



— BUREAU OF —  
RECLAMATION

# **Environmental Assessment and Finding of No Significant Impact for the Needle Rock – Lone Rock Ditch Piping Project**

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



## **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.

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**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*

**June 2022**

Cover Photo: Needle Rock Ditch with Needle Rock on the horizon.  
(Rare Earth Science, LLC).

## **FINDING OF NO SIGNIFICANT IMPACT**

United States Department of the Interior  
Bureau of Reclamation  
Western Colorado Area Office  
Grand Junction, Colorado

### **Needle Rock – Lone Rock Ditch Piping Project**

#### **Introduction**

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Reclamation (Reclamation) has conducted an environmental assessment (EA) for the Proposed Action of funding the Needle Rock – Lone Rock Ditch Piping Project. Under the legislative authority of Colorado River Basin Salinity Control Act, Reclamation will fund the Needle Rock – Lone Rock Ditch Piping Project (“Project” or “Proposed Action”), 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 and the Proposed Action Alternative to implement the Project.

#### **Decision and Finding of No Significant Impact**

Based upon a review of the EA and supporting documents, Reclamation has determined that implementing the Proposed Action will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the area. No environmental effects meet the definition of significance in context or intensity as defined at 40 CFR 1508.27. Therefore, an environmental impact statement is not required for this proposed action. This finding is based on consideration of the context and intensity as summarized in the EA. Reclamation’s decision is to implement the Proposed Action Alternative.

#### **Context**

The Project is in Delta County, Colorado. The affected locality includes the existing Needle Rock and Needle Rock Ditches, northeast of the Town of Crawford, in southeast Delta County. Affected interests include Reclamation, the U.S. Bureau of Land Management, Needle Rock Ditch Company and Lone Rock Ditch Company (together, “Applicant”) shareholders, and adjacent landowners. Part of the Project will take place on the BLM Needle Rock Natural Area, an 80-acre parcel with Wilderness Study Area designation.

#### **Intensity**

The following discussion is organized around the 10 significance criteria described in 40 CFR 1508.27. These criteria were incorporated into the resource analyses and issues described in the EA.




1. **Impacts may be both beneficial and adverse.** The proposed action would impact resources as described in the EA. Mitigating measures were incorporated into the design of the action alternative to reduce impacts. The predicted short-term effects of the Proposed Action include impacts to wildlife and habitat due to noise and habitat disturbance during construction, and short-term temporary ground disturbance and visual impacts. The non-impairment standard in BLM Policy Manual 6330 requires BLM to manage the Needle Rock Natural Area such that actions, uses, or activities do not impair its suitability for preservation as wilderness. As a valid existing right and an activity meeting the obligations of the Colorado River Basin Salinity Control Act, the Proposed Action is excepted from the BLM non-impairment standard. The predicted long-term effects of the Proposed Action include adverse effects to irrigation structures as cultural resources eligible for listing in the National Register of Historic Places (NRHP); loss of the artificial wetland and riparian habitat created by the ditches; and water depletions to downstream critical habitat for Colorado River endangered fishes. Best Management Practices (BMPs) and mitigating measures were incorporated into the design of the Proposed Action to reduce impacts to a level of insignificance. The ground disturbance and visual impacts of the Proposed Action on the Needle Rock Natural Area would be short-term and temporary, and conducted in the least impairing manner practicable. Short-term impacts to wildlife will be mitigated with construction timing restrictions. The long-term effect on cultural resources is being mitigated by the preparation of a video recording of a discussion on the history of the effected cultural resources. The long-term loss of artificial wetland and riparian habitat is being mitigated with a habitat replacement project. Water depletions to critical habitat for Colorado River endangered fishes are mitigated by the Upper Colorado River Endangered Fish Recovery Program, as identified in the U.S. Fish and Wildlife Service's (FWS') 2009 Final Gunnison River Basin Programmatic Biological Opinion (PBO). Beneficial effects are related to reduction of salt and selenium loading in the Colorado River basin.
2. **None of the environmental effects analyzed in the EA are considered significant.** None of the effects from the Proposed Action, together with other past, current, and reasonably foreseeable future actions, rise to a significant cumulative impact.
3. **The degree to which the selected alternative will affect public health or safety or a minority or low-income population.** The Proposed Action will have no significant impacts on public health or safety. No minority or low-income populations would be disproportionately affected by the Proposed Action.
4. **Unique characteristics of the geographic area.** There are no park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas that would be negatively affected by the Proposed Action.
5. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** Reclamation contacted representatives of other federal agencies, state and local governments, public and private organizations, and individuals regarding the proposal and its effects on resources. Based on the responses received, the effects of the Proposed Action on the quality of the human environment are not highly controversial.
6. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** There are no predicted effects on the human environment that are considered highly uncertain or that involve unique or unknown risks.

7. **The degree to which the action may establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.** Implementing the Proposed Action will not establish a precedent for future actions with significant effects and will not represent a decision in principle about a future consideration.
8. **Whether the action is related to other actions which are individually insignificant but cumulatively significant.** Cumulative impacts are possible when the effects of the Proposed Action are added to other past, present, and reasonably foreseeable future actions as described under related NEPA documents and plans; however, significant cumulative effects are not predicted, as described in the EA in Chapter 3.
9. **The degree to which the action may adversely affect sites, districts, buildings, structures, and objects listed in or eligible for listing in the National Register of Historic Places.** The State Historic Preservation Officer has concurred with a determination of adverse effect to some of the irrigation structures involved with the Proposed Action. Reclamation has entered into a Memorandum of Agreement (MOA) with the Colorado State Historic Preservation Officer (SHPO) to mitigate the impacts to the affected irrigation structures.
10. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** Consumptive loss of water in the Gunnison and Colorado River basins due to agricultural irrigation from the involved ditch systems results in annual water depletions of approximately 2,089 acre-feet from the Gunnison River watershed. Due to this historic and ongoing depletion, the Proposed Action may affect, and is likely to adversely affect, the four endangered Colorado River fishes: Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. The four endangered fishes occur downstream of the Proposed Action Area in the Gunnison and/or Colorado River basins, and they and their designated critical habitat are affected by historic water depletions caused by the consumptive use of water by irrigation systems. Water depletions to critical habitat for Colorado River endangered fishes are mitigated by the Upper Colorado River Endangered Fish Recovery Program, as identified in the U.S. Fish and Wildlife Service's (FWS') 2009 *Final Gunnison River Basin Programmatic Biological Opinion* (PBO). To ensure the historic water depletions of the ditch system are covered under the umbrella of the PBO and comply with the Endangered Species Act, the Applicant entered into Recovery Agreements with FWS (FWS TAILS: 06E24100-2022-F-0064). The Applicant's annual depletion rate is not expected to change as a result of the Proposed Action. Therefore, it is expected that the Proposed Action would not destroy or adversely modify designated critical habitat for the Colorado River endangered fishes.
11. **Whether the action threatens a violation of Federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment.** The project does not violate any federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, this project is consistent with applicable land management plans, policies, and programs. State, local, and interested public entities were given the opportunity to participate in the environmental analysis process.

### **Environmental Commitments**

The environmental commitments summarized in Chapter 4 of the Final EA will be implemented as part of the Proposed Action.

Approved by:



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Ed Warner  
Area Manager, Western Colorado Area Office

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# CHAPTER 1 - INTRODUCTION

This Environmental Assessment (EA) has been prepared to explain and evaluate the potential environmental effects of the Needle Rock Ditch Company's (NRDC's) and the Lone Rock Ditch Company's (LRDC's) proposed Needle Rock – Lone Rock Ditch Piping Project ("Project" or "Proposed Action"). The Federal action evaluated in this EA is whether the Bureau of Reclamation (Reclamation) would provide funding assistance to NRDC and LRDC (collectively, "Ditch Companies" or "Applicant") for the Proposed Action. This document has been prepared in compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's (CEQ's) NEPA regulations at 40 CFR Parts 1500 – 1508 (2020). 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 the southeast part of Delta County, Colorado (see Figure 1, below). The piping component of the Project is located about 2 direct miles northeast of the Town of Crawford, within Sections 21, 23, 26, 27, 28, and 29 of Township 15 South, Range 91 West (6th Principal Meridian). The Habitat Replacement Site for the Project is approximately 0.5 direct miles west of the Project's piping component in Section 20, Township 15 South, Range 91 West (6th Principal Meridian).

There are two classifications of land affected by the Proposed Action: private land and federal land. The Federal land is public land administered by the U.S. Bureau of Land Management (BLM) Uncompahgre Field Office, where Needle Rock Ditch crosses the 80-acre Needle Rock Natural Area Section 27 of Township 15 South, Range 91 West (6<sup>th</sup> Principal Meridian) (Figure 1). The Needle Rock Natural Area has the following BLM designations: Outstanding Natural Area (ONA), Area of Critical Environmental Concern (ACEC), and Wilderness Study Area (WSA). The Needle Rock Natural Area is also formally identified by BLM as an Instant Study Area, a specific category of WSAs. Instant Study Areas are less than 1,500 acres and generally not adjacent to other WSAs or a designated wilderness.

## 1.2 – Need for and Purpose of the Proposed Action

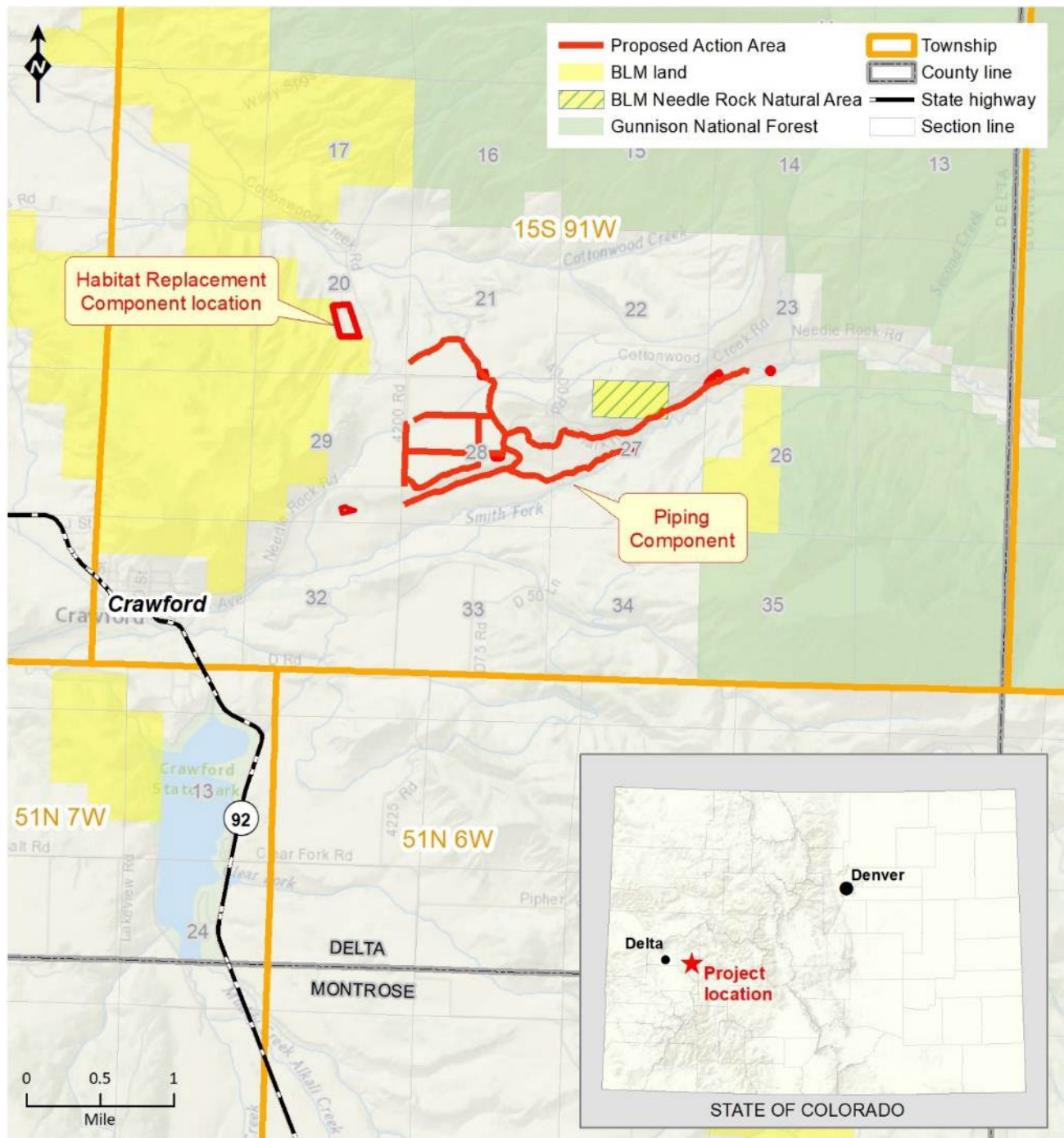
The need and purpose for the Proposed Action is to reduce salinity concentrations in the Colorado River basin in order to comply with the Colorado River Basin Salinity Control Act (Reclamation's federal nexus), and to acknowledge an existing historic prescriptive right-of-way (ROW) and grant a temporary construction ROW on BLM land and in order to comply with the Federal Land Policy and Management Act of 1976 (BLM's federal nexus).

