past	7.88	10.49
Cattleman's Ditch Phases 1 and 2	Past	18.57	23.32
Crawford Clipper – Center Lateral	Past	33.9	38.4 + Excess from previous project
Crawford Clipper - Jerdon, West, & Hamilton	Under Construction	11.6	33.4
Crawford Clipper – Spurlin Mesa (Clipper 4) & Zanni Lateral	Past	16.38	16.49
East Side Laterals – Phase 1	Past	59.85 acres[3]	100 acres
East Side Laterals – Phase 2	Past	26 acres	26 acres
East Side Laterals – Phase 3	Past	8.6	26
East Side Laterals – Phase 4	Past	7.04	Using excess from previous project

[3] In late 1990's and early 2000's, the habitat replacement procedures focused on acres rather than credits.

Salinity Project	Status	Habitat Units Lost	Habitat Credits Created
East Side Laterals – Phase 5 & GE, DK Laterals	Past	9.99	Using excess from previous project
East Side Laterals – Phase 7[4]	Past	2.77	41.9
East Side Laterals – Phase 8	Past	22.2	Using excess from previous project
East Side Laterals – Phase 9 & Phase 9 Mod	Past	35.6	31.7+ Excess from previous project
East Side Laterals – Phase 10	Approved	18.7	6.3[5]+ Excess
Fire Mountain Canal	Past	8.42	13.05
Forked Tongue/Holman Ditch	Past	6.7	11.07
Gould Canal – Projects A & B	Past	18.1	24.19
Grandview Canal – Original, Middle & Lower	Past & Current Proposed Project	33.6[6]	34
Minnesota Ditch – Phase 1	Past	11.17	22.73
Minnesota Ditch – Phase 2 and Minnesota L-75	Past	24.92	17.61 + Excess from previous project
Needle Rock/Lone Rock Ditch	Past	13.9	15.8

[4] East Side Laterals – Phase 6 was not a salinity control project, and therefore there is no habitat replacement project associated with that phase.

[5] As Phase 10 is a potential future project and documentation has not been completed at this time, this figure is an estimate.

[6] The Middle & Lower Grandview project is the current proposed project. The original Grandview Canal Piping Project resulted in the loss of 26 habitat units and the Middle & Lower is estimated to result in the loss of an additional 7.6 habitat units.

Salinity Project	Status	Habitat Units Lost	Habitat Credits Created
North Delta Canal – Phase 1 and Phase I Extension	Past	173.03	174.6
Orchard Ranch Ditch	Past	5.12	5.99
Pilot Rock Ditch	Past	16.9	20.9
Roger's Mesa Slack and Patterson Laterals	Past	20.34	39.93
Short Ditch Extension	Present	13.8	14.1
Stewart Ditch – Upper, Middle & Lower	Past	8.67	9.63
Turner/Lone Cabin Ditch	Approved	117.8	120.3
	TOTAL:	**697.8 units, 85.85 acres**	**784.3 credits, 126 acres**

APPENDIX E – SUMMARY OF COMMENTS ON THE DRAFT EA & RESPONSES

Twelve comment documents from seven commenters were received during the comment period. One commenter also submitted comments in the form of screenshots from a private social media post. One comment document was a letter of support and did not contain any substantive comments. The combined comment documents contained 74 distinct, substantive comments. The comments were primarily focused on impacts to property values, the loss of riparian habitat and impacts to wildlife, and the NEPA process. Possible responses to these comments include:

- Modifying one or more of the alternatives;
- Developing and evaluating suggested alternatives not previously given serious consideration by the bureau;
- Supplementing, improving, or modifying the analyses;
- Making factual corrections; or
- Explaining why the comments do not warrant further bureau response, citing sources, authorities, or reasons to support the bureau's position.

Reclamation reviewed each comment and classified them according to topic or comment category below, addressed in alphabetical order. Summary comments and consolidated responses follow. Changes were made to supplement, improve, or modify the EA as a result of these comments and the reader is referred to the section of the EA where the changes occurred. References to sections in the Final EA where changes are not described indicate that the information was present in the Draft EA and no changes were necessary to address the comment in the Final EA.

Category: Alternatives

Comment Numbers: 9, 20, 25, 38, 39, 71

Summary comment: Some commenters indicated preference for a half-pipe/lining method rather than piping the canal while Colorado Parks and Wildlife (CPW) indicated preference for the piping alternative due to adverse impacts to wildlife associated with the lining alternative. One commenter indicated the Draft EA does not adequately address the viability of lining the canal. One commenter suggested the consideration of an algae farm for salinity control. One commenter indicated a half-pipe/lining alternative would have detrimental impacts to plant and animal life.

Response: Reclamation acknowledges the various preferences for alternatives. The proposed federal action analyzed in this EA is awarding a grant through the federal Salinity Control Program; thus, salinity control efforts through the Salinity Control Program in the Crawford area is an applicant-driven process. This process, including information on Notice of Funding Opportunities (NOFOs) and cost effectiveness, is described in Section 1.5.1 of the Final EA. While an application was not received for lining the Grandview ditch, Reclamation acknowledges it is a feasible alternative that would meet the purpose and need for the action, and therefore carried the lining alternative through the EA for analysis. Reclamation disclosed impacts to plant and animal life related to

implementation of a half-pipe/lining alternative for each resource analyzed in Chapter 3 of the Final EA.

Applications have not been received related to algae farms as a method of salinity control. Information has not been presented to Reclamation which details how an algae farm alternative would occur or how effective (i.e. tons of salt removed) the alternative would be. Therefore, this alternative has not been defined to a point where it could be included for further analysis.

Category: Easements and Agreements For Activities Outside of Statutory Right-of-Way

Comment Numbers: 46, 47, 50, 57, 58, 61

Summary comment: Landowners expressed that portions of the new alignment identified in the Draft EA fall outside of the existing easement for the Grandview Canal on their property, and identified stipulations they would want included in any new easements or agreements for access outside the statutory right-of-way (as described in Section 2.2.3 of the EA) to allow the project to move forward as identified in the Draft EA.

Response: GCIC is responsible for coordinating with all landowners on obtaining the appropriate easements or access agreements in order to construct the project. If the appropriate easements or access agreements cannot be obtained, the project will not move forward as described in the EA and additional environmental analysis may be needed if GCIC wishes to move forward with a modified version of the project. GCIC has met with the commenters on multiple occasions and feel they are close to finalizing a new easement or access agreements which would allow the Proposed Action to carry forward. The stipulations identified in the comment letters are being incorporated into the new easement or access agreement with the commenter.

Category: Environmental Commitments

Comment Numbers: 74

Summary comment: CPW provided a list of recommended environmental commitments to include in the Final EA, including stipulations for reseeding plans in all non-agricultural fields and monitoring of seeding success, noxious weed control for 3 years post-construction, continued work in the habitat replacement site, and a request to construct the project from west to east to minimize the impact to big game.

Response: The project area would be reclaimed using either the sterile topsoiling or natural revegetation method as desired by the underlying landowner as described in Section 2.2.6. The Final EA includes an environmental commitment that weed control shall be implemented by Applicant or its contractor in accordance with any agreements with individual landowners. An amendment to the habitat replacement plan is being developed, as described in the Habitat Replacement comment response below. It is not possible to install the pipeline from west to east, as the pipeline cannot be completed in one non-irrigation season. Construction will end prior to the irrigation season, and for one year water will flow downhill from the installed pipeline into the open canal. Since water needs to flow downhill, it will not be possible to progress west to east.

Category: Erosion

Comment Numbers: 2, 49, 55, 56

Summary comment: One commenter was concerned about the risk of piping the canal resulting in the destabilization of a hillside on his property. Some landowners requested that the finished pipe alignment be graded after construction to match the surrounding contours and be revegetated to prevent erosion.

Response: A Reclamation engineer contacted the commenter about destabilizing the hillside on his property and identified that ditch segment and property in question are not included in the Proposed Action, and therefore no work would occur which would have the potential to destabilize the hillside in question. The Draft EA explained in Sections 2.2.1 and 2.2.2that the construction corridor would be graded to match surrounding contours after construction. Revegetation will be conducted by either the sterile topsoiling and natural vegetation or by conventional revegetation methods, with the method implemented to be determined by each landowner, as described in Section 2.2.6 of the Final EA. An analysis on erosion impacts associated with the Proposed Action are included in Section 3.2.14 of the Final EA. The analysis indicates soil erosion from irrigation water conveyances would be substantially reduced where ditch reaches are proposed for replacement with buried pipe. Therefore, no adverse effects on soil erosion would occur due to implementation of the Project.

Category: Fire Mitigation

Comment Numbers: 44

Summary comment: The commenter briefly referenced fire mitigation as a resource of concern.

Response: Section 3.2.5 of the Final EA discloses impacts to public safety as a result of implementing the Project and discusses that the Delta Fire Protection District 5 would continue to cover the Project Area for emergency response, and would not be hindered in their response.

Category: Groundwater

Comment Numbers: 32

Summary comment: The commenter briefly referenced subsurface irrigation as a resource of concern.

Response: An analysis on groundwater is included in Section 3.2.3 of the Final EA.

Category: Habitat Replacement

Comment Numbers: 14, 19, 68, 73

Summary comment: The commenter questioned the ability of the habitat replacement site to replace the value of the habitat lost due to implementing the Proposed Action. The commenter described the habitat replacement site as being isolated, miles away, with no irrigated fields nearby, and therefore not being of use to wildlife. The commenter indicated the Draft EA made unsupportable

conclusions about the loss of wildlife habitat. CPW commented on issues associated with the habitat replacement site, indicating that weed management is an ongoing issue, excess materials from the original wetland development have not been removed, and native trees and plantings have not been implemented.

Response: The habitat replacement concept explaining the ability of a habitat replacement site to replace the value of habitat lost due to implementing the Proposed Action is included in Section 3.2.9 of the Final EA. The habitat replacement site is located approximately two to five miles from the piping project, is adjacent to Crawford Reservoir, and is in close proximity to irrigated fields. Wildlife use of the area is apparent during site visits, as evidenced by big game laydown areas in the tall wiregrass and the presence of scat. During the 2025 site visit, CPW representatives mentioned that elk thickly utilize the habitat area. A map identifying the location of the habitat replacement site is included as Figure 1 in the Final EA.

Section 3.2.9 of the Final EA describes the habitat evaluation methodology outlined in Basinwide Salinity Control Program: Procedures for Habitat Replacement (Reclamation 2018), which is the protocol approved by the U.S. Fish and Wildlife Service to calculate the value of the habitat to be lost due to implementing the Proposed Action. The commenter did not provide information regarding their claim that the conclusions drawn through the implementation of the established evaluation methodology resulted in unsupportable conclusions about the loss of wildlife habitat that were disclosed in the Draft EA; therefore, no changes have been made to the analysis on wildlife habitat in the Final EA.