The Proposed Action would eliminate seepage loss from approximately 7.4 miles of the open unlined Needle Rock and Lone Rock ditch systems, reducing salinity loading by 2,952 tons per year



in the Lower Gunnison Basin and the Colorado River Basin. An additional beneficial effect of the Proposed Action would be the reduction of selenium in the Colorado River basin (SMPW 2011), although the amount of selenium reduction has not been quantified.

Figure 1. Map of project location.



## **1.3 – Decision to be Made**

Reclamation will decide whether to provide funding to NRDC to implement the Proposed Action, and BLM would acknowledge an historic prescriptive ROW and grant a temporary construction ROW on BLM land to allow for implementation of the Proposed Action.

## **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 2017). 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 2017). 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 deep percolation by flood irrigation practices. These mobilized salts are eventually transported into downstream surface waters.

In June 1974, Congress enacted the Colorado River Basin Salinity Control Act, Public Law 93-320, which directed 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.

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 on Funding Opportunity Announcements (FOAs) issued by Reclamation. As part of the FOAs, applicants are evaluated individually according to the following criteria: cost effectiveness, the ability to enable on-farm salinity control features, risk assessment, detailed project plan, costs & capability to implement 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 owned, 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.

### **1.4.2 – Needle Rock and Lone Rock Ditch Companies**

Needle Rock Ditch was incorporated in 1890 to provide irrigation water to lands on the north side of Smith Fork Creek in the Missouri Flats area, and to lands farther to the northwest in the Cottonwood Creek drainage. Lone Rock Ditch was established in 1887 and formally incorporated in 1970 to provide irrigation water to lands north of Smith Fork Creek. The irrigated crops associated with the open, earth ditches administered by the Ditch Companies are primarily grass pasture, with some alfalfa hay. In 2019, the Ditch Companies applied to Reclamation to fund the Proposed Action under Funding Opportunity Announcement No. BOR-UC-20-F001.

## **1.5 – Relationship to Other Projects**

### **1.5.1 – Salinity Control Program**

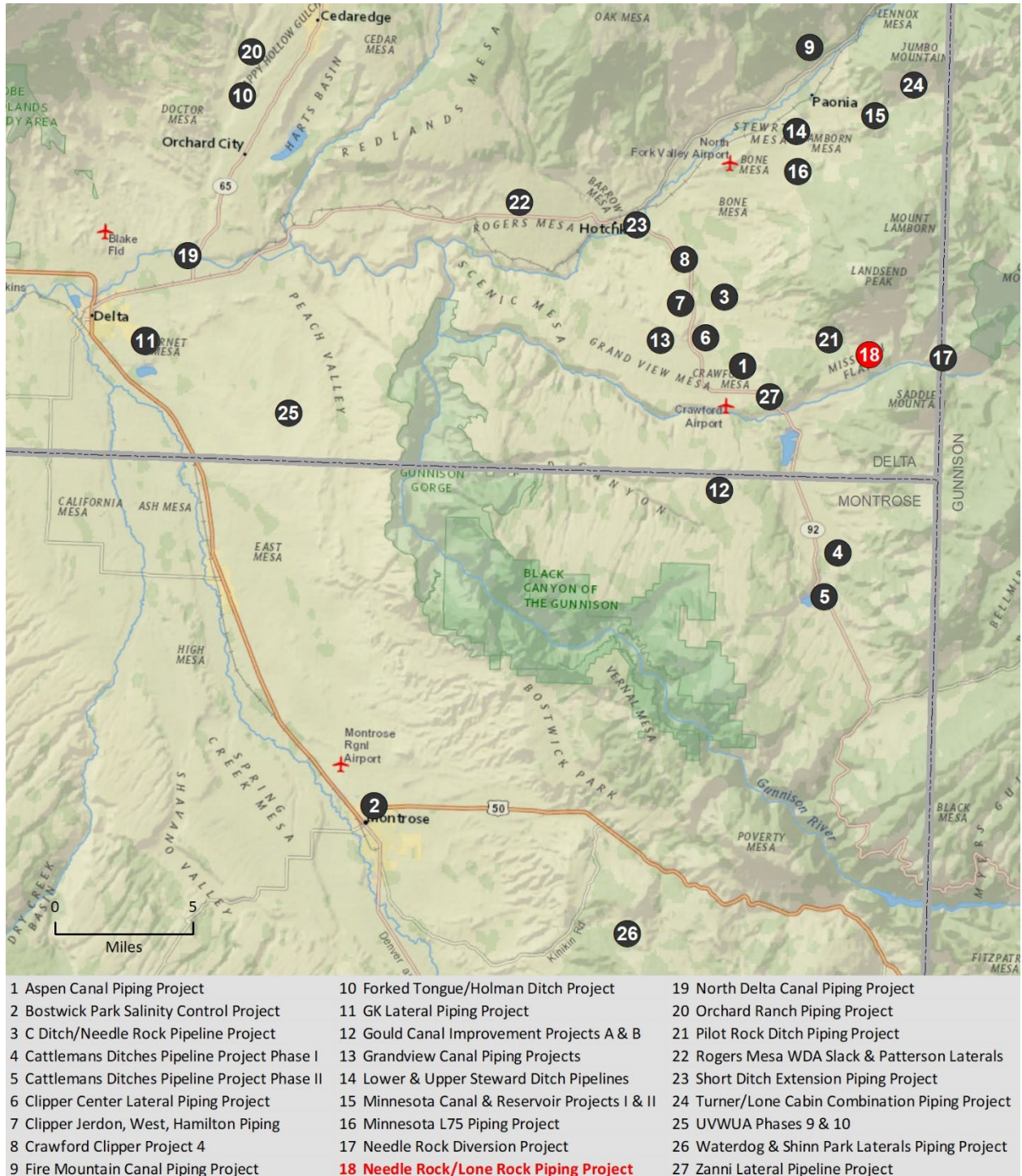
Reclamation, under the authority of the Colorado River Basin Salinity Control Act, Public Law 93-320, provides funding through the Basinwide Salinity Control Program and the Basin States Program to implement cost-effective salinity control projects in the Colorado River Basin. Reclamation's Western Colorado Area Office is in the process of or has recently utilized Salinity Control Program funds for the following salinity control projects in the vicinity of the proposed Project Area (Figure 2):

- 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
- Crawford Clipper Jerdon, West, Hamilton Piping Project
- Eastside Laterals Piping Projects ("UVWUA Phases & 10")
- Fire Mountain Canal Piping Project
- Forked Tongue/Holman Ditch Piping Project
- Gould Canal Improvement Projects A & B
- Grandview Canal Upper, Middle, and Lower Piping Projects
- Upper and Lower Stewart Ditch Piping Projects
- Minnesota Canal Piping Project Phase I and II
- Minnesota L75 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

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



### **1.5.2 – CRSP Basin Funds**

Reclamation's Western Colorado Area Office recently utilized Colorado River Storage Project (CRSP) Basin Funds to implement the following piping projects on CRSP-participating projects in the vicinity of the Proposed Action Area (Figure 2).

- Aspen Canal Piping Project
- GK Lateral Piping Project

### **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 Proposed Action include (Figure 2):

- Needle Rock Diversion Project (see Section 2.2.1 for how the Proposed Action is related to the Needle Rock Diversion Project)
- Grandview Canal Piping Project
- Crawford Clipper Ditch Upper West Lateral Master Plan Projects (various)

## **1.6 – Scoping**

Scoping for this EA was completed by Reclamation, in consultation with the following agencies and organizations, during the planning stages of the Proposed Action 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 recent similar projects and related informal consultations with Colorado Parks and Wildlife, Gunnison, Colorado, also helped identify potential concerns for the Proposed Action.

Issues determined to be of potential significance, and therefore appropriate for further impact analysis under this EA, are discussed in Chapter 3. The following issues and/or resources (Table 1) were determined to be insignificant or not applicable, and are not analyzed in greater detail within this document:

Table 1. Resources Eliminated from Further Analysis

Resource	Rationale for Elimination from Further Analysis
Indian Trust Assets and Native American Religious Concerns	No Indian trust assets have been identified within the Proposed Action Area. No Native American sacred sites are known within the Proposed Action Area. Neither the No Action Alternative, nor the Proposed Action Alternative, will affect Indian trust assets or Native American sacred sites. To confirm this finding, Reclamation provided the Ute Mountain Ute Tribe and the Ute Indian Tribe (Uintah and Ouray Reservation), and the Southern Ute Indian Tribe with a description of the Proposed Action and a written request for comments regarding any potential effects on Indian trust assets or Native American sacred sites as a result of the Proposed Action Alternative. No comments were received.
Environmental Justice & Socioeconomic Issues	The Proposed Action Area does not occur on Indian reservation lands or within disproportionately adversely affected minority or low-income populations. The Proposed Action Alternative would not involve population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. Therefore, neither the No Action Alternative, nor the Proposed Action Alternative, would have an environmental justice effect.
Wild & Scenic Rivers, Land with Wilderness Characteristics	No Wild and Scenic Rivers or Land with Wilderness Characteristics exist in the Proposed Action Area.
Drinking Water Quality	There is no data to support the notion that removing high salinity canal seepage water would degrade domestic well water salinity levels. No impacts anticipated, and therefore, this resource is not carried forward for further analysis.

## CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

Alternatives evaluated in this EA include the No Action Alternative and the Proposed Action Alternative.