GCIC has continuously maintained the wetland enhancements and has implemented plantings and weed control at the habitat replacement site; however, GCIC is taking an adaptive management approach with their site and have created an addendum to their habitat replacement plan (plan addendum) to help address some ongoing issues and ensure the excess credits relied upon by their current project are realized (Terra Firma 2025). Developing the plan addendum was part of an adaptive management process associated with GCIC's earlier project. The habitat replacement plan calls for reducing noxious weed cover, not eradicating noxious weeds (going from over 25% noxious weed cover to around 10% noxious weed cover). While GCIC continues to treat weeds with herbicide at the habitat site twice a year, their spraying effort did not prove to hold noxious weed cover at or less than 10%. This issue has been addressed in their plan addendum by incorporating biological control, along with mowing and herbicide application. GCIC has implemented plantings, and has planted native shrub and tree species in the enclosures and around the potholes four different times. Cottonwoods around some of the potholes are establishing and plantings are present in all the enclosures. With the exception of the cottonwoods around the potholes, the other plantings are still small and difficult to identify without being in the enclosures. While there are plantings, the amended plan includes establishing more plantings to ensure the diversity and stratification expectations for the habitat replacement site come to fruition. The original habitat replacement plan, being one of the earliest habitat replacement plans, lacks detail on numbers of plantings, etc. required to meet the stratification and diversity objectives. The plan addendum prescribes the locations of plantings to better ensure the success of the plantings and sets forth measurable criteria for success. The ponds have been mucked out twice since the original installation, and all mucked out material was removed from the site. Excess material from the original installation mentioned in the comment letter was mentioned in the 2025 site visit for the first time since its installation. CPW had an opportunity to review the draft amended plan and provided comments on the mucked material. The plan addendum specifies that mucked material will

be hauled offsite. Potholes will be dug out 3 to 6 feet so they will not need to be maintained as often.

Category: Hydrology

Comment Numbers: 51, 59

Summary comment: The commenters are concerned about the "waterfall area" as described in the Draft EA, indicating this would result in the piped portion of the canal terminating at the edge of their hayfield. The Draft EA indicated the water would be slowed and pooled in the "waterfall area;" however, one commenter pointed out that the Draft EA does not mention this in its analysis on surface hydrology in Section 3.2.3.

Response: The "waterfall area" portion of Grandview Canal has historically flowed approximately 50 to 85 cfs of irrigation water and approximately 12 cfs of winter stock water. After implementation of the Proposed Action, the very little irrigation water (only enough to wet the existing cottonwood trees) and no winter stock water would flow through the "waterfall area." To help alleviate any residual concerns, GCIC would redirect/ditch the end of the open abandoned waterfall segment of the canal southwest to a natural ephemeral drainage and away from the commenter's property. The landowner of the property which would accept this water plans to utilize any excess water. This information has been updated in Sections 2.2 and 3.2.3 of the Final EA.

Category: Livestock Operations

Comment Numbers: 48, 54.

Summary comment: Commenters want to ensure construction does not conflict with their livestock operations.

Response: GCIC understands the commenters have livestock on the parcels in question in April, May, and June and will coordinate with the commenter regarding the construction schedule in that area.

Category: Local Ecosystem

Comment Numbers: 26, 33, 35

Summary comment: Commenters mentioned that the open water ditch helps cool and add humidity to the dry air, and referenced that the ditch supports its own local ecosystem.

Response: Impacts to the microclimate provided by the open ditch and the cooling effect supported by the open ditch are described in the Final EA in Section 3.2.15. This section, along with the analysis contained in the Wildlife and Vegetation sections (Section 3.2.11 and Section 3.2.9) analyze impacts to the ecosystem supported by the canal as a whole.

Category: NEPA Process

Comment Numbers: 3, 4, 8, 10, 11, 12

Summary comment: The commenter was upset that his request to be involved in the preparation of the EA two years prior (May 2023) to the distribution of the EA for public comment was not responded to, and that no one had interviewed him regarding wildlife on his property. The commenter indicated he believes a certain amount of notice must be given when a landowner requests to be involved in information gathering and the writing of the Draft EA. The commenter was upset that on the day he attempted to call the Western Colorado Area Office (WCAO) and access the EA online, the phones and the Reclamation website were down. The commenter also identified a landowner within the Project area that was not notified of the public comment period.

Response: Reclamation prepares EAs to disclose the impacts of federal actions on the human environment in compliance with the National Environmental Policy Act (NEPA). While not required by NEPA, Reclamation may choose to conduct a public comment period on Draft EAs to solicit input from the public. This public comment period is the opportunity for the public to be involved in the preparation of the EA for a given project.

As described in Section 1.7, Reclamation consults with various agencies and organizations, rather than landowners, while preparing the Draft EA. Although a May 2023 response from past Reclamation staff to the commenter was found, Reclamation apologized for not responding adequately to the commenter's early email, and ensured the commenter that his early comments were considered during the writing of the Draft EA. Drafting the EA occurred well after the May 2023 comments were received due to the project's design not being completed to a point where an analysis on impacts could begin. Reclamation provided a list to the commenter of the sections in the Draft EA where all the concerns raised in his May 2023 comment letter had been addressed.

Reclamation acknowledges that on the day the commenter attempted to call the WCAO, both the phones and internet were down (Reclamation 2025c). The commenter was able to contact WCAO that same day via one of the other two methods of communication listed in the Draft EA distribution letter, and WCAO was able to provide him with a copy of the Draft EA within three hours, as well as ensured the commenter would have an opportunity to review the Draft EA by authorizing the submittal of comments beyond the closure of the 30-day public comment period. In total, the commenter had the opportunity to submit five comment letters on the Draft EA. The unnotified landowner was also contacted, and their request for a two-week extension to review the Draft EA and provide comments was granted, providing them time to submit three comment letters. The NEPA process has been followed for this action, and the public comment period was successful.

Category: Noxious Weeds

Comment Numbers: 21, 22, 37, 49, 56, 72

Summary comment: A commenter referenced an infestation of Russian knapweed along the dry lands bordering the Grandview Canal. The commenter agreed with the discussion in the Draft EA that replacing topsoil and reseeding would have a low likelihood of success, and indicated he felt the sterile topsoiling/natural revegetation reclamation method described in the EA is the preferred choice of reclamation to attempt to control the spread of noxious weeds. The commenter indicated it is very likely the Russian knapweed will spread regardless and questioned who would control the weeds and pay for controlling the weeds. Another commenter indicated reclamation of the construction corridor should be finished to ensure the approximate original contour is maintained,

and the final surface should be free of any unnatural rocks or debris, topped with topsoil, and revegetated to prevent erosion. This commenter also indicated they would want revegetation conducted according to their wishes (which includes replacing topsoil and reseeding). CPW reiterated that invasive weeds typically flourish following surface disturbance, and recommended a native drought-tolerant seed mix be used for revegetation in all areas not slated to be irrigated.

Response: As the commenter has indicated, the Draft EA included information about the project area containing Russian knapweed, as well as other noxious weeds (3.2.10). The Final EA discloses noxious weeds in the surroundings would spread opportunistically into these disturbed soils, or ground disturbance would trigger germination of the existing weed seed bank in the soils. To be conservative, the Final EA assumes a lack of weed control throughout the entirety of the project area. However, it is noted that design features would help slow or prevent invasive weeds from colonizing areas disturbed by construction. The Final EA also notes that after construction and reclamation of the Project Area, noxious weed presence would be managed subject to agreements between the Applicant and individual landowners. As described in Section 2.2.6 of the Final EA, revegetation will be conducted by either the sterile topsoiling or natural vegetation methods, with the method implemented to be determined by each landowner. As described in the comment response in the Erosion category above, the description of the Proposed Action in Section 2.2.1 includes grading the area to match surrounding contours after construction. Revegetation will be conducted by either the sterile topsoiling/ natural vegetation method or the conventional reseeding method, with the method implemented to be determined by each landowner, as described in Section 2.2.6 of the Final EA. The seed mix to be used would include drought-tolerant and locally ubiquitous native grass, as described in Section 2.2.6 of the Final EA, and is listed in Appendix A of the Final EA.

Category: Prairie Dogs

Comment Numbers: 67

Summary comment: The commenter indicated the dry canyon rim on the south side of the Grandview Canal is infested with prairie dogs, and projected that the presence of the canal serves to keep prairie dogs from moving north onto his property. The commenter is concerned about property damage and diminished hay production.

Response: Reclamation met with the commenter and with landowners on the north side of the Grandview Canal, adjacent to the commenter. It was discussed how prairie dogs are already present on the properties surrounding the commenter's property on the north side of the canal. Because prairie dogs are already present on the north side of the canal, the potential for them to move north or south of the canal is already present and is not the result of implementing the Project. In addition, another open ditch borders the commenter's property adjacent to the Grandview Canal, and that other open ditch is not proposed for piping. A discussion on prairie dogs has been added to Table 2 in the Final EA.

Category: Property Values

Comment Numbers: 13, 18, 23, 24, 28, 34, 36, 62, 63, 65, 66, 757

Summary comment: A commenter questioned the accuracy of the information contained in the Draft EA attributed to discussions with the Delta County Assessor and indicated he has formally complained to the Delta County Assessor about ditch piping affecting property values. A commenter indicates the analysis on Property Values included in the Draft EA draws unsupportable conclusions and identifies himself as an established realtor in the area. That same commenter, as an established realtor, emphasizes the value buyers place on properties with live water, and estimates the loss of live water could constitute a loss of 10 to 30% of a property's value. Other commenters agree that "live water" and the associated presence of wildlife on a property contributes to the value of the property. One commenter indicates that an accompanying water right to the live water adds significantly to the value of a property. One commenter indicated there are situations where open irrigation ditches result in the establishment of sensitive or endangered habitat/species or protected wetlands that limit a landowners potential to develop a property for other uses in the future, and piping the open ditch could limit the establishment of conditions the commenter categorizes as detrimental to the use of the property.

Response: Reclamation held a meeting with the Delta County Assessor on June 3, 2025 to review the analysis contained in the Draft EA. The Delta County Assessor clarified that there is a distinction between property values for taxation purposes and the market value of a property. When the Assessor's Office conducts a valuation on an agriculturally producing property, that valuation is based on an income approach and is connected to the agricultural productivity of the land (Colorado Division of Property Taxation 2025). In contrast, market value is the most probable price that a property should bring in a competitive and open market. These differences have been clarified in the Final EA, and the Property Values section of the Final EA has been reviewed by the Delta County Assessor to ensure this difference was properly captured. A corresponding analysis on Project impacts to both property value for taxation purposes and impacts to market value have been included in Section 3.2.6 of the Final EA. While the commenter did not provide citations of formal studies or documentation to support the commenter's conclusion that the loss of live water could constitute a loss of 10 to 30% of property value, this information has been cited in the Final EA as it originates from an established realtor in the vicinity of the Project. Further existing research identifies that converting open ditch to pipe could have a positive or negative effect on market values. Positive effects to market value generally stem from enhanced crop or pasture yields (which would also increase the property value for taxation purposes) due to the reduction in water conveyance losses, the more reliable water source, and water quality benefits (Hrozencik et al. 2022). Negative effects to market value generally stem from the loss of aesthetic water features (Hubbell 2025; Gibbons et al. 2017; Nicholls & Crompton 2017). Citations were added to support these effects. The Final EA reaches the conclusion that impacts to market value would have either a positive impact or a negative impact to the property's value dependent on the desire of potential buyers at the individual level. Because the impact would essentially be speculative since it would be

[7] Comment 75 was numbered out of order, and is included in the numbered comment letters between Comment 28 and Comment 29.

property- and buyer-specific rather than a guaranteed negative impact on properties in the Project area as a whole, it would not rise to the level of significant.

Section 3.2.6 of the Draft EA included the following: "According to the County Assessor, no statement or complaint has been received from a landowner, property buyer, or property seller, that a piped ditch had detracted from the value of a property in the North Fork valley (George 2023)." This sentence has been removed from the Final EA, as the County Assessor has now received complaints submitted by the commenter.

The Final EA analyzes threatened and endangered species in Section 3.2.12 and wetlands in Section 3.2.3. While it is speculative to analyze if, under the No Action Alternative, the open ditch remaining open would eventually develop conditions that could limit a landowners' potential to develop a property for other uses in the future, it is noted that examples of opposing viewpoints were provided regarding the benefit of or the adverse effect on property values resulting from piping open ditches. As described above, the Final EA reaches the conclusion that impacts to market value would have either a positive impact, a negative impact, or negligible impact to the property's value dependent on the desire of potential buyers at the individual level.

Category: Recreation

Comment Numbers: 43, 62

Summary comment: A commenter briefly referenced recreation in the canal as a resource of concern. A commenter indicated piping open ditches diminishes the value of recreational properties by removing the live water component.

Response: There is no recreation authorized in the Grandview Canal, and therefore there are no recreational properties that rely on the Grandview Canal for recreational opportunities. A discussion on recreation is included in Table 2 of the Final EA.

Category: Salinity Benefit

Comment Numbers: 1, 26, 41

Summary comment: A commenter indicated salinity benefits of ditch piping/lining projects are unproven and minimal. A commenter claimed previous studies have shown that salinity isn't an issue where the ditch runs through their ranch. A commenter questioned if the Grandview Canal is the only or most prevalent source of Gunnison River salinity.

Response: As described in Section 1.5.1 of the Final EA, estimated salinity reduction is calculated based on measured total dissolved solids loads in basin streams, GIS-based model calculations to determine subbasin loads, and ditch mapping data that include average flows, ditch lengths, and average annual days of use. Richards et al. (2014), Schaffrath (2012), and Linard (2013) provide more detailed information on salt loading estimate methodology.

The U.S. Geological Survey (USGS) prepares progress reports for the Bureau of Reclamation on the quality of water in the Colorado River Basin, and these reports indicate that the Salinity Control Program is effective in reducing the salinity levels in the lower Colorado River (Reclamation 2023). The beneficial effects of improved water quality resulting from the Project and other similar projects

in the Upper Colorado River region would contribute to the regional efforts underway to reduce salinity in the lower Gunnison and Colorado River watersheds. This information has been added to Section 3.2.2 of the Final EA.

As described in Section 1.4.1 of the Final EA, the Basinwide Salinity Control Program funds salinity control projects with a one-time grant that is limited to an applicant's competitive bid. The Grandview Canal and Irrigation Company (GCIC) applied for a grant and their proposal ranked high enough for selection. One of the factors that the applications were evaluated on is their cost competitiveness. This is based on the amortized cost of the project per ton of salt load savings incurred by the project. The Grandview Project was determined to be in the competitive range for the group of applications received at that time. Selection does not require a project to be the only or most prevalent source of salinity in an area. In order for other projects to be considered, Reclamation would need to receive an application, and the project would need to rank high enough for selection.

Category: Threatened & Endangered Species

Comment Numbers: 40

Summary comment: A commenter questioned if any endangered reptiles, birds or small mammals live along the canal that would be greatly affected by the instantaneous stoppage of flowing water.

Response: Threatened and endangered species are discussed in Section 3.2.12 of the Final EA. No significant impacts to threatened and endangered species and their critical habitat would occur as a result of the Project, because the previous execution of a 2010 Recovery Agreement in accordance with the 2009 PBO ensures the Project has no significant impact on the Upper Colorado River listed fishes or their designated critical habitat; and because habitat for the monarch butterfly (proposed for listing) would be conserved at the existing habitat replacement site.

Category: Vegetation

Comment Numbers: 52, 69

Summary comment: One commenter is concerned about the loss of cottonwood trees which rely on the ditch seepage water. Another commenter is concerned about the loss of juniper trees that occur within the easement area.

Response: The Final EA identifies that cottonwood trees contribute to an estimated 0.52 acre of riparian vegetation cover along the ditch sections involved in the Project in Section 3.2.9, and that this riparian vegetation would be permanently lost to do implementation of the Project.

As described in Section 2.2.3, construction footprints would be limited to only those necessary to safely implement the Project. The authorized construction width would not be mechanically cleared to its maximum outer limits as a part of site preparation, so juniper trees would be avoided to the greatest extent possible. There are approximately 20 juniper trees present within the anticipated construction footprint area which are identified as potentially needing to be removed to implement the Project. An analysis on the removal of juniper trees has been added to Section 3.2.9 of the Final EA.

Category: Visual Resources

Comment Numbers: 30, 34, 45, 63, 69

Summary comment: Commenters are concerned about impacts to wildlife viewing and its associated aesthetics along the canal once it is piped, as well as the visual loss of the cottonwood trees along the canal.

Response: Impacts to visual resources are disclosed in Section 3.2.8 of the Final EA. The analysis recognizes the loss of approximately 0.52 acre of scattered cottonwoods. A discussion on impacts to wildlife viewing has been added to Section 3.2.8 in the Final EA.

Category: Water Rights

Comment Numbers: 27, 29, 42, 60

Summary comment: Commenters mention water rights as a resource of concern and question if any livestock watering adjudication would be removed from the ditch and voided after piping the ditch. One commenter questioned if the ditch carries winter livestock water. One commenter indicated live water is a critical factor for ranch operations, and claimed piping the canal would remove the live water that many ranches depend on. A commenter questioned the specifics of how the proposed delivery of temporary winter stock water from the Crawford Clipper Ditch system during Project construction would be implemented.

Response: An analysis on Water Rights and Use is included in Section 3.2.1 of the Final EA, and a discission on stock water delivery is included. Livestock water would continue to be delivered. While there would be no change in irrigation water rights or winter stockwater rights associated with the Project, GCIC would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by improving the system.

The Grandview Canal does carry winter livestock water (during the non-irrigation season) to GCIC shareholders when temperatures are high enough that the stock water does not freeze in the open ditch. GCIC shareholders would continue to receive their winter stockwater in the pipeline following Project construction, accessed at their regular irrigation outlets, and there would be an added benefit of being able to deliver stock water during the winter freeze periods. The canal may pass through properties where livestock are watering incidentally, where the property owner is not a GCIC shareholder. Incidental (non-shareholder) users of winter stockwater from the open canal would no longer have access to this source of livestock watering following Project construction. . An analysis on the impacts to winter livestock water is included in Section 3.2.1 of the Final EA.

Alternative arrangements for winter stock water for GCIC shareholders would be made during construction if necessary; alternative arrangements are common when temperatures are low enough that the stock water freezes. If winter stock water is to be delivered from the Crawford Clipper Ditch system to GCIC shareholders during construction of the Project, arrangements will be made with intervening landowners.

Category: Wetlands

Comment Numbers: 31

Summary comment: The commenter briefly referenced wetlands as a resource of concern.

Response: Discussions on wetlands are included in Sections 3.2.3 and 3.2.9 of the Final EA.

Category: Wildlife

Comment Numbers: 5, 6, 7, 15, 16, 17, 23, 30, 32, 45, 53, 64, 70, 71

Summary comment: Commenters are concerned about impacts to large cottonwood trees which attract roosting bald eagles, impacts to deer and elk utilizing the canal as a water source, impacts to waterfowl and migratory birds, impacts to trout in the canal, and the overall impact to wildlife and wildlife habitat. CPW specifically mentioned the wildlife which inhabits the area includes mountain lion, black bear, wild turkey, mule deer, elk, small mammals, migratory birds, and various raptor species. CPW indicated they are concerned about potential impacts associated with converting earthen irrigation canal to cement-lined (shotcrete) canals, as hooved animals like deer may be unable to escape a cement-lined canal due to the depth and steepness of its sides. CPW indicated that there are various alternative water sources for wildlife, including the Smith Fork, multiple stock ponds, and floor-irrigated agricultural fields on the mesa within the project area, and therefore CPW recommends the Preferred Piping Alternative be selected. One commenter was concerned that the four on-farm stockwater outlets with the potential to be active during freezing months described in Section 3.2.11 of the Draft EA occurs on their property, and they are concerned about attracting elk to their hayfields.

Response: Impacts to wildlife and wildlife habitat are disclosed in Sections 3.2.11 and 3.2.9 of the Final EA. Wild turkey has been added to Section 3.2.11 of the Final EA. These sections disclose that some cottonwood trees would die or be taken down as a result of the Project, which would remove some potential roosting and nesting habitat for raptors and other birds.

The Final EA (Section 3.2.11) describes that after implementation of the Project, water resources for big game and other wildlife would continue to exist in the Project Area at a rate of more than 4 sources per square mile (the rate recommended by CPW) and identified that the Project would result in better availability of winter livestock water for the shareholders, as it would not freeze. These stock watering resources would also benefit big game. CPW is not concerned about the loss of the open ditch as a water source for big game as there are various alternative water sources for wildlife.

The Final EA (Section 3.2.11) discloses that water birds, such as mallard ducks, teal, Canada geese, and great blue herons, use open water in the Project Area, and may occasionally chose ditch banks for nest sites. The Final EA discusses that the habitat value associated with the lost wetland and riparian habitat would be fully maintained at the existing habitat replacement site for the life of the Project (50 years). Because the value of these species' habitat would be fully maintained in the general geographic area, there would not be a significant impact to bird species resulting from the loss of the ditch-induced wetland and riparian habitat.

The Final EA (Section 3.2.11) discloses that fish (non-native trout species) are occasionally observed in the ditch segments involved with the Project. The Final EA discusses that fish occasionally finding their way into the ditch system from the natural water sources diverted to the ditch may still find their way into the system; because this already occurs, there would be no change in fish entering the system.

Reclamation acknowledges CPW's recommendation that Preferred Alternative (piping the canal) be selected for implementation over the canal lining alternative to reduce potential impacts to wildlife. CPW's concerns regarding the potential impact to hooved animals associated with the canal lining alternative has been added to Section 3.2.11 of the Final EA.

The four on-farm stockwater outlets referenced by the commenter are not on the commenter's property. The four shareholder stockwater outlets are at the same location as the shareholders' irrigation water outlets, and can be used during winter months as deemed necessary by each shareholder. Big game are already using the general area as winter range and watering at various locations (as described above) Overall, the timing of stockwater use during the non-irrigation season is at each user's discretion. The availability of winter water is only one of several factors determining where big game are wintering; therefore, the Project is unlikely to measurably affect big game winter distribution in the area.

5/1/2025

Ed Warner

Area Manager

Bureau of Reclamation

Western Colorado Area Office

445 West Gunnison Ave, Suite 221

Grand Junction, CO 81501

This response is related to the letter dated April 23, 2025 pertaining to the Grandview Canal and Irrigation proposed piping of 4 miles of existing open irrigation canals.

Our family has owned and operated a ranch in the impacted area for 40 years. During that time we have witnessed multiple 'improvement' projects, many of which have had significant negative impact on the host properties. Our ranch was placed in a conservation easement in 2009. As such we evaluate all proposed projects through the lens of what is best for the wildlife, Smith Fork River, and our ranching activities.

Previous studies have shown that salinity isn't an issue where the ditch runs through our ranch but if consideration is ever given to piping this last section of the canal significant study and thought needs to be paid to the substantial risk associated with destabilizing the hillside. It is our position that the potential risk to the hillside (and the access road to the ranch headquarters, including our home) is not worth the benefit of piping that small section of the irrigation canal.

Comment 1

Comment 2

I can be reached at (972) 935-2649 if you wish to discuss this matter further.

John L. DuFon

Outlook

[EXTERNAL] Re: Availability of Draft EA - Grandview Canal Middle and Lower Piping Project

From Wendell Koontz <wkoontz@deltacountyco.gov>
Date Mon 5/12/2025 10:58 AM
To Ward, Jennifer K <jward@usbr.gov>

Jennifer

Delta County has reviewed the Grandview Canal piping project and supports the Proposed Action that would fund the project.
Thank you for the work you and the Bureau do for Delta county.

Regards.