## 2.1 – No Action Alternative

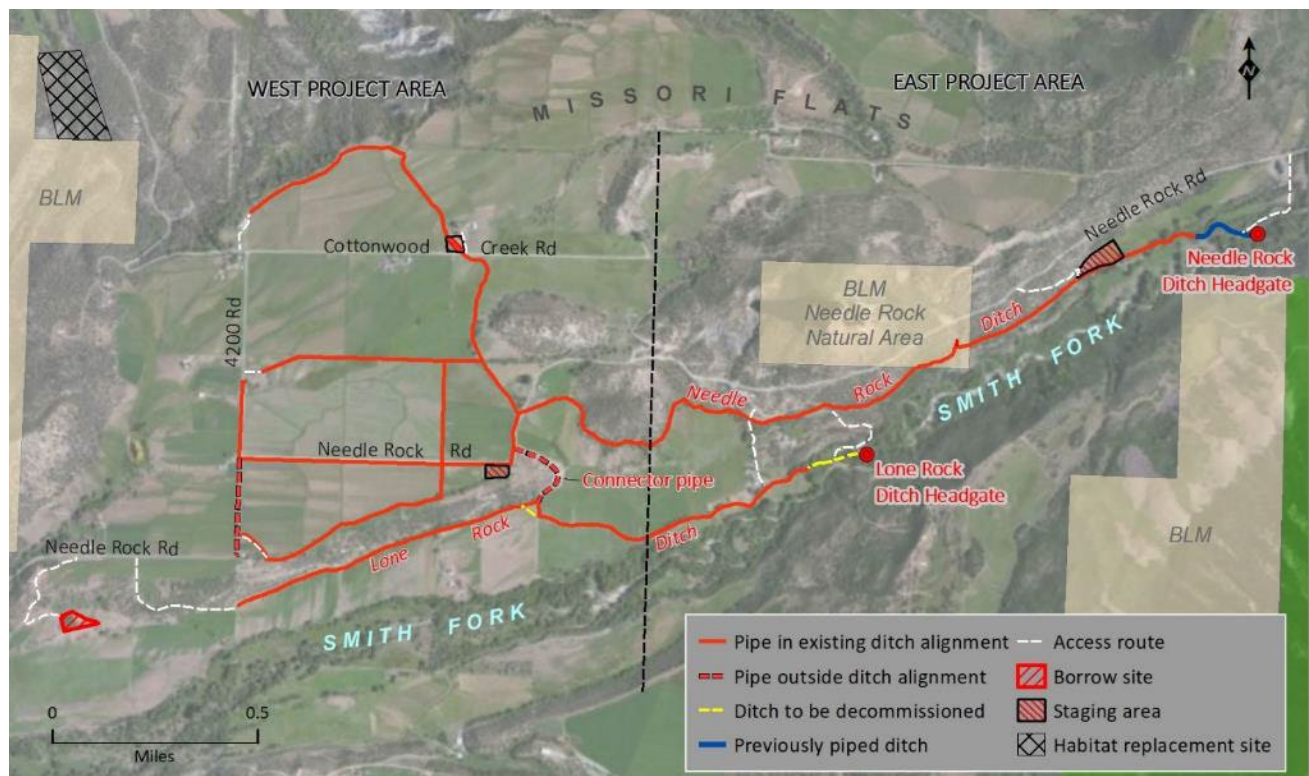
Under the No Action Alternative, Reclamation would not approve funding for the Project. The Needle Rock and Lone Rock ditch systems would continue to flow in open, earthen ditches, and the resultant salt loading to the Lower Gunnison Basin and the Colorado River Basin would continue.

## 2.2 – Proposed Action

Under the Proposed Action, Reclamation would authorize funding to the Ditch Companies to implement the Needle Rock – Lone Rock Piping Project, and BLM would acknowledge an historic prescriptive ROW and grant a temporary construction ROW to NRDC on BLM land to allow for implementation of the Proposed Action.

The Proposed Action involves installing approximately 7.5 miles of buried pressurized pipeline. Approximately 7.1 miles of the pipeline would be installed in the existing ditch prisms, and about 0.4 miles of pipe would be installed in new alignments outside the existing ditch prisms (see Figure 3). The two ditch systems currently divert water from two separate locations on the Smith Fork. The Proposed Action would combine the diversions of the two systems at the current Needle Rock Ditch diversion. The Needle Rock Ditch headgate would receive minor modifications to improve its operation, the two ditch systems would be joined by a connector pipeline, and the Lone Rock diversion and the first approximately 750 feet of the Lone Rock Ditch would be decommissioned.

Figure 3. Proposed Action Plan





Additionally, an approximately 220-foot lateral segment of Lone Rock Ditch would be decommissioned just south of where the connector pipe would join the systems (Figure 3). A variety of control structures (valves, air vents, meters, etc.) and outlets (turnouts, risers, frost-free hydrants) would be installed in the system. Table 2 provides a summary of project components (distances and acreages are approximate), broken out by land ownership status (private lands vs. public lands).

For all aspects of the Proposed Action, Best Management Practices (BMPs) would be used to minimize impacts of the project on the human and ecological environments. BMPs and other protective measures are incorporated as part of the Proposed Action, are described and analyzed as part of the Proposed Action in CHAPTER 3 (Affected Environment & Environmental Consequences), and are summarized in CHAPTER 4 (Environmental Commitments).

No water storage, pump stations, compressor stations, or new irrigated areas would be associated with the Proposed Action.

Table 2. Summary of Project Components for the Proposed Action

Component	Total Area Involved	On BLM Land	On Private Land	Comment
Ditch to be piped in the existing ditch prism	7.1 mi	815 linear feet (0.75 acre)	6.95 mi	Construction width: Private land – 60 feet BLM land – 40 feet
Pipe to be installed outside the existing ditch prism	0.4 mi	--	0.4 mi	Needle Rock-Lone Rock connector pipe (0.2 mi) and a pipe along the west side of 4200 Rd (0.2 mi)
Existing ditch to be decommissioned	0.2 mi	--	0.2 mi	The first 750 feet of Lone Rock Ditch and its headgate, and about 220 feet of a ditch segment in an irrigated hayfield
Needle Rock Ditch headgate modification	Potential for 0.03-acre disturbance in pre-existing footprint	--	Potential for 0.03-acre disturbance in pre-existing footprint	The Needle Rock Ditch headgate was redesigned and replaced in 2019, funded by and analyzed by RCPP. The currently proposed modifications are in the previous footprint of analysis
Staging areas	2.9 acres total (4 areas)	0.1 acre (1 area)	2.8 acres (3 areas)	Limited staging on BLM (not for large-scale project-wide materials storage)

Component	Total Area Involved	On BLM Land	On Private Land	Comment
Access ways	1.9 mi	--	1.9 mi	Accessways are on pre-existing private roads
Borrow areas	1.5 acre	--	1.5 acre	One area west of the piping component, off Needle Rock Road
Borrow area (at Gould Reservoir basin)	93 acres	--	93 acres	This is a contingency borrow area that was analyzed under a different salinity control project (Gould Canal Improvement Projects A & B (see Figure 2)
Habitat Replacement Site	17 acres	--	17 acres	To be improved in accordance with a Habitat Replacement Plan, in order to replace riparian/wetland habitat lost as a result of the piping component

### 2.2.1 – Pipeline Installation

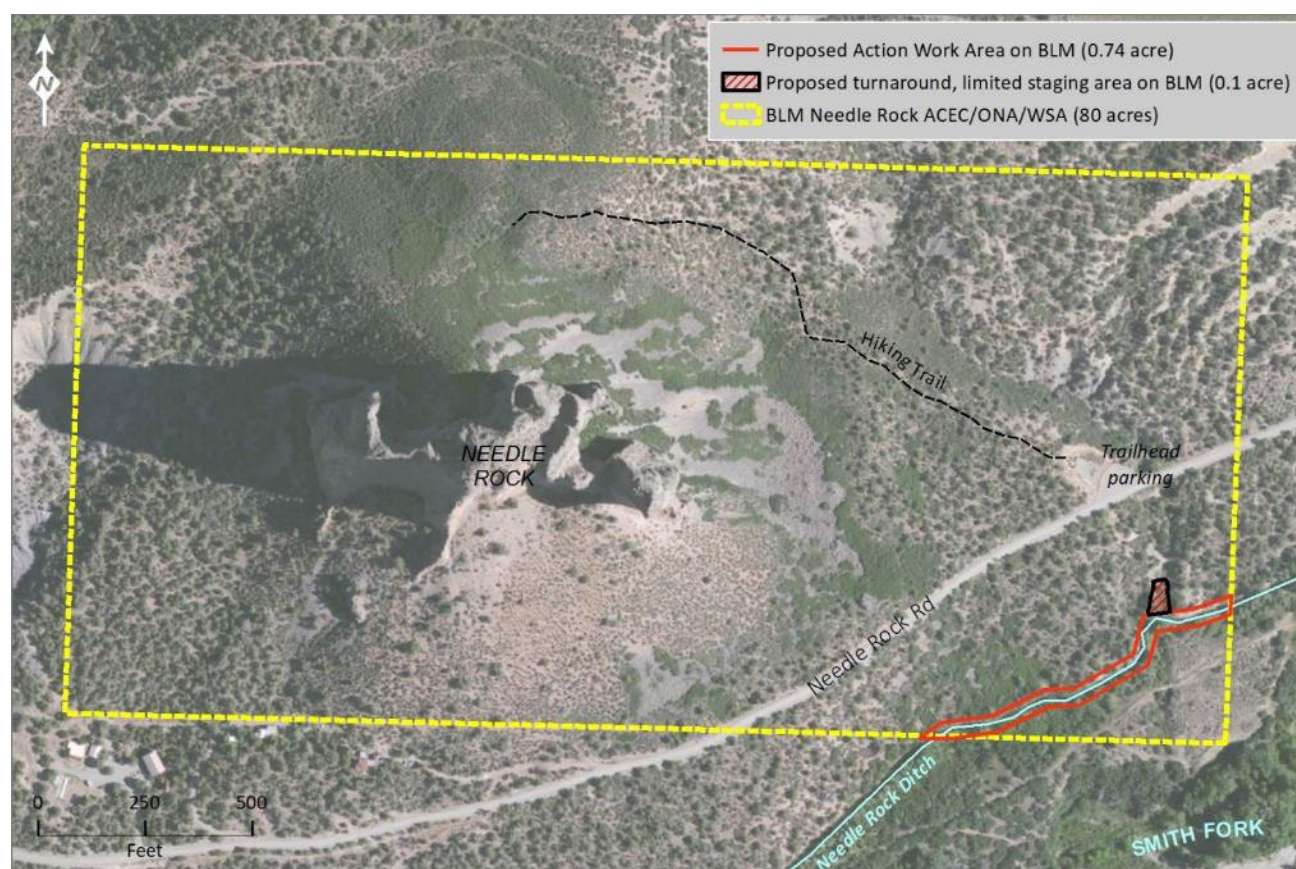
The first 875 feet of Needle Rock Ditch is already piped (completed in 2019 with funding from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Regional Conservation Partnership Program (RCPP). The proposed action would begin piping Needle Rock Ditch from the end point of the RCPP project and continue throughout the laterals across the Missouri Flats area (Figure 3), connecting with the Lone Rock Ditch system with buried pipe extending south from Needle Rock Ditch turnout #7 to Lone Rock Ditch. Pipe sizes would vary from 42-inch diameter in the main line to as small as 1-inch diameter at the turnouts. Pipe material would be PVC or similar. The burial depth would be below frost line (with 30 inches of cover) since the system delivers winter stock water to its shareholders.