Wendell A. Koontz

On Thu, Apr 24, 2025 at 8:09 AM Ward, Jennifer K <jward@usbr.gov> wrote:

> Hello,
>
> Please find attached a letter announcing the availability of the Draft Environmental Assessment for Grandview Canal and Irrigation Company's Grandview Canal Middle & Lower Piping Project. The public comment period extends through Monday, May 27, 2025.
>
> Thank you,
> Jenny
>
> Jenny Ward
> Environmental Group Chief
> Western Colorado Area Office
> Bureau of Reclamation
> (970) 248-0651

--
Wendell A. Koontz

Delta County Commissioner District 3
wkoontz@deltacounty.com
O: (970) 874-2113
C: (970) 200-4251

Comme 6

Outlook

[EXTERNAL] my opposition to piping the Grandview Canal in Crawford

From Gary Hubbell <grandviewranch@gmail.com>
Date Tue 5/20/2025 11:11 AM
To Ward, Jennifer K <jward@usbr.gov>; ewarner@usbr.gov <ewarner@usbr.gov>

Jenny Ward:

I'm writing to you in response to an email I received from Ed Warner of the US Bureau of Reclamation on April 24, 2025, regarding an Environmental Assessment for the purposes of piping the Grandview Canal.

Comment 3

Let me first state to you that I contacted the Bureau of Reclamation OVER TWO YEARS AGO regarding this project and asked to be included in the production of the EA. Only recently did your field guy, "Josh", give me a phone call. This lack of accountability and response is EXACTLY WHAT IS WRONG in our government. Sadly, your office--headed by Ed Warner--is a pitiful but prime example of the massive inefficiencies in our government.

Today I read again Ed Warner's letter of April 24, knowing that I have only a few more days to comment. I clicked on the link for the EA of the Grandview Ranch project. Although my internet service is over 600 mBPS (very fast, for those of you who don't know), the browser timed out because the website is not responding. Okay, I thought, I'll call you--YOU, Jenny Ward, at 970-248-0651, as recommended in Ed Warner's letter. "Busy". No option for voicemail. Hmmmm, I thought, and looked up the office number. 970-248-0600. Same problem--"Busy", no response, no voicemail, an immediate disconnection. Then I tried Josh's number that I had saved in my phone. Same thing.

Comment 4

As far as I can tell, your communications are completely down, yet I have a deadline to respond to a project that will radically alter the character of my property.

I must state my opposition to said project. NO ONE has sought to contact me and learn any of my observations from an environmental perspective. This project will have significant deleterious consequences for many sensitive species.

There are large cottonwoods on our property immediately adjacent to the Grandview Canal. These tall trees attract migrating bald eagles on an annual basis. We've had as many as half a dozen at a time roosting in those trees. It is not a spontaneous event that happens every few years--EVERY YEAR there are numbers of bald eagles that roost in those trees, fish in the canal, and hunt ducks in the canal. Comment 5

Large numbers of deer water there in the canal. Migrating waterfowl use it heavily during the coldest part of the winter when all the static water--lakes, ponds, and reservoirs--are frozen over. It is one of the only refuges of open water for miles around. Comment 6 Comment 7

Has your EA taken those factors into account? Did anyone interview me and ask for documentation? No. I can't even access the draft EA because your website is down. Comment 8

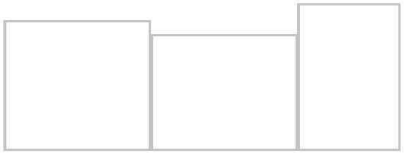
I submit that the Grandview could be lined like the Fruitland Mesa irrigation canal with a "half pipe". That would be an acceptable alternative, in my view. Has this option been considered? Comment 9

I'm actually very curious as to whether or not anyone will actually receive, read, and respond to my email. I'm requesting an immediate phone call from Ed Warner to clarify what's going on here. Your agency's lack of transparency is embarrassing to me as an American citizen and taxpayer.

I have a call in to Jeff Hurd's office and they will be receiving a copy of this email.

Respectfully submitted,

--



Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

Outlook

[EXTERNAL] Re: Availability of Draft EA - Grandview Canal Middle and Lower Piping Project

From Gary Hubbell <grandviewranch@gmail.com>
Date Tue 5/27/2025 3:33 PM
To Ward, Jennifer K <jward@usbr.gov>
Cc Broderdorp, Kurt <kurt_broderdorp@fws.gov>; Adams, Tyler R CIV USARMY CESPA (USA) <Tyler.R.Adams@usace.army.mil>; Moe, Jana P <jpmoe@blm.gov>; Sralla - DNR, Rachel <rachel.sralla@state.co.us>; Ryan Unterreiner - DNR <ryan.unterreiner@state.co.us>; Gardunio - DNR, Eric <eric.gardunio@state.co.us>; brian.magee@state.co.us <brian.magee@state.co.us>; Kelly Crane - DNR <kelly.crane@state.co.us>; Codi Inloes-Williams <codi.inloes-williams@state.co.us>; michael.goolsby@state.co.us <michael.goolsby@state.co.us>; Culture <sunagpra@southernute-nsn.gov>; Rebecca Mitchell <rebecca.mitchell@state.co.us>; Raquel Flinker <rflinker@crwcd.org>; Drew Peternell <Drew.Peternell@tu.org>; luke.laurita@tu.org <luke.laurita@tu.org>; info@chc4you.org <info@chc4you.org>; tanya@theconservationcenter.org <tanya@theconservationcenter.org>; planning@deltacounty.com <planning@deltacounty.com>; wkoontz@deltacounty.com <wkoontz@deltacounty.com>; csrs@dmea.com <csrs@dmea.com>; editor@deltacountyindependent.com <editor@deltacountyindependent.com>; Foote - DNR, Peter <peter.foote@state.co.us>; DORISTEAL@msn.com <DORISTEAL@msn.com>; Larry Jensen <larryrjensen@gmail.com>

Jennifer Ward--

I understand that today is the end of the comment period for the Environmental Assessment for the proposed Grandview Canal pipeline project in Crawford.

First, I want to state my categorical denunciation of your agency and the manner in which your office has handled this process. I first emailed your agency on May 6, 2023, asking to be included in any biological assessments and reporting, noting several bird species that commonly inhabit this area, including regular visits by bald eagles. No one ever replied. Comment 10

Secondly, in my attempt to access the EA and contact your office, the website was down--completely unresponsive--as well as three different phone numbers for Bureau of Reclamation extensions at your office. The phones didn't even go to voicemail; the response was "busy" and the call was immediately disconnected on all three lines. I also learned that my neighbor, Larry Jensen, whose property encompasses 1.5 miles of the canal, was completely unaware of the issuance of the EA and any current plans to pipe the canal, which was long rumored. He learned of it through me. This is beyond poor Comment 11

business practices--if any of my brokers and auctioneers were to do business like this, they would be fired. You have embodied the bad reputation of an overbearing federal government--unaccountable, uncaring, uncommunicative, and some might say tyrannical.

Finally, I was able to get a response from my recent email.

I understand the intent behind the project--to reduce salinity in the water that ultimately goes to Mexico as the result of a treaty that was signed with Mexico. You do not need to acquaint me with the concept. However, I also understand that there is a certain amount of notice that must be given and that when a landowner requests to be involved in the information gathering and the writing of the draft EA, there should be communication. Nothing of the sort ever occurred.

Comment 12

Comment 13

In the writing of this EA, your author makes some unsupportable conclusions. In particular, in Section 3.2.6, Property Values, the author claims ***"According to the County Assessor, no statement or complaint has been received from a landowner, property buyer, or property seller, that a piped ditch had detracted from the value of a property in the North Fork valley (George 2023)...In general, in this agricultural area of Delta County, it is not open ditches that add value to real estate, but rather the irrigation water itself and its application to farmlands (George 2023). The application of water to farmlands can produce profitable crops for landowners, while at the same time providing green open space in the area that contributes to the scenic pastoral views enjoyed by the residents around the area.***

From the County Assessor's perspective, while the market value of a property may shift positively or negatively due to the personal preferences of potential buyers, the value of a property would not change as a result of piping the ditches (George 2023).
No significant impacts to property values would occur as a result of the Project, because piping the ditch would not affect the factors that are considered during the County Assessor's valuation process."

I strongly disagree with this position. I am an Accredited Land Consultant (ALC), recognized by the Realtors Land Institute as one of the top land professionals in the country. ALC's make up .0002% of all licensed agents in the United States. Our organization has participated in filing amicus briefs in three recent Supreme Court lawsuits, of which our side prevailed in all three.

Together with my broker associates, we conducted $49.5 million in real estate sales last year, including over 4,500 acres of land. All told, I've been directly involved in thousands of acres of land sales, hundreds of transactions, hundreds of millions in dollar volume, and 13 properties with conservation easements since 2007. We have worked with many hundreds of buyers and sellers. ***We know land values. We know what amenities our buyers are seeking, and almost every buyer is seeking a property with live water. Anyone who says otherwise is obviously not a professional land broker and has not worked with the buying public.***

I was very curious about that quote from Delta County Assessor Jolene George, so I called her and asked her about it. "I don't recall ever saying that," she said. "Where did they get this information?" I told her I did not know. I asked her what she would think would be preferable to a real estate buyer--a dry scar of dirt, or flowing live water? "Well, obviously live water," she said. I asked her if it was true that no one had ever complained about piping a ditch. She admitted that one landowner had in fact complained, to which I replied, "Well, now it's at least two. Consider this my formal complaint."

I then called Dawn Reeder, who apparently authored this document, who had failed to contact me during the research process. She explained that the County Assessor's process was the most valuable and stood by the conclusions. When pressed as to her personal opinion of what is more desirable–a flowing stream or a scar of dry dirt–she said the same as the Assessor–"Well, obviously a flowing stream."

I have queried several other Accredited Land Consultants. After all, my colleagues are truly the experts. We're the ones transacting sales of land, water, and minerals on a daily basis. The following Accredited Land Consultants agree with my assessment that land is more valuable with live water flowing through it, as opposed to an underground pipe:

- John Fowle, ALC, Shaffer Real Estate, Delta County. John noted that a similar pipeline had been built through North Delta, with serious deleterious effects to flora and fauna, noting giant dead cottonwood trees and disappearance of deer and other wildlife.
- Justin Osborn, ALC, past president of the Colorado Realtors Land Institute
- Jake Hubbell, ALC, who knows the property very well
- Luke Nissen, ALC, who has visited the property and knows it well
- Seth Craft, ALC, who has flown over it many times and knows the property well

I asked a similar question on a Facebook poll of over 2,000 United Country Real Estate agents, who specialize in rural property sales. Early results show 5 responses, all of whom say piping the canal will result in a loss of property values. On my own Facebook page, I posted a similar question. Of the 22 responses (most of which came from land brokers and professional real estate agents), ONE said that piping the canal was the preferable alternative. All the others said that live water definitely adds value to the property. In my professional opinion, the loss of live water could constitute a loss of more than 20% of the property's value.

The report also states that a "habitat bank" can make up for loss of habitat on the property. The wetland bank in question is an isolated property several miles away that does not have any irrigated fields nearby. Consequently, it is not used by many species, particularly mule deer. Mule deer inhabit my Grandview Ranch property on a daily basis, birthing their fawns in the meadows and seeking refuge from predators in nearby bedding habitat. The loss of such a large water resource will no doubt have a strong effect on local deer populations. Migrating ducks rest on the canal in spring and fall, particularly when ponds and reservoirs are frozen. It provides critical open water for waterfowl. Bald eagles roost in the cottonwoods lining the canal. Of course this isn't a trout stream, but we often find trout in it, not to mention crawdads and other piscatorial species. In the past couple of winters, we've also had a herd of over 100 elk wintering on the ranch for over a month at a time, and the elk have used the canal to drink. Kestrels, blue herons, belted kingfishers, swallows, redtail hawks, bluebirds, woodpeckers, and even the occasional sandhill cranes--they all use the land and trees immediately surrounding the canal.

Comment 14

Comment 15

Comment 16

Comment 17

In my opinion, the EA makes unsound conclusions regarding property values, which will cause economic harm to the landowners whose properties host the canal. It makes unsupportable conclusions about the loss of wildlife habitat. This document does not adequately address the viability of lining the bottom of the canal and keeping it open, which may be a viable alternative. I do not support this EA. I disagree with it. I think its conclusions are unsupportable, particularly when addressing land values, and I think it opens the door to litigation regarding "takings". I think the

Comment 18

Comment 19

Comment 20

biological and ecological conclusions are unsound and I think we will all be poorer for it if this project is completed as planned.

Finally, I must once again emphasize that my experience in trying to work with the Bureau of Reclamation has been far from satisfactory, and I will be contacting officials to institute a review of the process and those involved.

Respectfully submitted,

On Thu, Apr 24, 2025 at 8:09 AM Ward, Jennifer K <jward@usbr.gov> wrote:

> Hello,
>
> Please find attached a letter announcing the availability of the Draft Environmental Assessment for Grandview Canal and Irrigation Company's Grandview Canal Middle & Lower Piping Project. The public comment period extends through Monday, May 27, 2025.
>
> Thank you,
> Jenny

Jenny Ward
Environmental Group Chief
Western Colorado Area Office
Bureau of Reclamation
(970) 248-0651

--

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

Outlook

[EXTERNAL] Re: Availability of Draft EA - Grandview Canal Middle and Lower Piping Project

From Gary Hubbell <grandviewranch@gmail.com>
Date Tue 5/27/2025 8:23 PM
To Ward, Jennifer K <jward@usbr.gov>
Cc Broderdorp, Kurt <kurt_broderdorp@fws.gov>; Adams, Tyler R CIV USARMY CESPA (USA) <Tyler.R.Adams@usace.army.mil>; Moe, Jana P <jpmoe@blm.gov>; Sralla - DNR, Rachel <rachel.sralla@state.co.us>; Ryan Unterreiner - DNR <ryan.unterreiner@state.co.us>; Gardunio - DNR, Eric <eric.gardunio@state.co.us>; brian.magee@state.co.us <brian.magee@state.co.us>; Kelly Crane - DNR <kelly.crane@state.co.us>; Codi Inloes-Williams <codi.inloes-williams@state.co.us>; michael.goolsby@state.co.us <michael.goolsby@state.co.us>; Culture <sunagpra@southernute-nsn.gov>; Rebecca Mitchell <rebecca.mitchell@state.co.us>; Raquel Flinker <rflinker@crwcd.org>; Drew Peternell <Drew.Peternell@tu.org>; luke.laurita@tu.org <luke.laurita@tu.org>; info@chc4you.org <info@chc4you.org>; tanya@theconservationcenter.org <tanya@theconservationcenter.org>; planning@deltacounty.com <planning@deltacounty.com>; wkoontz@deltacounty.com <wkoontz@deltacounty.com>; csrs@dmea.com <csrs@dmea.com>

Ms. Ward--

In response to the proposed Grandview Canal pipeline project, the author states:

"Following construction disturbance, natural areas would be recontoured and either topsoiled and reseeded with a seed mix appropriate for the surrounding vegetation community or finished with sterile subsurface soil and unseeded, depending on the wishes of the underlying landowner. Where applicable, the seed mix for the natural areas would be a native drought-tolerant weed-free seed mix approved by Reclamation (Appendix A). Natural colonization of native plants on the reserved unweathered subsurface soil is preferable to reseeding on reserved topsoil in these areas. Redistributed topsoil has a low probability of success in germinating commercial seed mixes following construction, especially in drought conditions, and instead has historically germinated its own existing seed banks of ruderal weeds adapted to ground disturbance. Finishing the ground surface instead with unweathered subsurface soil would help eliminate the weed seed bank in the construction area. In accordance with the principles of ecological succession, surrounding native vegetation would colonize the construction corridor over a period of several years as the new topsoil becomes weathered. Because the upland native vegetation is abundant in the surrounding areas and would re-colonize the construction corridor, the impact to upland native vegetation would not rise to the level of significant.

I must note that there is a significant infestation of Russian knapweed along the dry lands bordering the Grandview Canal. The author of your EA fully admits that importing topsoil is an exercise in futility and even planting dryland grass species likely won't work. Allowing nature to "colonize" native species is really the only choice. However, I find

Comment 21

it very likely that we will see intense colonization of Russian knapweed instead. This is a scourge on the landscape, and you know it. I proffer the question--if I am to be left with a scarred landscape with an intense infestation of knapweed, who will come and control it? At what cost? Who will pay? I don't want the job. I have enough to do already. Will the downstream beneficiaries of this project come and do it?

Comment 22

On Tue, May 27, 2025 at 7:36 PM Gary Hubbell <grandviewranch@gmail.com> wrote:

> Here are some comments from my Facebook page. All of these people are "real" and personal friends and acquaintances. Note the poll I made on the United Country Real Estate Facebook page. All 8 of the respondents voted to "keep the canal open", noting that it would result in a loss of property values. In total, I received about 37 responses. All were in favor of keeping the canal open, mostly for wildlife values. Others noted a loss in property values. One response was in favor of piping the canal.
>
> On Thu, Apr 24, 2025 at 8:09 AM Ward, Jennifer K <jward@usbr.gov> wrote:
>
> > Hello,
> >
> > Please find attached a letter announcing the availability of the Draft Environmental Assessment for Grandview Canal and Irrigation Company's Grandview Canal Middle & Lower Piping Project. The public comment period extends through Monday, May 27, 2025.
> >
> > Thank you,
> > Jenny
> >
> > Jenny Ward
> > Environmental Group Chief
> > Western Colorado Area Office
> > Bureau of Reclamation
> > (970) 248-0651

--

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

--

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

Outlook

[EXTERNAL] Re: Availability of Draft EA - Grandview Canal Middle and Lower Piping Project

From Gary Hubbell <grandviewranch@gmail.com>
Date Tue 5/27/2025 7:37 PM
To Ward, Jennifer K <jward@usbr.gov>
Cc Broderdorp, Kurt <kurt_broderdorp@fws.gov>; Adams, Tyler R CIV USARMY CESPA (USA) <Tyler.R.Adams@usace.army.mil>; Moe, Jana P <jpmoe@blm.gov>; Sralla - DNR, Rachel <rachel.sralla@state.co.us>; Ryan Unterreiner - DNR <ryan.unterreiner@state.co.us>; Gardunio - DNR, Eric <eric.gardunio@state.co.us>; brian.magee@state.co.us <brian.magee@state.co.us>; Kelly Crane - DNR <kelly.crane@state.co.us>; Codi Inloes-Williams <codi.inloes-williams@state.co.us>; michael.goolsby@state.co.us <michael.goolsby@state.co.us>; Culture <sunagpra@southernute-nsn.gov>; Rebecca Mitchell <rebecca.mitchell@state.co.us>; Raquel Flinker <rflinker@crwcd.org>; Drew Peternell <Drew.Peternell@tu.org>; luke.laurita@tu.org <luke.laurita@tu.org>; info@chc4you.org <info@chc4you.org>; tanya@theconservationcenter.org <tanya@theconservationcenter.org>; planning@deltacounty.com <planning@deltacounty.com>; wkoontz@deltacounty.com <wkoontz@deltacounty.com>; csrs@dmea.com <csrs@dmea.com>

6 attachments (2 MB)
Screenshot 2025-05-27 at 7.29.34 PM.png; Screenshot 2025-05-27 at 7.30.25 PM.png; Screenshot 2025-05-27 at 7.29.16 PM.png; Screenshot 2025-05-27 at 7.29.51 PM.png; Screenshot 2025-05-27 at 7.30.13 PM.png; Screenshot 2025-05-27 at 7.33.17 PM.png;

Here are some comments from my Facebook page. All of these people are "real" and personal friends and acquaintances. Note the poll I made on the United Country Real Estate Facebook page. All 8 of the respondents voted to "keep the canal open", noting that it would result in a loss of property values. In total, I received about 37 responses. All were in favor of keeping the canal open, mostly for wildlife values. Others noted a loss in property values. One response was in favor of piping the canal.

On Thu, Apr 24, 2025 at 8:09 AM Ward, Jennifer K <jward@usbr.gov> wrote:

> Hello,
>
> Please find attached a letter announcing the availability of the Draft Environmental Assessment for Grandview Canal and Irrigation Company's Grandview Canal Middle & Lower Piping Project. The public comment period extends through Monday, May 27, 2025.

Thank you,
Jenny

Jenny Ward
Environmental Group Chief
Western Colorado Area Office
Bureau of Reclamation
(970) 248-0651

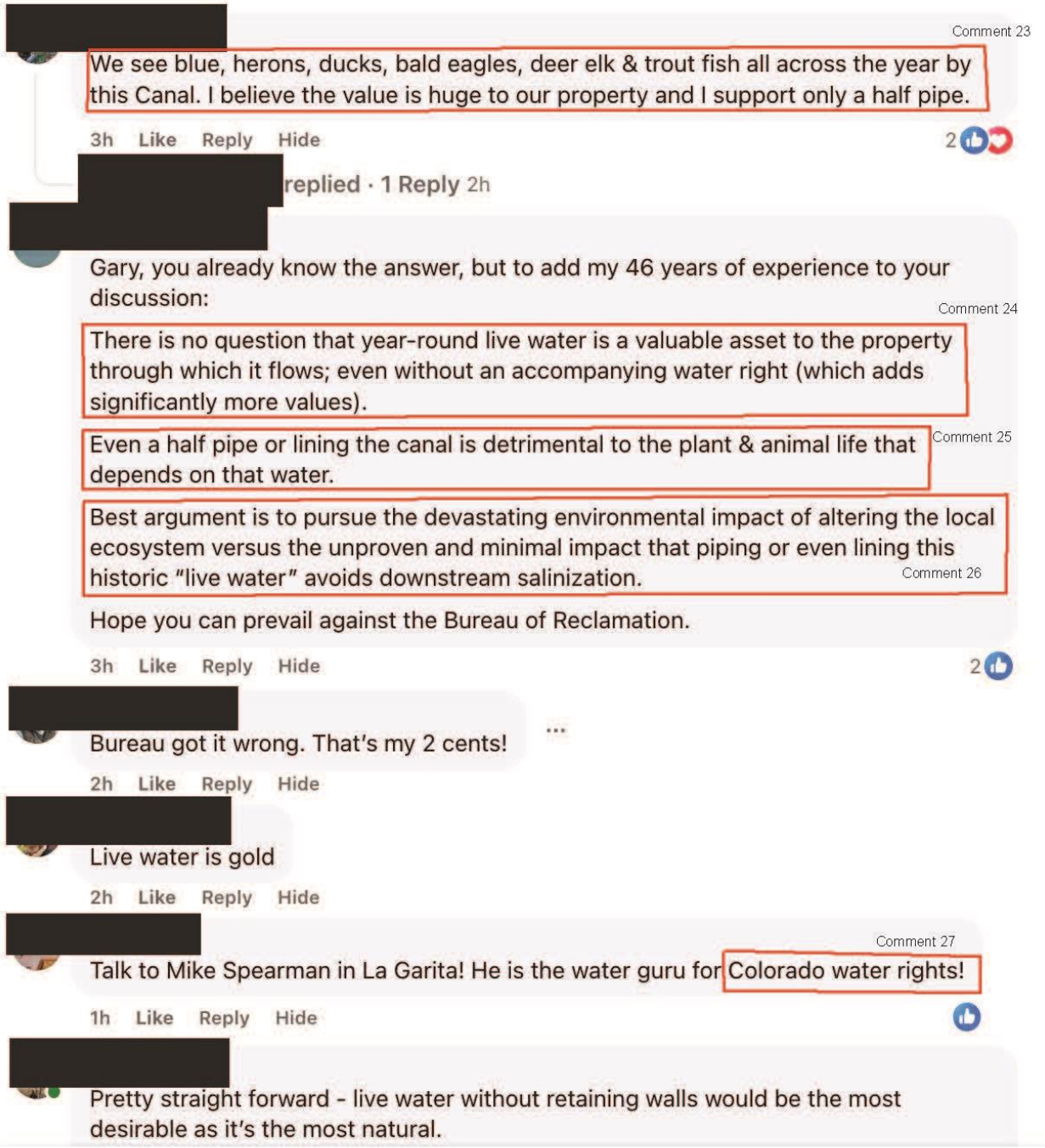
--

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

***Because the Facebook commenters did not submit the comments themselves and may not be aware that their comments are being included in this Final EA, their names and profile pictures have been redacted.