Installation of the pipeline in the existing ditch prism would involve using trackhoes and bulldozers to grub ditch bank vegetation. Downslope woody vegetation at the toe of the ditch prism, especially in natural areas, would be left intact as much as possible, to maintain a natural vegetative soil anchor downgradient of the disturbance footprint. Following grubbing, trackhoes and bulldozers would be used to reserve existing topsoil and fill the existing ditch with material from the existing ditch prism. An excavator would then trench to the appropriate depth in the prepared ditch prism. The pipe would be transported to the construction site on flatbed trucks (or similar) and unloaded with front end loaders with pallet forks. A trackhoe would position the pipe in the trench. The pipe would be bedded and buried with fill material from within the ditch prism (see Photograph 1, below) or, if

necessary, with bedding or fill obtained from one of the proposed borrow sites or a commercial sand and gravel pit. For installation of pipelines in new alignments, the process would be similar, but without the step of first filling the existing ditch to prepare for trenching. To prevent the spread of weeds, all equipment and vehicles would be cleaned prior to arriving on work sites.

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-licensed 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.

Figure 4. Proposed Action Plan – BLM Needle Rock Natural Area Detail



Following pipe installation, the pipe alignment would be graded to match the surrounding land contours and restore drainage patterns. Reserved topsoil would be replaced on the prepared surface using a trackhoe, without back-dragging the blade (i.e., without smoothing), to create microtopography for reseeding. In natural areas, grubbed material and slash including large trees and large rocks would be reserved and then distributed on the reseeded surface to provide a nursery environment for establishing seedlings and help prevent erosion. Excess grubbed shrubs, trees and stumps would be cut, chipped, or burned at one of the private land staging areas or hauled to a local landfill. No burning would occur on BLM land.



A one-lane dirt maintenance road or ATV trail would remain on the pipe alignment following construction. Appropriately-sized culverts would be placed at drainage crossings, or in natural areas and on BLM land, drainage crossings would be rock channels.

There are seven points where the buried pipe alignment would cross county roads. These crossings would be trenched across the roads, and the road surface restored, per Delta County Road and Bridge specifications.



*Photograph 1. Example of the pipeline installation process on the upper Needle Rock Ditch in the area just below the headgate, completed in 2019. (Applegate Group, Inc.)*

### **2.2.2 – Lone Rock Ditch & Diversion Decommissioning**

To ensure no runoff or other water can flow in decommissioned ditch segments, an excavator would be used to fill the ditch with material from the existing ditch prism or material from one of the planned borrow sites. Then a trackhoe would contour the filled ditch alignment to match the surrounding land, including natural drainage patterns that cross the alignment. The segment of Lone Rock Ditch to be decommissioned is the first 750 feet from the headgate. Since this ditch segment is not in a prism but instead excavated below grade, decommissioning this segment would require imported fill. The other segment of ditch proposed for decommissioning (a 220-foot-long Lone Rock lateral) would be filled with material from the existing ditch prism and contoured such that it is incorporated into the surrounding irrigated hayfield.

The Lone Rock Ditch headgate consists simply of a short length of pipe through the riverbank with a steel slide headgate. These items would be removed with an excavator and properly disposed off site. There is no concrete box or dam associated with the Lone Rock Ditch headgate.

### **2.2.3 – Needle Rock Ditch Headgate Modification**

Two improvements are proposed for the Needle Rock Ditch headgate. The first improvement involves the headgate's approximately 60-foot-long buried corrugated return pipe, which returns debris and excess water to the creek, but has become blocked with debris during the past two irrigation seasons. To remedy this issue, the existing return pipe would either be slip-lined with a smooth-walled pipe such as PVC, or completely removed and converted to an open earthen channel. The channel would be 2 to 4 feet deep and 10 feet wide on top. Excavated material would be graded out next to the channel and reseeded.

The second improvement would involve placing precast concrete slabs in front of the overshot sluice gate and the diversion gate which allow the sluice gate to better pass bedload gravels during high water. This would be accomplished during low water, when approximately 6 inches of gravel can be excavated from the creek bed and the precast concrete slabs can be placed with their upper surfaces at grade.

### **2.2.4 – Access**

All access ways for construction of the Proposed Action would be on the existing ditch prisms, in the proposed new pipe corridors, or directly to these areas from county roads or from existing private roads with landowner permission. Any private land access easements for the Proposed Action and their specific locations would be clearly marked on the construction drawings. Private road access ways may require some grading and replacement of gravel following construction use.

The existing ditch alignments involved in the Proposed Action are in historic prescriptive easements on both private and public (BLM) lands. All private landowners in the footprint of the Proposed Action where activities would take place outside the historic prescriptive easement have verbally agreed to allow the activities of the Proposed Action to be conducted on their lands. The right-of-way for the new connector pipe (Figure 3) is a written agreement between the landowner and the Ditch Companies. BLM has acknowledged the historic prescriptive easement of Needle Rock Ditch through the BLM Needle Rock Natural Area. NRDC is in the process of applying for a BLM temporary construction right-of-way (ROW) permit to complete construction of the Proposed Action.

The width of the construction area on private land for the Proposed Action is anticipated to be 60 feet wide or less. In the BLM Needle Rock Natural Area, the width of the construction is anticipated to be 40 feet or less. Construction footprints would be limited to only those necessary to safely implement the Proposed Action—the authorized construction width would not be cleared to its maximum outer limits as a part of site preparation. 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, especially on steep slopes. In other areas, minor deviations of up to 10 feet from the existing ditch centerline maybe be incorporated to achieve a straighter pipeline configuration where possible.

### **2.2.5 – Staging**

Three staging areas have been identified on irrigated pasture or previously disturbed areas on private land (Figure 3). The staging areas would be used to store pipe and other project supplies and equipment. Pipe arriving and leaving the staging area would be transported on flatbed trucks (or similar). Front end loaders with pallet forks (or similar) would be used to handle pipe in the staging areas.

One proposed turnaround/limited staging area has been identified on the BLM Needle Rock Natural Area (Figure 4). The area extends 100 feet north from the ditch centerline and is approximately 75 feet wide along the ditch, tapering to about 40 feet wide at its north end. This is the only relatively flat location within 1,500 feet in either direction along Needle Rock Ditch. The area is an ephemeral drainage pattern that only flows during prolonged precipitation events. This area would be necessary as a pullout and to turn vehicles and equipment around in the narrow ditch corridor through the BLM Needle Rock Natural Area. This area would also require a rock drainage (as a drainage culvert alternative) following pipeline construction to control erosion and prevent damage to the pipeline during flow events. This area is identified as a “limited” staging area, because it would not be used to store significant quantities of pipe and other materials on a project-wide basis like the private land staging areas, but simply provide for necessary maneuvering of equipment, supplies, and vehicles for the duration of construction through this segment.

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. Equipment would be removed from the BLM Natural Area if construction work is idled for more than two consecutive weeks.

### **2.2.6 – Borrow Activities**

It is anticipated that a significant amount of necessary bedding fill will be generated from within the construction footprint. Onsite materials contain a significant amount of rock, especially in the east part of the Proposed Action area. 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 the borrow site identified on Figure 3. A secondary borrow resource would be the Gould Reservoir basin, approximately 8 direct miles south of the site, which was previously analyzed and approved for a different salinity control project. Alternatively, borrow material could be purchased from a commercial provider. Borrow material would be loaded to end-dump trucks using an excavator and hauled to the construction site via approved access ways.

### **2.2.7 – Post-Construction Revegetation & Weed Control**

Restoration activities would occur on all surface disturbances caused by construction of the Proposed Action. All non-irrigated disturbed areas would be seeded with a drought-tolerant seed mix, appropriate for the surrounding native vegetation. This seed mix would be recommended by BLM (Appendix A). Where irrigated lands are revegetated, the seed mix would be a weed-free hay mix acceptable to the landowner. Reseeding success would be monitored subject to agreements between the Ditch Companies and individual landowners, and NRDC and BLM.

Noxious weeds would be controlled in disturbed areas in accordance with county standards (Delta County 2020). Woody noxious weeds within the Proposed Action Area would be mechanically removed during construction. After construction, the Ditch Companies would control woody and herbaceous noxious weeds as necessary for the life of the project with appropriate herbicides. NRDC would coordinate with BLM on the use of herbicides on BLM land, and would provide Pesticide Use Proposals (PUPs) prior to treatments.

### **2.2.8 – 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 can be as short as October through mid-April, or as long as mid-July through mid-April. Needle Rock Ditch is obligated to deliver Smith Fork Project exchange water each season through approximately November 1. Construction outside existing ditch alignments and ditch decommissioning would not need to avoid irrigation season and could occur during any time of the year, with certain timing restrictions explained below. Reseeding work and weed treatments would occur during seasons when those activities have the best opportunity for success.

Construction activities both within and outside the existing ditch alignments would be subject to timing restrictions to protect wildlife (nesting migratory birds and raptors, wintering big game), as explained in the Wildlife analysis (Section 3.2.10) and the Environmental Commitments (CHAPTER 4). Areas with construction timing restrictions, and the nature of those restrictions, would be prominently marked on construction drawings. Timing restrictions are summarized as follows:

- Grubbing or removal of vegetation would not occur during the period of April 1 through July 15 to protect nesting migratory birds.
- Construction work within a ½-mile radius of Needle Rock would avoid the period of March 15 to July 31 to protect nesting peregrine falcons.
- Construction work in the east part of the Proposed Action area (including the Needle Rock Natural Area) would be avoided during the period of February 1 through April 15 to avoid disturbance to wintering elk, mule deer, and wild turkey (see Figure 3 for the demarcation between the West and East Project Areas).

Construction is anticipated to occur over a period of two years. With a single crew, construction is estimated to require a total of approximately 200 days on private land, and a total of approximately 10 days on BLM land. If the contractor provides more than one crew, the total construction time would be significantly shorter. When construction is underway, it would occur during daylight hours (typically 7 am to 4 pm), Monday through Saturday, on a sequenced basis in the Project area. Weather conditions could cause gaps in activity.



### **2.2.9 – Habitat Replacement**

In accordance with the Colorado River Basin Salinity Control Act, habitat replacement would be required to mitigate for riparian and wetland habitat lost as a result of the Proposed Action. As part of the Project, the Ditch Companies developed a Habitat Replacement Plan (ERO 2022) for a site at the general location shown on Figure 1.

The habitat replacement project would occur on approximately 17 acres (“Habitat Replacement Site”) on a private parcel owned by an NRDC shareholder (Figure 1) and encumbered by a conservation easement held by Colorado Open Lands. The Habitat Replacement Site is in a draw that forms a Cottonwood Creek seasonal tributary. The tributary receives ephemeral flow from several small drainages and has limited riparian character. This site would be improved and enhanced as wildlife habitat in accordance with a Habitat Replacement Plan (ERO 2022). The goals of the plan would be to install five water control features (earthen check dams) that would slow and store seasonal and ephemeral water flows, enhancing open water interspersion at the site and lengthening the time water is available to the vegetation. Vegetation species diversity and structural stratification would be enhanced by willow and cottonwood pole plantings around water control features, and planting of other appropriate native riparian shrubs that can self-propagate and increase habitat diversity at the site. Existing weed infestations at the site would be treated and managed, and disturbed lands reseeded with appropriate native grass and forb species. The Ditch Companies would be responsible for ongoing maintenance of the Habitat Replacement Site for 50 years after its establishment.