Comment 23
We see blue, herons, ducks, bald eagles, deer elk & trout fish all across the year by this Canal. I believe the value is huge to our property and I support only a half pipe.
3h Like Reply Hide
2
replied · 1 Reply 2h
Gary, you already know the answer, but to add my 46 years of experience to your discussion:
Comment 24
There is no question that year-round live water is a valuable asset to the property through which it flows; even without an accompanying water right (which adds significantly more values).
Comment 25
Even a half pipe or lining the canal is detrimental to the plant & animal life that depends on that water.
Best argument is to pursue the devastating environmental impact of altering the local ecosystem versus the unproven and minimal impact that piping or even lining this historic "live water" avoids downstream salinization.
Comment 26
Hope you can prevail against the Bureau of Reclamation.
3h Like Reply Hide
2
Bureau got it wrong. That's my 2 cents!
2h Like Reply Hide
Live water is gold
2h Like Reply Hide
Comment 27
Talk to Mike Spearman in La Garita! He is the water guru for Colorado water rights!
1h Like Reply Hide
Pretty straight forward - live water without retaining walls would be the most desirable as it's the most natural.

[redacted]

Pretty straight forward - live water without retaining walls would be the most desirable as it's the most natural.

Comment 28

You fix one problem to cause another with changes to the ditch. There's no way to guarantee no net change in value. The Bureau isn't an appraiser.

1h Like Reply Hide Edited

[redacted]

Comment 75

To offer an opposing viewpoint for conversation sake, we have seen many situations where open irrigation ditches result in the establishment of sensitive or endangered habitat or species that limit the landowners potential to develop the property to higher uses in the future. Having the water piped could limit the establishment of any wetlands or other conditions detrimental to use of the property

1h Like Reply Hide

[redacted]

No pipes

1h Like Reply Hide

[redacted]

Comment 29

Does that ditch have winter livestock water in it? That could also be an issue for some people if that is taken away.

1h Like Reply Hide

[redacted]

Live water is a must . Piping is killing of all natural elements of what I and many enjoy

40m Like Reply Hide

[redacted]

Comment 30

Definitely live water adds value from a wildlife and aesthetic standpoint. Agree that if erosion is a problem rip rap is the answer

31m Like Reply Hide

[redacted]

Comment 31

if you were protecting wetlands, you might have a chance, but the down river rights of other states have priority

4h Like Reply Hide

[redacted]

Live water is everything to wildlife. Free flowing water is a huge draw.

[redacted]

I agree with leaving the ditches open. If erosion is a problem rip rap the banks. This piping has only become urgent in the last few years. It is more politics than anything. Wildlife, subsurface irrigation, and more benefit from the open water. Comment 32 It also helps cool and adds humidity to the dry air. Comment 33

6h Like Reply Hide Edited 5

[redacted] Comment 34

I think the ditch/canal would add value to your property. To watch the wildlife that use it would be a draw, the look of it is calming and natural. It carries it's own ecosystem. Comment 34 cont.

7h Like Reply Hide Comment 35 2

[redacted]

This is a real critical issue! Losing anything to the degree of water is a step backwards. Live water definitely adds value to a property, especially for buyers who prioritize natural resources. It's concerning that the Bureau of Reclamation believes piping won't affect property values. Many areas, including Yuma County AZ and Imperial County CA, are battling with salinity issues from being the end user of the Colorado River. Their experiences past and current could provide valuable insights into the long term impacts of such decisions on land value and agricultural viability. Comment 36 As you know there's broader implications of losing live water and the potential for invasive species to uncontrollably take over. Comment 37 I'd be looking into alternatives like an algae farm to combat the salt content. Comment 38

6h Like Reply Hide 2

[redacted] Comment 39

1/2 pipe would be best, looks like the they are looking for a cheap bandaid, which will cost more later!

7h Like Reply Hide

[redacted] Comment 40

Any endangered reptiles, birds or small mammals living along the canal that will be greatly affected by the instantaneous stoppage of the flowing water? Beat Big Brother at their own game? Tie it up in court till they lose interest.

[redacted]

Absolutely! Free flowing water has many advantages for land value. Anyone that would disagree is a stupid liberal bureaucrat.

6h Like Reply Hide 3

[redacted]

Heck, I'm not in real estate & I would not want to lose free flowing water from from a property purchase and also I see it as one of the selling points. Half pipe.

5h Like Reply Hide Edited 2

[redacted]

Yes it absolutely adds value!

5h Like Reply Hide

[redacted]

100% adds value!

5h Like Reply Hide

[redacted]

Live water for sure and all that it provides for!!!

5h Like Reply Hide

[redacted]

Adds value

4h Like Reply Hide

[redacted]

Water people are crazy

5h Like Reply Hide

[redacted]

Comment 41

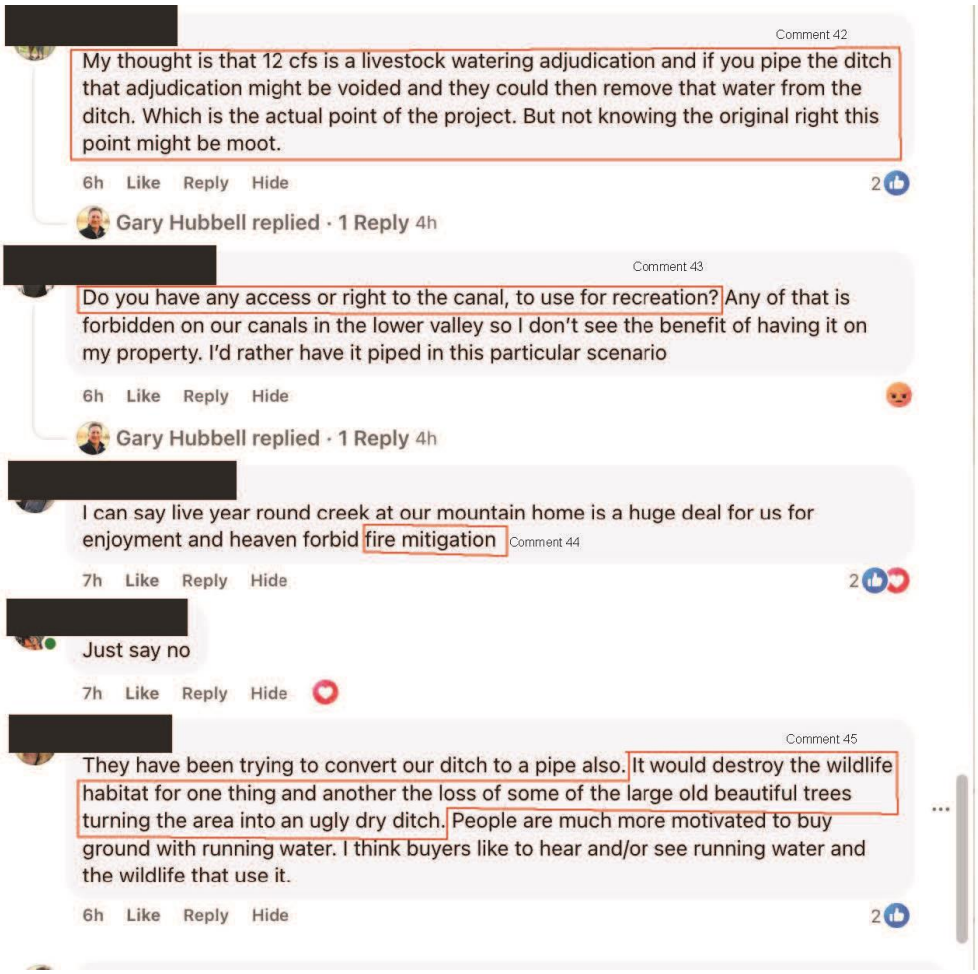
Is the Grandview Canal the only or most prevalent source of Gunnison River salinity?

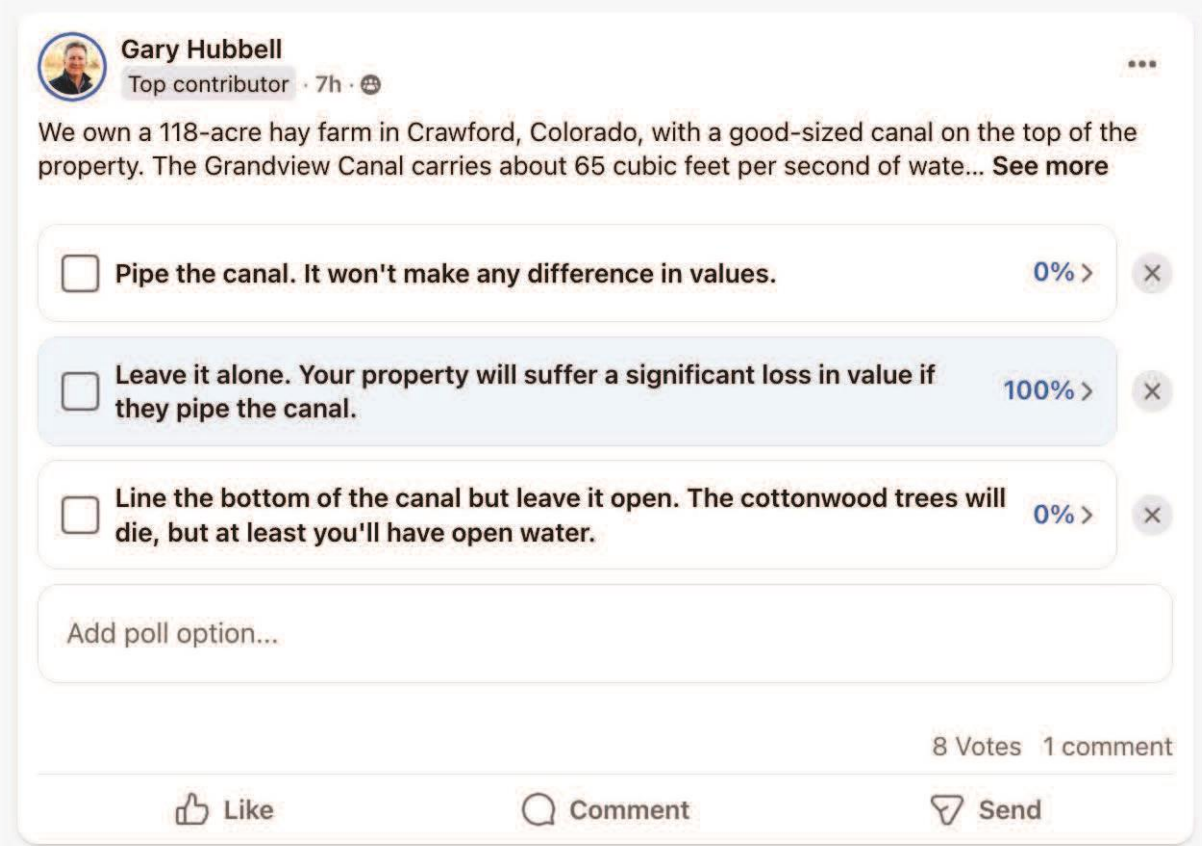
7h Like Reply Hide

Gary Hubbell replied · 1 Reply 4h

[redacted]