Native shrub plantings would be installed by hand or with the assistance of a small tractor. Weeds would be removed mechanically and/or treated with aquatic-safe herbicides. Vegetation slash would be chipped and mulched onsite or removed and processed at one of the proposed staging areas. New shrub plantings would be irrigated as necessary and protected from livestock and wildlife damage using webbing and wire cages.

The timing of the work at the Habitat Replacement Site would correspond with construction of the piping project and with the most effective and appropriate times for seedings, plantings, weed control, irrigation, and other site maintenance, with the following exception: Removal of vegetation would be avoided during the migratory bird nesting season.

### **2.2.10 – Permits & Authorizations**

#### *Agreements & Authorizations*

If the Proposed Action is approved, the following interagency agreements or permits would be required prior to project implementation:

- BLM Historic Prescriptive Easement Acknowledgment for that portion of the Needle Rock Ditch occurring on BLM land.
- BLM Right-of-Way (ROW) Temporary Permit for work extending outside the historic prescriptive easement of Needle Rock Ditch.
- Recovery Agreement executed between the U.S. Fish & Wildlife Service (FWS) and NRDC
- Recovery Agreement executed between FWS and LRDC.
- 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*

If the Proposed Action is approved, 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.

Compliance with the following laws and Executive Orders (E.O.) are required prior to and during project implementation:

#### *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)

#### *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)]

# CHAPTER 3 – AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

## 3.1 – Introduction

This chapter discusses resources that may be affected by the Proposed Action Alternative and the No Action Alternative. For each resource, the potentially affected area and/or interests are identified, existing conditions described, and potential impacts predicted under the No Action and Proposed Action Alternatives. This section is concluded with a summary of impacts.

## 3.2 – Affected Environment & Environmental Consequences

### 3.2.1 – Water Rights & Use

The Needle Rock Ditch system supplies irrigation water to 34 users irrigating approximately 1,666 acres. The irrigated area associated with that part of Needle Rock Ditch system associated with the Proposed Action is approximately 540 acres and 12 users. The Lone Rock Ditch system delivers irrigation water to 6 users irrigating approximately 170 acres. Needle Rock Ditch also delivers Smith Fork Project exchange water and is affiliated with the Crawford Water Conservancy District. Needle Rock Ditch is obligated to carry exchange water each season through approximately November 1. Needle Rock Ditch water rights total 42.915 cubic feet per second (cfs) and were adjudicated in several filings between 1889 and 1954. Lone Rock ditch holds rights to 10 cfs, adjudicated in three filings between 1889 and 1954.

State records for Needle Rock Ditch for 1970 through 2018 show average annual diversions of 6,381 acre-feet, with a maximum annual diversion of 10,813 acre-feet and a minimum annual diversion of 1,285 acre-feet. The maximum average monthly diversion rate is 43 cfs. State records for Lone Rock Ditch diversions from 1970 through 2018 show an average annual diversion of 809 acre-feet, with a maximum annual diversion of 1,400 acre-feet and a minimum annual diversion of 37 acre-feet. The maximum average monthly diversion rate is 5.7 cfs.

Irrigation is primarily accomplished by flood methods directly from ditch laterals, and to a lesser extent with gated pipe. Crops consist of grass pasture, with some alfalfa hay. The Needle Rock Ditch system also carries winter stock water during the non-irrigation season for an annual average of 190 days.

Domestic wells in the area are permitted by the State of Colorado to draw on natural sources of groundwater. Pursuant to Colorado Revised Statute (CRS) § 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...**". There is an ongoing trend to pipe earthen irrigation ditches in the region (see Figure 2).

*No Action Alternative:* The No Action Alternative would have no effect on water rights and uses within the Gunnison River Basin. The water delivery system would continue to function as it has in the past.

*Proposed Action:* Under the Proposed Action Alternative, the Ditch Companies would have the ability to better manage irrigation water with efficiencies gained from eliminating ditch seepage and connecting their systems. The new turnout structures include adequate controls and measuring devices which would further improve water management in the system. A mutual agreement between the Ditch Companies is being developed to guide their ongoing joint maintenance and operation of their connected systems following construction of the Proposed Action. LRDC applied to the District Court, Water Division 4 for a change in point of diversion from its existing headgate on Smith Fork Creek (to be abandoned by the Proposed Action), to the Needle Rock Ditch point of diversion. The change in diversion was granted in Case Number 20CW14 filed September 9, 2020. During construction, winter stock water would be delivered to shareholders through sharing agreements with other local ditch companies (i.e., Pilot Rock Ditch and Gove Ditch).

The Proposed Action contributes to the growing amount of piped irrigation conveyances in the region, which are collectively reducing water seepage and improving irrigation water delivery efficiency on a larger scale. The Proposed Action would not include new water storage or the irrigation of new lands. No adverse effects on irrigation water rights or winter stock water delivery in the Gunnison or Colorado River Basins would occur due to implementation of the Proposed Action.

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

### **3.2.2 – Water Quality**

Irrigation practices in the region and in the Proposed Action 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 is leached 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 2020).

Most irrigation ditches are considered Waters of the U.S., and are under the jurisdiction of the Clean Water Act (CWA). In 2021, the Corps issued Regional General Permit 5 (RGP-5) for Ditch Related Activities in the State of Colorado.

*No Action Alternative:* Under the No Action Alternative, the estimated 2,952 tons of salt annually contributed to the Colorado River Basin from the upper Needle Rock Ditch and Lone Rock Ditch systems would continue. Current selenium loading levels would continue.

*Proposed Action:* In the long term, the Proposed Action would eliminate seepage from the involved ditch systems, reducing salt loading to the Colorado River Basin at an estimated rate of 2,952 tons

per year. The Proposed Action is also expected to reduce selenium loading into the Gunnison River basin, although the amount of selenium loading reduction that could result from the Proposed Action has not been quantified. Improved water quality would likely 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 importance to users and to wildlife. The improved water quality resulting from the Proposed Action would contribute to the regional efforts underway to reduce salinity and selenium in the lower Gunnison and Colorado River watersheds.

BMPs would be implemented during construction to minimize erosion and protect water quality. Project construction would take place in the ditch prism when water is not present. 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 (if dewatering is conducted) (see Section 2.3.8 and CHAPTER 4).

The Proposed Action 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. As a “ditch related activity in the State of Colorado” that is “conducted under a binding agreement with the USBR” (Reclamation), the Proposed Action would be authorized under RGP-5, by submitting documentation required by RGP-5 to the Army Corps 30 days in advance of construction. The required documentation for the new Proposed Action, as a salinity control project per a binding agreement with USBR 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.”

### **3.2.3 – Air Quality**

The Clean Air Act specifies limits for criteria air pollutants. If the levels of a criteria 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. Delta County is in attainment for all criteria pollutants (EPA 2021). Minor impacts to air quality from routine maintenance of the ditch systems involved with the Proposed Action include dust from occasional travel in light vehicles along the Proposed Action corridor.

*No Action Alternative:* There would be no effect on air quality in the Proposed Action Area from the No Action Alternative. The ditch systems 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.

*Proposed Action:* There would be no long-term impacts to air quality from the Proposed Action. Delta County would remain in attainment for all criteria pollutants. Exhaust and dust from construction activities in all areas involved with the Proposed Action would be minimized by BMPs, and any residual dust would have a temporary, short-term effect on the air quality in the immediate Proposed Action Area. Following construction, impacts to air quality from routine maintenance and operation activities along the pipeline corridor would be similar or less in magnitude to those currently occurring for the existing ditch. The potential exists for other ditch piping projects in the region currently in NEPA review to be constructed concurrently with the Proposed Action. Even if other projects occur concurrently with the Proposed Action, the total combined impact on air quality in

the area is expected to be temporary and would not rise to the level of non-attainment for any criteria pollutants in Delta County.

### **3.2.4 – Public Access, Transportation, & Safety**

The NRDC currently operates on private and BLM land in historic prescribed rights-of-way (collectively, the “right-of-way”) in the Project area.

The main transportation routes in the vicinity of the Proposed Action are Needle Rock Road, Cottonwood Creek Road, and 4200 Road (Figure 3). Private roads and county roads generally provide access and mobility for residents traveling in and out of the Proposed Action Area.

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

*No Action Alternative:* There would be no effect to public safety, transportation, or public access from the No Action Alternative.

*Proposed Action:* Short-term temporary impacts related to access, public transportation, and safety would result from the Proposed Action. All construction activities related to the Proposed Action would take place entirely in the approved or prescriptive project rights-of-way. There would be no need for construction of new access roads outside the ditch right-of-way. 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 trenched pipe crossings are made across county roads. Appropriate traffic signage would be used to notify drivers of active construction ingress/egress. The Ditch Companies and the construction contractor would coordinate with the county and sheriff departments when traffic or access would be delayed or substantially re-routed.

All utilities would be located and marked and, if necessary, relocated or raised, prior to any construction activities in the Project area. To ensure public safety, pipe trenches left open while unattended (e.g. overnight) would be covered.

### **3.2.5 – Noise**

A moderate baseline level of noise occurs in the Proposed Action area, associated with farming and ranching activities and the Ditch Companies’ operation and routine maintenance of the ditch systems. Operation and maintenance involve the use of light-duty trucks 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 Proposed Action. The Pilot Rock Pipeline Project is a nearby similar project that could be occurring simultaneously with the Proposed Action and generating noise in the area.

*No Action Alternative:* There would be no noise effects from the No Action Alternative.

*Proposed Action:* Proposed Action construction activities would generate noise audible to residents near the Proposed Action. Sources of noise would include heavy equipment moving earth or

crushing rock, trucks hauling pipe and other materials. As explained in Section 2.2, blasting may be required to help prepare the pipe trench if bedrock is encountered 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 Proposed Action. Some construction noise (operating heavy equipment) from a nearby similar project (Pilot Rock Pipeline Project) has the potential to reach areas near the Proposed Action. Noise generated by this other project combined with the Proposed Action would be short-term and temporary, and would not occur outside daylight hours.

### **3.2.6 - Wilderness Study Area**

The BLM's Needle Rock Natural Area is approximately 80 acres managed by BLM is in the east part of the Proposed Action area (see Figures 1 and 4). This land has the following BLM designations:

- Wilderness Study Area (WSA)
- Area of Critical Environmental Concern (ACEC)
- Outstanding Natural Area (ONA)

The Needle Rock Natural Area is also formally identified by BLM as an Instant Study Area (ISA), a specific category of WSAs. ISAs are less than 1,500 acres and generally not adjacent to other WSAs or a designated wilderness.

The 80-acre Needle Rock Natural Area is surrounded by private lands. Needle Rock, the area's namesake, rises 1,000 feet from the surrounding area in the center of the 80 acres. Needle Rock Road, a county road, traverses the southeast corner of the Needle Rock Natural Area for approximately 1,400 feet. BLM has established a parking lot and kiosk on the northwest side of the county road in the east part of the Natural Area. From there, a short foot trail climbs around the east and north side of Needle Rock. Southeast and downgradient of the county road, Needle Rock Ditch contours through the Needle Rock Natural Area for approximately 815 feet. Needle Rock Ditch has been in its present location and conveying irrigation water annually since 1889, prior to the establishment of the BLM, FLPMA legislation, and the Wilderness Act (NRDC provided BLM with materials to substantiate the presence and continual use and maintenance of Needle Rock Ditch at its present location on the Needle Rock Natural Area).