My thought is that 12 cfs is a livestock watering adjudication and if you pipe the ditch that adjudication might be voided and they could then remove that water from the


[redacted]
Comment 42
My thought is that 12 cfs is a livestock watering adjudication and if you pipe the ditch that adjudication might be voided and they could then remove that water from the ditch. Which is the actual point of the project. But not knowing the original right this point might be moot.
6h Like Reply Hide
2
Gary Hubbell replied · 1 Reply 4h
[redacted]
Comment 43
Do you have any access or right to the canal, to use for recreation? Any of that is forbidden on our canals in the lower valley so I don't see the benefit of having it on my property. I'd rather have it piped in this particular scenario
6h Like Reply Hide
Gary Hubbell replied · 1 Reply 4h
[redacted]
I can say live year round creek at our mountain home is a huge deal for us for enjoyment and heaven forbid fire mitigation
Comment 44
7h Like Reply Hide
2
[redacted]
Just say no
7h Like Reply Hide
[redacted]
Comment 45
They have been trying to convert our ditch to a pipe also. It would destroy the wildlife habitat for one thing and another the loss of some of the large old beautiful trees turning the area into an ugly dry ditch. People are much more motivated to buy ground with running water. I think buyers like to hear and/or see running water and the wildlife that use it.
6h Like Reply Hide
2


Gary Hubbell
Top contributor · 7h ·
We own a 118-acre hay farm in Crawford, Colorado, with a good-sized canal on the top of the property. The Grandview Canal carries about 65 cubic feet per second of wate... See more
Pipe the canal. It won't make any difference in values.
0%
Leave it alone. Your property will suffer a significant loss in value if they pipe the canal.
100%
Line the bottom of the canal but leave it open. The cottonwood trees will die, but at least you'll have open water.
0%
Add poll option...
8 Votes 1 comment
Like
Comment
Send

To: Jennifer Ward

Good morning,

Thank you for the opportunity to comment on the Grandview Canal Middle and Lower Piping Project. We have had a dialogue with the representatives of Grandview Canal for over seven years regarding this project. Recently, we have attempted to finalize our understanding of the construction of this change to the Grandview Canal, but we have not been able to come a written agreement of the details. I do, however, believe that we are all working in good faith to complete that agreement.

The following is a list of my concerns that we are discussing:

1) The Grandview Canal has a written easement for the canal on our property. It is not an exclusive easement. The alignment of the proposed pipeline on the maps provided in the EA does not comply with the terms of that easement. Comment 47
2) Access to the work areas utilizes private roads for which they do not have an easement.
3) As we use this property as part of our livestock operation, we need a construction and operation plan which ensures that there are no conflicts with either party in conducting their business during the construction period. Comment 48
4) All construction operations should be completed to industry accepted standards. This should include, but is not limited to, safety, cleanliness, respect for landowner rights, etc.
5) The final product should be finished to ensure that the approximate original contour is maintained. This may require imported material to repair erosion on the canal and to prevent erosion issues in the future. Comment 49
6) The final surface of the disturbance should be free of any unnatural rocks or debris, topped with topsoil consistent with the other soils in the area, and revegetated to prevent erosion and weeds.
7) Improvements currently on the proposed work area, i.e., roads, fences, etc., should be repaired or replaced to their existing conditions.
8) Utilization of any materials on the property to facilitate construction of this project will be at our discretion, as we possess the mineral rights.
9) The Grandview Canal will be responsible for any damage that occurs to our property as a consequence of the proposed "waterfall area" after the completion of the project.
10) Grandview Canal will indemnify us against any and all liabilities resulting from their construction.

Comment 46

Thank you for your consideration of our comments,

Larry Jensen
larryrjensen@gmail.com
(970) 921-6144

Dear Jennifer,

I appreciate the opportunity to comment on the Grandview Canal EA since we were not included in the notification of the comment period.

My husband and I own property across which a large section of the Grandview Canal flows and will be piped. We have been trying to reach an understanding with the Grandview Canal but have not yet entered into an agreement. The issues that I have are:

- There is a recorded easement for the Grandview Canal on our property, limited to 60' in width. The map of the Proposed Pipeline in the EA shows it is substantially out of that easement in places. The EA mentions that "*A total of approximately 1.5 miles of existing ditch segments would be abandoned.*" Most of that would be on our property where the pipeline is not in the current ditch. Comment 50
- Grandview Canal has not requested permission in order to include a staging area on our property.
- The EA shows access to the project on two private roads which are on our property. One is a driveway to a residence and has nothing to do with the Grandview Canal. The other is a road from Grandview Mesa Road to our property. This road leads to no residences; it is only used by us and by those to whom we have given specific permission. Soon after we purchased the property, before we had a chance to build fences, we used a hotwire to contain our livestock on the property. A representative of Grandview Canal drove through the hotwire. After that, we sent the ditch a letter saying that only the ditch rider and president of Grandview Canal had permission to drive up that road, and that permission was given at our sole discretion. If the road were to be used for this project, I would expect that the ditch company would approach us for permission.
- The EA states, "*All landowners in the footprint of the Project where activities would take place outside the statutory rights-of-way have formally agreed (or will have formally agreed prior to construction) to allow the activities of the Project to be conducted on their lands.*" There are two problems with this statement. First, there is a specific easement for the ditch, not a statutory right-of-way. Second, we do not have an agreement. That is not to say that we are not open to agreeing to the project, but there are issues to discuss and resolve.

- On page 12 of the EA, the "*waterfall area*" is mentioned. In this specific area, the Grandview Canal for several years has either seeped, leaked, or overflowed into our hayfield to the north of the ditch. It has made a portion of the hayfield so wet as to be unusable, but putting the ditch in a pipe will solve that problem. However, in the description of the "*waterfall area*," the water for the "*waterfall area*," would "*be slowed and pooled ... and would terminate in a wet area.*" This is right above the hayfield to the north. On page 25, the EA specifically says, "*there would be no significant impact to surface hydrology as a result of the Project.*" Therefore, some assurances must be made that this will not again result in water on the driveway or in our hayfield. Comment 51

- There are several juniper trees in the easement area. They are few and far between and grow slowly. My request would be that, whenever possible, any trees might be avoided. Comment 52
- My understanding of what the EA says about water for big game is that it can be handled with on-farm outlets in the immediate area – "*Four on-farm stockwater outlets spread across the Lower Section of the Project Area would have the potential to be active during freezing months following Project implementation. These stock watering resources would also benefit big game*" (page 39.) Bringing big game onto our hayfields looking for water is totally unacceptable. It would have an intolerable impact on our fields, fences, and the economics of operating a cattle ranch. On page 40 of the EA, it then states, "*wildlife watering resources would be maintained, and wetland and riparian habitat values would be maintained at the existing habitat replacement site.*" That does not keep the elk out of **our** hayfields and cattle herd. We, as landowners, have a proposal to avoid this unexpected consequence, but need to discuss it with the representatives of the ditch company. Comment 53
- We need to use this property at certain times of the year and must have a construction schedule and have stock water so that our operation and the construction can function without conflict. Comment 54
- As the EA states on page 45, "*Soils in the area are also highly prone to erosion, especially where irrigation ditches contour through Mancos shale-derived soils and along slope faces.*" This is very true, and the Project must be finished such that the original contours are reestablished to avoid erosion. Also, the revegetation must be to our wishes, topping with the stockpiled topsoil from the ditch banks, and using appropriate dryland seed, thereby avoiding erosion and limiting weeds. Comment 55 Comment 56
- All fences and roads must be left in at least the condition in which they were before the Project.
- An agreement must be reached between the ditch company and us before any material from the property is used in the Project.
- Grandview Canal will indemnify us against any and all liabilities resulting from their Project. Comment 57

We are actually in favor of this Project, but we need to reach an agreement with Grandview Canal before the Project begins.

Thank you for your consideration of my comments,

Michelle Jensen
thefourjranch@gmail.com
(970) 921-6144

Matthew Jensen
42374 Cottonwood Creek Rd
Crawford, CO 81415

June 13, 2025

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

Dear Mr. Warner:

This letter is written to capture comments I have regarding the Grandview Canal Environmental Assessment (EA).

My family owns the ground under approximately 1.5 miles of canal that would be impacted by the proposed action. I am not writing today to advocate for or against the proposed action. Rather, I wish to express that should one of the action alternatives be adopted, Grandview Canal will have to reach an agreement with my family. Section 2.2.3 of the EA states, "All landowners in the footprint of the Project where activities would take place outside the statutory rights-of-way have formally agreed (or will have formally agreed prior to construction) to allow the activities of the Project to be conducted on their lands." My family is part of the group who have not formally agreed to the construction. With the exception the small deviation close to the Fruitland Mesa Rd, all deviations between the existing canal and the proposed pipeline shown in Figure 3 lie within my family's property. These deviations lie outside of the Grandview Canal easement. There are some concerns that my family have that need to be addressed before the plan proposed in the EA can be constructed. Comment 58

One concern is the terminus of the "waterfall area." As I understand, the wet area at the end of "waterfall area" is at the edge of our hayfield. I don't think it is unreasonable to ask that the existing canal not be left open and running only to end at our hayfield. Comment 59

Another concern is the stock water access. The use of winter stock water from the Crawford Clipper Ditch system would have to flow through my family's property to make it to the Grandview Canal users. The exact specifics for how construction would proceed with stock water flowing have not be finalized. Comment 60

In regards to the two upland weed control methods mentioned in 3.2.9, we would opt for the topsoil and reseeding option (as opposed to the subsurface, mineral soil option).

Figure 3 depicts a north/south access road between 3750 Rd and Cattle Dr. This is a private road on our property. My family gave written permission for Grandview Canal to use this road, but my family limited the scope for this access. Furthermore, continued access was revocable and left at our discretion. Comment 61

Some discussion with the Grandview Canal has occurred to address some of our concerns. However, it was our understanding that we would talk at length this week, before the June 13th deadline for

comments. Unfortunately, timing didn't allow for these talks, so we felt it necessary to voice our concerns now.

I thank you for your consideration.

Sincerely,

Matthew Jensen

Outlook

Fw: [EXTERNAL] Fwd: Concerns Regarding Piping of Ditches and Impact on Land Value

From Busch, Frederick A <fbusch@usbr.gov>
Date Wed 7/16/2025 2:23 PM
To Deming, Bart W <bdeming@usbr.gov>
Cc Dunham, Joshua L <jdunham@usbr.gov>; Ward, Jennifer K <jward@usbr.gov>

FYI

Frederick Busch, P.E.
Technical Services Division Manager
Bureau of Reclamation
Western Colorado Area Office
(O) (970)248-0653
(C) (970)892-1421

From: Gary Hubbell <grandviewranch@gmail.com>
Sent: Wednesday, July 16, 2025 1:31 PM
To: Dunham, Joshua L <jdunham@usbr.gov>; Busch, Frederick A <fbusch@usbr.gov>
Subject: [EXTERNAL] Fwd: Concerns Regarding Piping of Ditches and Impact on Land Value

Gentlemen:

Below you will find an email regarding the Grandview Canal project submitted by my colleague, Seth Craft of M4 Ranch Group. Seth is quite possibly the top-selling ranch broker in Colorado on a year-over-year basis with sales typically in the range of $80-$100 million a year. Seth is a fellow Accredited Land Consultant with the Realtors Land Institute.