In accordance with BLM's RMP (BLM 2020) the Needle Rock ISA is managed according to BLM Manual 6330, Management of Wilderness Study Areas (BLM 2012) until Congress either designates it as wilderness or releases it for other uses, at which time it would be managed consistent with its underlying land use designation of ACEC (RMP Actions WIL-MA-02 and WIL-MA-10).

*No Action Alternative:* The No Action Alternative would have no effect on the Needle Rock WSA. Regular operation of the open irrigation ditch system on the WSA would continue as it has in the past.

*Proposed Action:* Under the Proposed Action Alternative, BLM would acknowledge NRDC's historic prescriptive easement on BLM land in the Needle Rock Natural Area and authorize a Temporary Construction ROW to complete the project.



In accordance with BLM Manual 6330 (BLM 2012) Policies for Specific Activities, Part 1.6.D.4.c. (Rights-of-Way):

- i. Existing rights-of-way may be renewed if they are still being used for their authorized purpose. When processing an application for renewal of an existing right-of-way, consistent with 43 CFR 2807.22(a) and 43 CFR 2887.12, the BLM should consider new, additional, or modified terms and conditions to minimize impacts to wilderness characteristics. Necessary, routine maintenance to keep an existing right-of-way facility in a safe and reliable condition, as well as any additional actions authorized in the original permit, may be permitted.
- ii. Except as described under 1.6.D.4.d (Access) below, no new rights-of-way will be approved for uses that do not satisfy the non-impairment standard.

The non-impairment standard in BLM Manual 6330, General Policy, Part C, requires BLM to manage WSAs such that actions, uses, or activities do not impair the suitability of the WSA for preservation as wilderness. Under the non-impairment standard, only temporary uses or facilities may be approved, and the use or facility must not create new surface disturbance. Exceptions to the non-impairment standard are explained at 1.6.C.2, and include:

- d. Valid existing rights. Any valid existing right (VER) existing on the date of approval of FLPMA (October 21, 1976)—or prior to the designation date for Section 202 WSAs not reported to Congress—will be recognized.
- g. Other legal requirements. Activities required to meet obligations imposed by other laws are allowed even though they may violate the non-impairment standard. Such activities should, however, be carried out in the least impairing manner practicable.

Needle Rock Ditch on the BLM's Needle Rock Natural Area, which pre-dates the establishment of the BLM, FLPMA legislation, and the Wilderness Act, constitutes a VER as defined under the subpart d exception to the non-impairment standard. The ditch has been in continuous use and maintenance at its current location since 1889. Although NRDC studied the possibility of moving the Needle Rock Ditch alignment to the south and out of the Needle Rock Natural Area, this was determined to be infeasible due to access complications, and elevational gradient changes which would create sedimentation issues in the pipeline. Further, even if the pipeline were re-routed to avoid the Needle Rock Natural Area, the abandoned ditch segment would require decommissioning—potentially causing a similar profile of temporary ground- and vegetation-disturbing activity requiring post-construction reclamation. Additionally, the Proposed Action would implement requirements of the Colorado River Basin Salinity Control Act, meeting the subpart g exception to the non-impairment standard.

BLM's action of granting a temporary construction permit for completion of the Proposed Action would allow for a reclaimable surface disturbance that would return the disturbed area to a condition that is relatively natural and similar to the pre-construction condition. The Proposed Action incorporates numerous BMPs/Design Features that would ensure the proposed activities are carried out in the least impairing manner practicable (CHAPTER 4). These include creating the smallest possible disturbance footprint; maintaining ditch-prism vegetation and root balls in place as much as possible; site-finishing with natural arrangement of logs and boulders grubbed onsite during

construction; post-construction reseeding with appropriate native species; weed control; and timing restrictions to protect nesting raptors and wintering big game.

In the event that Congress releases the Needle Rock Natural Area from its WSA designation, BLM would manage the land as an ACEC. Under the ACEC designation, management policy applicable to the Needle Rock Ditch would be similar, except the Needle Rock Natural Area would be managed for the less stringent action of “ROW avoidance” rather than “ROW exclusion” and as VRM Class II rather than the more restrictive VRM Class I. The Proposed Action would still be authorizable on the Needle Rock Natural Area with the ACEC designation.

### **3.2.7 – Visual Resources**

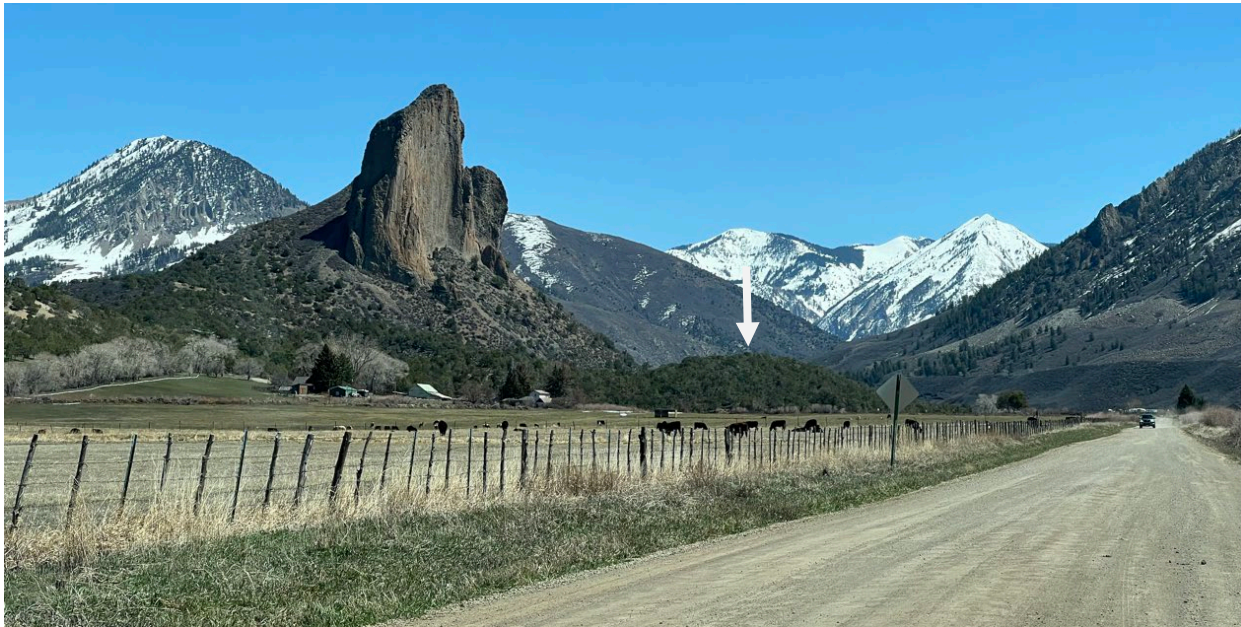
The Proposed Action is in an area of pastoral beauty, with a pleasing array of colors and textures across the relatively open landscape—a mosaic of irrigated meadows and natural woodlands and shrubland—against a backdrop of near and distant mountains. Needle Rock, a local distinctive landmark, is the focal point and namesake of the BLM Needle Rock Natural Area in which it lies (see the cover photograph of this document). Needle Rock is an important element of the viewsheds around the Town of Crawford. A 2009 Visual Resources Inventory (BLM 2009) evaluated the scenic quality and sensitivity level of the Needle Rock Natural Area in accordance with the BLM Visual Resource Inventory Manual H-1419-1. Scenic quality is characterized using a standardized Scenic Quality Field Inventory methodology, ranking key factors such as landform, vegetation, water, color influence of adjacent scenery, scarcity, and cultural modifications. The inventory assigned a Scenic Quality Rating of “Class A” (high visual appeal) to the Needle Rock Natural Area. Sensitivity level is characterized based on factors such as types of users, amount of use, public interest, adjacent land uses, and special areas. The inventory assigned a sensitivity level of “high” to the Needle Rock Natural Area. Due to these factors, and its WSA designation, The BLM Needle Rock Natural Area is classified as Visual Resource Management (VRM) Class I (BLM 2020). VRM Class I applies to lands where a Congressional or administrative decision outside of BLM’s land use planning process was made “to preserve the natural character of the landscape.” According to BLM’s RMP (2020), VRM Class I “provides for natural ecological changes only. This class includes primitive areas, some natural areas, some wild and scenic rivers, and other similar areas where landscape modification activities should be restricted.”

The visual resources of the Needle Rock Natural Area are enjoyed by the general public from two perspectives: from a viewshed perspective and an onsite perspective. Examples of each perspective are shown in Photographs 2 through 4, below. Needle Rock Ditch itself is not a highly visible component of the Needle Rock Natural Area from common points of view that the public encounters along Needle Rock Road or from the trailhead or hiking trail within the Needle Rock Natural Area. Needle Rock Road, a public road maintained by Delta County, passes through the Needle Rock Natural Area (Figure 4) between its principal visual feature (Needle Rock) and Needle Rock Ditch. The ditch itself is an approximately 6-foot-wide linear watercourse flanked by natural mixed mountain shrub vegetation and scattered mature cottonwoods (see the cover photograph of this EA). It contours along the hillside at an elevation more than 80 feet below the county road.

Throughout the Proposed Action area in general, there is a low baseline level of visual disturbance associated with local ranching and farming activities, local roads and construction projects, and the Ditch Companies’ operation and routine maintenance of their ditch systems. These activities can involve vehicles, machinery, earth moving, field and ditch burning, and can generate dust and smoke.



*Photograph 2. Viewsbed perspective of Needle Rock. Looking northeast from Needle Rock Road toward the BLM Needle Rock Natural Area from 0.75 mile east of Crawford and 2.75 direct miles southwest of Needle Rock. The Proposed Action Area on BLM land is not visible from this vantage due to intervening topography. The arrow points to the intervening topography. (Rare Earth Science)*



*Photograph 3. Viewsbed perspective of Needle Rock. Looking northeast from Needle Rock Road toward the BLM Needle Rock Natural Area from 1 mile southwest of Needle Rock. The Proposed Action Area on BLM land is not visible from this vantage due to intervening topography. The arrow points to the intervening topography. (Rare Earth Science)*





*Photograph 4. Onsite perspective. Looking south toward Needle Rock Ditch from Needle Rock Road within the Needle Rock Natural Area. The vantage is a point near the entrance to the BLM Needle Rock Natural Area parking area and trailhead. The approximate location of Needle Rock Ditch is indicated by the arrow. The ditch is screened by vegetation. (Rare Earth Science)*



*Photograph 5. Onsite perspective. Looking southeast from the saddle area on the hiking trail in the Needle Rock Natural Area. The arrow points to the approximate location of Needle Rock Ditch on the Natural Area. The ditch is screened by vegetation. The open area to the left of the arrow is a short stretch of Needle Rock Road and the BLM trailhead parking area. (Rare Earth Science)*

*No Action Alternative:* There would be no visual impacts from the No Action Alternative.

*Proposed Action:* Temporary impacts related to visual disturbance during and after construction would result from the Proposed Action throughout the Proposed Action area. Machinery would be operating on the landscape and highly visible in certain locations, especially in the Missouri Heights area which is predominantly open irrigated hayfield and pastures. In the east part of the Proposed Action area, operating machinery and ground disturbance would be somewhat screened by surrounding vegetation. Following construction, the disturbance footprint would be a linear area of bare ground varying from 40 to 60 feet wide. Within a few growing seasons, soil conservation measures and revegetation efforts would help the disturbed ground blend with the surroundings.

The Proposed Action would take place in the southeast corner of the BLM Needle Rock Natural Area (Figure 4), south of and more than 80 feet in elevation downgradient of Needle Rock Road.<sup>1</sup> The prominent landscape feature and the most important and attractive visual element on the BLM Needle Rock Natural Area is Needle Rock itself, situated in the central part of the Natural Area, north of Needle Rock Road. Likewise, all public recreation activity on the BLM Needle Rock Natural Area is oriented toward the trailhead parking area and trail on the north side of Needle Rock Road. The Proposed Action Area is not visible from the BLM Needle Rock parking area/trailhead. Travelers on Needle Rock Road in the east part of the Needle Rock Natural Area can see the general area of a small section of Needle Rock Ditch below the road for about 100 feet, through a break in the near-road vegetation and topography (Photograph 4). Even there, the ditch itself is largely screened or obscured by evergreen vegetation on the hillside. From other viewshed-scale vantages along Needle Rock Road, that part of Needle Rock Ditch on the Needle Rock Natural Area is obscured by topography (Photographs 2 and 3). Hikers on the Needle Rock trail can see the general location of Needle Rock Ditch (demarcated by a line of cottonwoods) after the trail reaches about 7,100 feet in elevation. When the trail reaches about 7,200 feet in elevation, the ditch itself is partially visible through the vegetation screen (Photograph 5). At this point the ditch is nearly a quarter mile from the view point, and does not contribute significantly to the sweeping mountain and valley views from there.

During construction, hikers using the trail on the Needle Rock Natural Area may be able to see construction equipment related to the Proposed Action through the vegetation screen, as would travelers on Needle Rock Road. Following construction, the hikers on the trail and travelers on Needle Rock Road in the immediate vicinity may be able to see a linear swath of bare ground where the pipe has been buried. This linear swath of bare ground would be at least partially concealed by existing evergreen vegetation that currently screens the ditch prism from these key vantage points. Visual disturbance during construction and the remaining construction disturbance footprint on the Needle Rock Natural Area would be temporary and largely screened by vegetation and/or topography from Needle Rock Road and the remainder of the Needle Rock Natural Area. Overall, the visual appearance of existing and post-construction conditions on the Needle Rock Natural Area, once revegetation is mature, would be similar in character: a linear feature on the ground surface screened by natural vegetation.

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<sup>1</sup> The following qualitative analysis of the Needle Rock Natural Area visual resource is not a full BLM VRM analysis, but rather relies on USBR's experience with other irrigation piping projects (Section 1.5) and a former Visual Resources Inventory performed by BLM (BLM 2009).

Although the Needle Rock Natural Area is characterized as VRM I, the Proposed Action would still be authorizable because it qualifies for exceptions to the non-impairment standard outlined in BLM Manual 6330, Management of Wilderness Study Areas (BLM 2012) (see 3.2.6 for further detail). Soil protective measures, conservation of as many large trees and shrubs as possible along the ditch prism, site-finishing with strategic/natural-looking distribution of grubbed logs and boulders, revegetation with appropriate native seed, and weed control, would mitigate long-term impacts to the visual resources of the Needle Rock Natural Area, helping it to blend with the surroundings over time.

### **3.2.8 – Recreation**

Public recreation opportunities in the Proposed Action area are related to the Needle Rock Natural area, which has a public parking area, trailhead, and interpretive signage on the north side of Needle Rock Road (Figure 4). A multi-use (non-motorized) trail extends from the trailhead around the east and north side of Needle Rock.

*No Action Alternative:* There would be no recreation impacts from the No Action Alternative.

*Proposed Action:* The Proposed Action would take place in the southeast corner of the BLM Needle Rock Natural Area (Figure 4), on the south side of Needle Rock Road. All public recreation activity on the BLM Needle Rock Natural Area is oriented toward the trailhead and trail on the north side of Needle Rock Road. As a result, the Proposed Action would have no effect on customary public recreation opportunities on the BLM Needle Rock Natural Area, other than temporary noise and visual impacts discussed in Sections 3.2.5 and 3.2.7.

### **3.2.9 – Vegetation Resources & Weeds**

Beginning at the initiation of the Proposed Action near the Needle Rock Ditch headgate, the ditch contours through undeveloped natural areas north of Smith Fork Creek in the east project area, and then enters agricultural and residential land in the west project area. The ditch itself is flanked by a narrow margin of coyote willow, reed canarygrass, and pasture grasses, with scattered stands of narrowleaf cottonwoods, Gambel oak, and mixed mountain shrubs on the ditch prism, especially in the eastern extents. The Ditch Companies occasionally grub vegetation out of the ditches and from the ditch banks with heavy machinery. Except for the limited staging area on the BLM Needle Rock Natural Area, which is in a natural grassy swale, the staging areas are irrigated grass pastures or on other previously disturbed ground.

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.

Weeds present within the Proposed Action Area include herbaceous noxious weeds such as Russian knapweed (*Acroptilon repens*), whitetop (*Cardaria draba*), and Canada thistle (*Cirsium arvense*) (ERO 2020). A noxious weed survey was conducted on the Needle Rock Ditch alignment in the BLM Needle Rock Natural Area in July 2021. This 815-foot-long reach of Needle Rock Ditch was relatively free of noxious weeds, with only a few Canada thistle plants observed on the ditch bank. Flowing water in the canal is a vector for the continued spread of weeds. Vehicles, people and their dogs, livestock, and wildlife traveling on the ditch prism can also contribute to the spread of weeds.



The Ditch Companies manage noxious weeds on the ditch prisms by spot-spraying seasonally, as resources permit.

*No Action Alternative:* There would be no effect on existing vegetation from the No Action Alternative.

*Proposed Action:* The Proposed Action would directly disturb and result in the permanent loss of approximately 3.6 acres of riparian and wetland vegetation associated with the open ditch and seepage from the ditch (ERO 2020). Following construction, the riparian and wetland areas and open water associated with the ditch would be replaced by upland vegetation compatible with the pinyon-juniper woodland-type or Gambel oak mixed mountain shrub vegetation communities, both by reseeding and natural recolonization. Construction activities would directly disturb other previously disturbed areas, such as the staging areas or irrigated pastures or roadsides. Dust from operating equipment and vehicles could also temporarily affect nearby vegetation. 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. Following construction, disturbed natural areas would be recontoured and reseeded with a drought-tolerant seed mix approved by BLM and adopted by Reclamation (Appendix A) appropriate for the surrounding habitat. Disturbed agricultural areas would be contoured to the surrounding grade and reseeded with compatible hay or pasture seed mixes. Agricultural areas are expected to return to a condition similar to or better than their pre-construction condition within a year of construction. Although a mature pinyon-juniper woodland overstory would require a few decades to become re-established, understory vegetation consisting of mixed montane native shrubs and grasses is expected to become re-established within a few years following construction in revegetated woodland areas.

Recognizing that the wetland and riparian vegetation associated with ditch margins supports or contributes to the support of aquatic and terrestrial wildlife and migratory birds, the Colorado River Basin Salinity Control Act requires mitigation of its loss. An evaluation<sup>2</sup> was performed to quantify potential wetland and riparian habitat values that would be lost due to implementation of the Proposed Action (ERO 2020). The Ditch Companies developed a Habitat Replacement Plan (ERO 2022) to replace the estimated habitat value to be lost due to the Proposed Action. The Habitat Replacement Site is located northwest of the Proposed Action's piping component (Figure 3) in the Cottonwood Creek drainage.

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.

To curtail the spread of noxious weeds, environmental commitments (such as cleaning vehicles and equipment prior to bringing them onsite—see CHAPTER 4 of this EA) would help minimize the

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<sup>2</sup> The evaluation followed methodology outlined in Reclamation's *Basinwide Salinity Control Program: Procedures for Habitat Replacement* (April 2018). In accordance with the evaluation method, a Total Habitat Value (THV) is calculated for each affected wetland or riparian habitat area by multiplying its acreage by its habitat quality score (HQS), which is assigned based on a series of physical and biological criteria.

risk of such infestations, and ongoing weed management efforts by the Ditch Companies would be implemented during revegetation of construction alignments. In the long-term, piping these ditch systems, along with other salinity control projects in the region, would remove an important vector of weed seed transport—open water. Seeps from the earthen ditches that currently support herbaceous and woody noxious weeds would be dried and the ability of the environment to support these weeds would be diminished.

### 3.2.10 – Wildlife Resources

Vegetation communities supported by the open ditches, in association with nearby irrigated land, and native woodlands and shrublands, provide nesting, breeding, foraging, cover, and movement corridors for an array of wildlife.

The Proposed Action Area falls within winter range of elk and mule deer (CPW 2021) in Game Management Unit 53. Colorado Parks & Wildlife (CPW) Species Activity Mapping describes most of the Proposed Action Area as severe winter range and parts of the Proposed Action area as winter concentration areas for elk and mule deer (Figure 5 and Figure 6). Together, winter concentration areas and severe winter range are “critical winter range.” Game Management Unit 53 has nearly 91,000 acres of elk critical winter range, and 69,000 acres of mule deer critical winter range. The entire Proposed Action also lies within a large resident mule deer area, with a concentration area in the south (Figure 6). CPW maps parts of the Proposed Action as within wild turkey winter range, a winter concentration area, and a production (breeding) area (Figure 7).