Respectfully submitted,

---------- Forwarded message ---------
From: **Seth Craft** <seth@m4ranchgroup.com>
Date: Tue, May 27, 2025 at 9:58 PM
Subject: Concerns Regarding Piping of Ditches and Impact on Land Value
To: Gary Hubbell, ALC <grandviewranch@gmail.com>

To Whom It May Concern,

As an Accredited Land Consultant through the REALTORS® Land Institute and a broker with M4 Ranch Group, I'd like to express a serious concern regarding the ongoing piping of open ditches throughout western Colorado—specifically in the Crawford area.

This process significantly diminishes the value of agricultural and recreational properties by removing the live water component that many ranches depend on. Live water is a critical factor not only for ranch operations and aesthetic value, but also for sustaining local wildlife. When open ditches are piped, we remove a vital water source for deer, elk, and other species that rely on this habitat, effectively deterring their presence on the land.

Comment 62

Comment 63

Comment 64

In my professional experience, the elimination of live water access on a ranch can result in a 10% to 30% reduction in property value, depending on the extent and nature of the water loss. This is not only a financial concern but also an environmental and land stewardship issue that should not be taken lightly.

Comment 65

Please feel free to contact me should you want further insight on how this may affect specific properties.

Best regards,

Seth Craft

--

United Country Real Estate
Colorado Brokers & Auctioneers
COMMERCIAL PROPERTIES
Colorado Brokers & Auctioneers
RANCH PROPERTIES
COLORADO
BROKERS & AUCTIONEERS

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

Outlook

Fw: [EXTERNAL] Re: Discussion points for meeting with Grandview Canal and Irrigation Company

From Busch, Frederick A <fbusch@usbr.gov>
Date Wed 7/16/2025 2:22 PM
To Deming, Bart W <bdeming@usbr.gov>
Cc Dunham, Joshua L <jdunham@usbr.gov>; Ward, Jennifer K <jward@usbr.gov>

FYI

Frederick Busch, P.E.
Technical Services Division Manager
Bureau of Reclamation
Western Colorado Area Office
(O) (970)248-0653
(C) (970)892-1421

From: Gary Hubbell <grandviewranch@gmail.com>
Sent: Wednesday, July 16, 2025 1:37 PM
To: Dunham, Joshua L <jdunham@usbr.gov>
Cc: Busch, Frederick A <fbusch@usbr.gov>
Subject: [EXTERNAL] Re: Discussion points for meeting with Grandview Canal and Irrigation Company

Hi, Josh--

GCIC is very anxious to meet with me? That's interesting, since they never called me back after two requests to meet.

Do I have additional items? YES.

First, I strongly disagree with the EA's opinion of property values, and I can name any number of appraisers, land brokers, and Accredited Land Consultants who would agree with my assessment that this project will diminish my property values. I also question the manner in which the data was assembled. In my opinion, piping the canal will result in a diminishment in my property values of at least 15% and possibly as much as 30%. I just forwarded an email from Seth Craft, ALC, of M4 Ranch Group stating exactly that.

Comment 66

Second is the issue of prairie dogs. The dry canyon rim above my property is infested with prairie dogs, and the canal serves to keep them from invading my property. I am certain that I'll be overrun with prairie dogs as soon as this project is finished. Then I will have a never-ending battle with pestilent rodents that not only damage my property, but diminish my hay production FOR PERPETUITY. What is the plan to mitigate my upcoming infestation? Comment 67

Third, proposing a "wetland bank" 2 1/2 miles away to mitigate loss of habitat is absurd on the face of it. It's highly unlikely that any blue heron, belted kingfisher, fox, or songbird is going to travel that distance for water. The wildlife using that wetland today will be using it tomorrow and in the future. None of the habitat that will be lost with this project will be "replaced" by an already existing wetland. Comment 68

Fourth, it is sad to see dead cottonwood trunks lining what were formerly vibrant ditches. The Grandview Canal on Lower Grandview and Scenic Mesa lost incredible scenic values and habitat by piping the lower section of the Grandview. I don't want to see the same scenario on my property. Comment 69

Lastly, I really don't care for the way your office has handled its professional responsibilities with this scenario. Your phones were dead, website shut down, no one answering, no one responding, and now that appropriation is near, I'm suddenly getting some attention when I first reached out to you over two years ago.

Respectfully submitted,

Gary Hubbell

On Wed, Jul 16, 2025 at 10:54 AM Dunham, Joshua L <jdunham@usbr.gov> wrote:

> Mr. Hubbell,
> I just wanted to kick this back to the top of your inbox. GCIC is very eager to meet with you. Please let me know when you have your list of discussion point compiled. Thanks
>
> Joshua Dunham
> Design and Construction Group Chief
> Bureau of Reclamation
> Phone (970) 248-0613
>
> ---
>
> **From:** Dunham, Joshua L
> **Sent:** Friday, July 11, 2025 11:31 AM
> **To:** grandviewranch@gmail.com <grandviewranch@gmail.com>
> **Cc:** Busch, Frederick A <fbusch@usbr.gov>
> **Subject:** Discussion points for meeting with Grandview Canal and Irrigation Company
>
> Mr Hubbell,
> Thank you for your time on the phone today. As I said, I would like to facilitate a meeting with yourself and GCIC. In preparation for that meeting I would like to develop a list of discussion points regarding your concerns about the project, with the aim of exploring possible alternatives that could mitigate these concerns while still meeting the Salinity Control Program objectives. Some of the concerns we discussed were the loss of open water habitat and the potential loss of trees along the canal banks. Would you mind compiling a list of any more concerns you have about the project and emailing them to me. I will share these concerns with GCIC in hopes that this will help facilitate a fruitful discussion. Thanks for your help in this matter.

Joshua Dunham
Design and Construction Group Chief
Bureau of Reclamation
Phone (970) 248-0613

--

Gary Hubbell, ALC
Accredited Land Consultant
Broker/Owner/Auctioneer
United Country Colorado Brokers
31428 Highway 92
P.O. Box 393
Hotchkiss, CO 81419

970 872 3322 mobile

email: grandviewranch@gmail.com
facebook: www.facebook.com/coloradoranchbroker
www.aspenranchrealestate.com
www.uccoloradobrokers.com

COLORADO
Parks and Wildlife
Department of Natural Resources

Gunnison Service Center
200 S. Spruce Street
Gunnison, CO 81230
P 970.641.7060 | F 970.648.3014

August 1, 2025

Department of the Interior
Bureau of Reclamation
445 West Gunnison Ave, Suite 221
Grand Junction, CO 81501

RE: Draft Environmental Assessment: Grandview Canal Middle & Lower Piping Project

To whom it may concern,

Thank you for the opportunity to comment on the Bureau of Reclamation's (Reclamation) draft Environmental Assessment (EA) for the Grandview Canal Middle & Lower Piping Project. This draft EA analyzes two alternatives, which include the piping or lining of the Grandview Canal. The Preferred Alternative analyzed is the Piping Alternative, which would convert approximately 4 miles of open earthen irrigation ditch to a buried pipeline. The Lining Alternative would include installing approximately 4 miles of PVC membrane liner covered in fiber-reinforced shotcrete to form a cement irrigation canal. This project is intended to reduce salinity loading into the Colorado River, and both alternatives would meet the purpose and need for the project to address the needs identified in the Salinity Control Act. Colorado Parks and Wildlife (CPW) has the following comments regarding wildlife concerns associated with this project.

The proposed project area is on private lands inhabited by diverse wildlife, including mountain lion, black bear, wild turkey, mule deer, elk, small mammals, migratory birds, and various raptor species, including bald and golden eagles. The project area contains CPW-mapped High Priority Habitats (HPH), which include Severe Winter Range for mule deer and elk, and Winter Concentration Area for mule deer.

Comment 70

We appreciate the inclusion of an additional raptor survey in the spring of 2026, CPW's recommended buffer distances for active nests, and the timing recommendations for vegetation removal to avoid impacts on migratory birds.

CPW remains concerned about potential impacts associated with converting earthen irrigation canals to cement-lined (shotcrete) canals. No research has been conducted that examines concrete canals' impacts on wildlife or big game in particular. Anecdotal evidence and professional observation have shown that cement-lined canals (shotcrete) can present a barrier or a hazard to ungulates attempting to access water and/or during migration periods. Hooved animals like deer may be unable to escape a cement-lined canal due to the depth and steepness of its sides. There are various alternative water sources for wildlife, including the Smith Fork, multiple stock ponds, and flood-irrigated agricultural fields on the mesa within the project area. Therefore, for these reasons,

Comment 71

CPW recommends the Preferred Piping Alternative be selected and carried forward in the Record of Decision (ROD).

One of the area's most visible and immediate threats to ecosystem health is non-native/invasive weeds. Invasive weeds typically flourish following surface disturbance, and active weed monitoring and management should be incorporated after the proposed project is completed. We recommend native drought-tolerant seed mix be utilized for revegetation in all areas not slated to be irrigated. CPW can provide the project proponent with a site-specific native seed mix upon request.

Comment 72

A habitat replacement project was completed at Crawford State Park in 2012 to offset the impacts from the original Grandview Canal Piping Project. The Middle & Lower Piping Project proposes utilizing credits from the original habitat replacement project in 2012. The draft EA states that the Grand Canal Irrigation Company (GCIC) has continuously maintained the wetland enhancements and conducted habitat planting and weed control at the habitat replacement site. While many commitments made during the first phase of this project have been fulfilled, a few issues remain. These include weed management, removing excess materials left over from the original wetland development, and planting native trees. The location currently has toadflax, hoary cress, Canada thistle, and musk thistle that remain untreated and are impacting the habitat value of the project. Material excavated during the original improvement project to create the wetlands has not been removed and is currently piled around the edge of the wetlands and ponds. Lastly, native trees have not been planted within the habitat improvement project.

Comment 73

Please incorporate the following recommendations to avoid and minimize impacts to wildlife in the Final EA and ROD:

- Disturbed soils not within irrigated agricultural fields will receive a drought-tolerant native seed mix post-construction activities;
- Where soil disturbance activities have occurred, monitor and treat for noxious weeds for 3 years post-construction;
- Yearly post-construction monitoring should be implemented to assure reclamation effort success, and additional reseeding should take place as needed on a site-by-site basis;
- As specified in the EA, GCIC must conduct active weed management within the habitat replacement project site and plant native trees;
- Remove excavated materials around the edges of the habitat-replacement ponds;
- To reduce impacts to mule deer and elk during the winter (December 1- April 30), CPW recommends that construction activities start on the west side of the project area and work to the east towards more densely populated areas. This will minimize the impact of big game by reducing human disturbance in areas with the least human presence. CPW acknowledges that the seasonal timing stipulation for mule deer and elk winter High Priority Habitats overlaps with the non-irrigation season, which is the period when construction needs to occur for this project.

Comment 74

Thank you for the opportunity to comment on the Grandview Canal Middle and Lower Piping Project Environmental Assessment. If you have any questions or would like further clarification, please do not hesitate to contact the Southwest Region Land Use Coordinator, Peter Foote at (970) 375-6713 or the District Wildlife Manager, Adam Wallerstein at 970-275-4276.

Very Respectfully,

Brandon Diamond
Area Wildlife Manager, Area 16

CC: Area 16 File, SW Region File