Figure 5. Elk Range in the Proposed Action Area

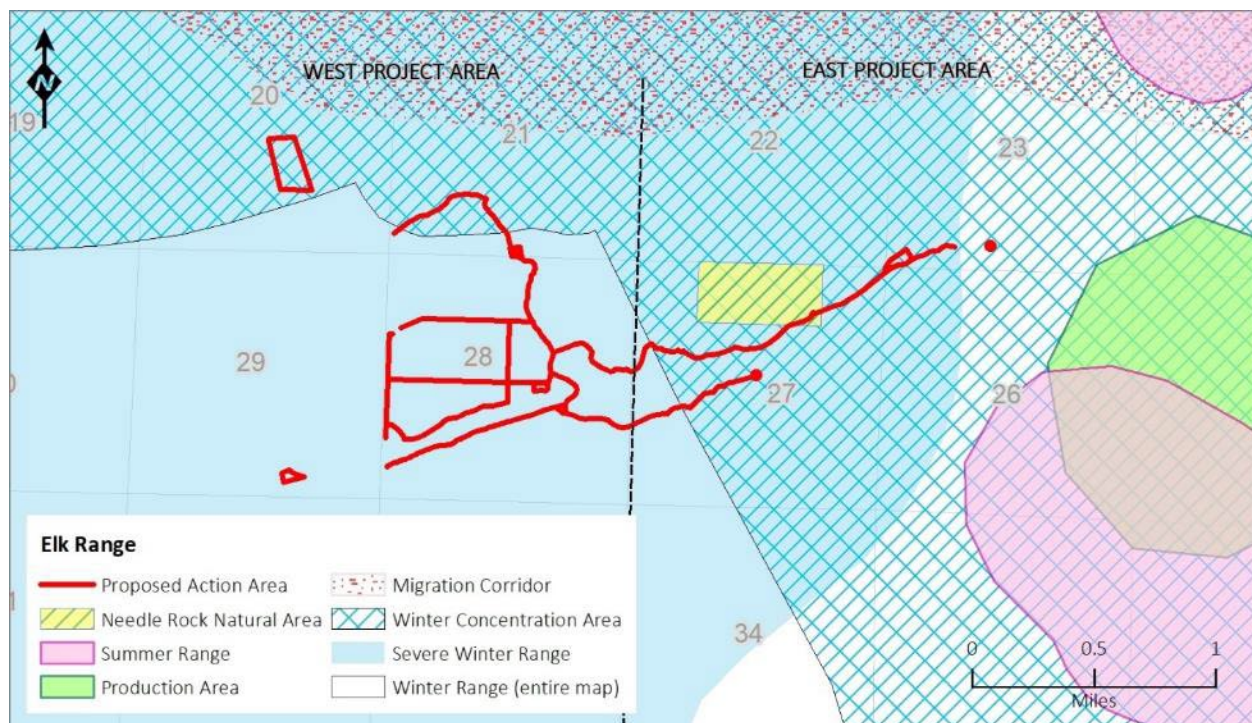
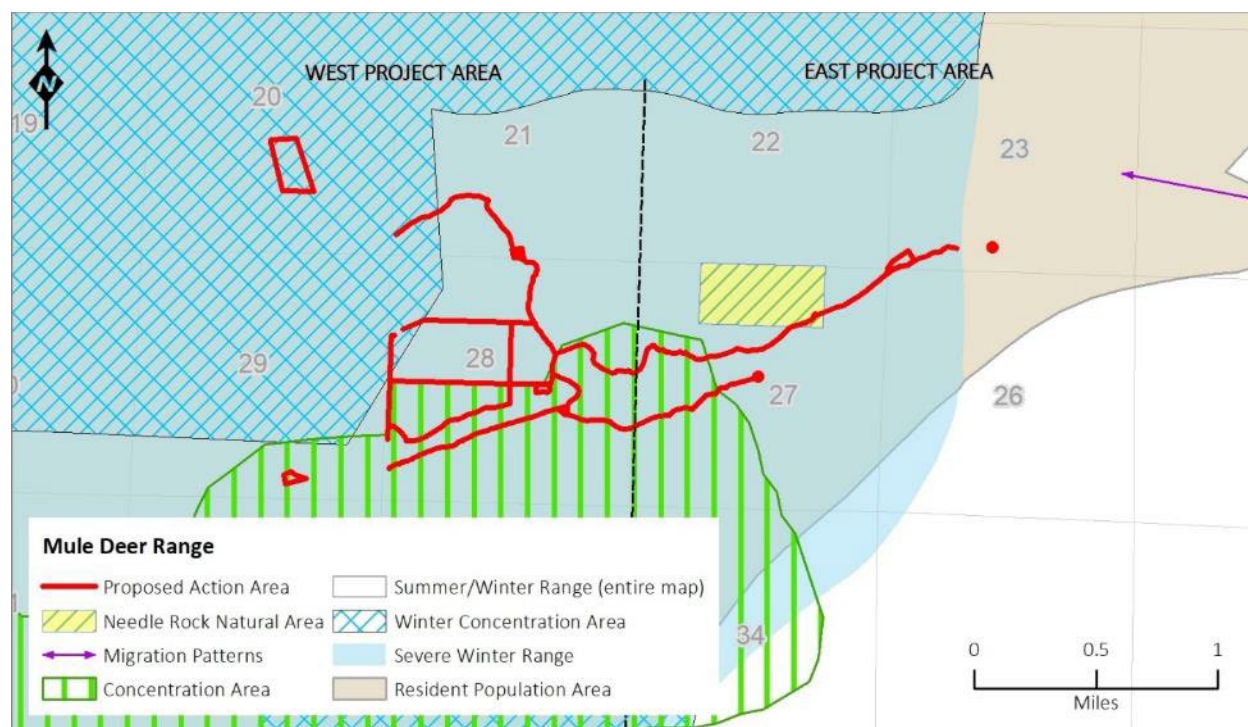




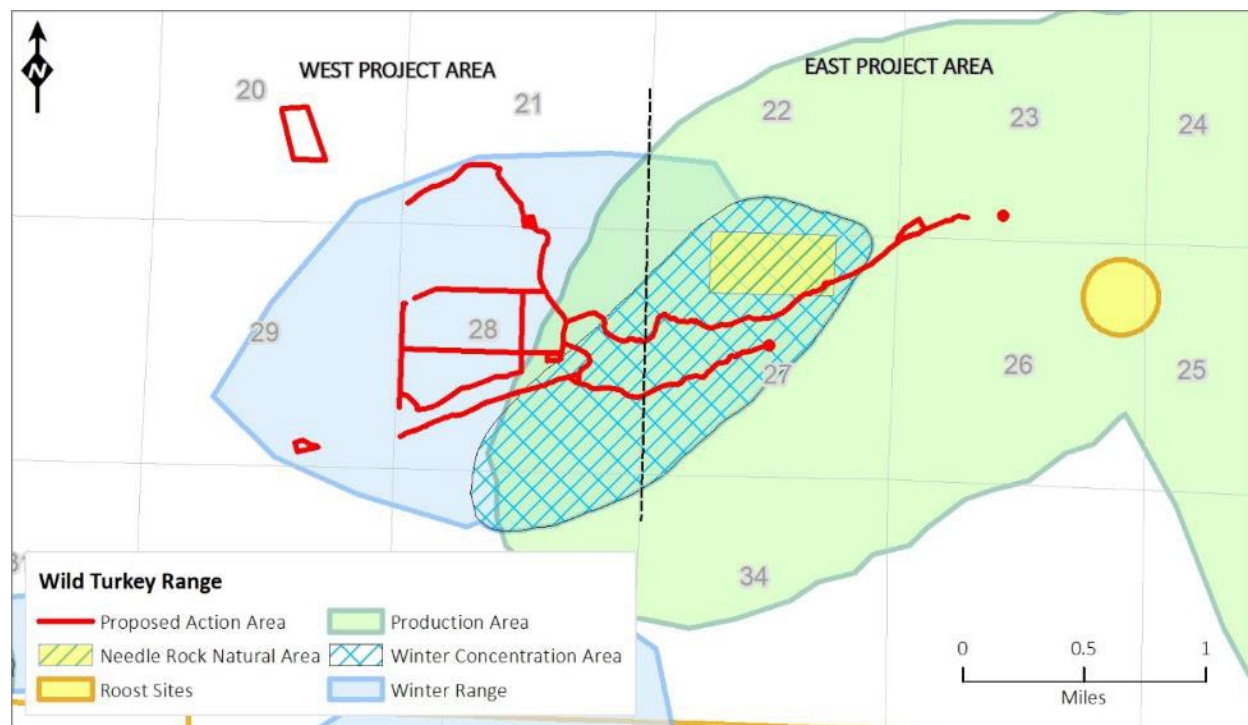
Figure 6. Mule Deer Range in the Proposed Action Area



A variety of small mammals, reptiles, and amphibians inhabit the general area. 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 (a BLM Sensitive Species), several species of mice, voles, shrews, and cottontail rabbit. Striped skunk, raccoon, red fox, coyote, bobcat, beaver, western terrestrial garter snake, smooth green snake (a BLM Sensitive Species), Woodhouse's toad, western chorus frog, northern leopard frog (a BLM Sensitive Species), several species of bats (some of which are BLM Sensitive Species), and tiger salamander could also be using the area.

The primary nesting season for migratory songbirds in the Proposed Action Area is April 1 through July 15. The core nesting season for raptors in the area is 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, peregrine falcons nest as early as March 15, and bald eagles nest between October 15 and July 31 (CPW 2008). The entire Proposed Action area lies within CPW-mapped bald eagle winter range and winter forage range (CPW 2020), and Needle Rock is a documented peregrine falcon nesting site. A nesting raptor survey conducted for the Proposed Action Area during March and April of 2020, and reconfirmed during May and June of 2021, identified three active red-tailed hawk nests within 1/3 mile of the Proposed Action area, and confirmed an active peregrine falcon nest on Needle Rock. Note that CPW's publicly-available Species Activity Mapping (2021) erroneously shows an active bald eagle nest at the same location as the known peregrine falcon nest on Needle Rock (Le Fevre, pers. comm.).

Figure 7. Wild Turkey Range in the Proposed Action Area



Wildlife in the Proposed Action Area experiences a baseline level of disturbance from residential activities, domestic dogs, people and vehicles traveling on public and private roads, and ranching and farming activities, especially in the East Project Area. A portion of the Pilot Rock Piping Project (a salinity control project currently under NEPA review) is a nearby similar project that could be occurring simultaneously with the Proposed Action and contributing to wildlife disturbance in the 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 artificially-created riparian and wetland habitat to uplands. Wildlife distribution across the landscape, especially wildlife that depend on riparian and wetland habitat, is changing in response to these habitat changes. Consistent with the Colorado River Basin Salinity Control Act, projects to replace riparian and wetland habitat losses are completed in conjunction with the piping projects.

*No Action Alternative:* There would be no effect on wildlife resources from the No Action Alternative. Salt and selenium loading from the area would continue to affect aquatic dependent species.

*Proposed Action:* Upland wildlife habitat impacted by the Proposed Action would result in minor temporary impacts to wildlife species within the Proposed Action area.

Impacts to game animals (elk, mule deer, wild turkey) would include short-term disturbances, stress, and periodic displacement while construction is underway. Construction would create incremental activity and ground disturbance throughout the Project area.

Construction disturbances to big game in their critical winter ranges (i.e., severe winter range, winter concentration areas) during harsh winter months would cause the greatest harm due to the lack of food availability and expenditure of energy in moving away from the disturbance. For this reason, CPW recommends and BLM's RMP specifies that construction activities be avoided during the period of December 1 through April 15 in big game critical winter range. Due to the obligation of Needle Rock Ditch to carry Smith Fork Project exchange water through November 1, and the estimated 10 week work period needed to complete installation of the pipeline in the Needle Rock Ditch alignment in the East Project Area (at an estimated rate of 200 feet per day), the Applicant has requested an alternate timing restriction in the East Project Area of February 1 through April 15. Since this timing restriction is not in conformance with BLM's RMP, BLM and Reclamation coordinated with CPW, and the parties agreed that the alternate timing restriction would be acceptable if construction in the East Project Area would proceed from east to west. The east-to-west progression of construction during the winter months, along with the logistical limitation of completing an estimated 200 feet per day of pipeline, would mitigate negative impacts to wintering big game by being incrementally localized and avoiding the most remote parts of the East Project Area in the most severe part of winter when big game are most vulnerable to higher snow cover and reduced forage. The construction timing restriction, and the east-to-west work pattern to protect wintering game in the East Project Area, would be prominently marked on the construction drawings.

Given the existing level of human disturbance and development (winter livestock feeding, residential activities) in the West Project Area, big game in the West Project Area would be somewhat habituated to the Proposed Action disturbances, and no winter timing restrictions would be applied.

During construction, pipeline trenches left open overnight would be kept to a minimum and covered to reduce potential for entrainment of big game and public safety problems. 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.

There would be a short-term temporary loss of vegetative cover in big game critical habitat until the areas are revegetated. However, the construction footprint of the Proposed Action represents approximately 0.1 percent of the total amount of elk and mule deer critical winter habitat in Game Management Unit 53, and this temporary loss of vegetative cover is not anticipated to cause measurable effects to big game.

Construction impacts to small animals, especially burrowing amphibians, reptiles, and small mammals, could include direct mortality and displacement during construction activities, both in the existing ditch alignment and new pipe alignments. However, these species and habitats are relatively common throughout the area and population-level impacts would not be likely; therefore, impacts would be minor.

There would be no direct effect to nesting songbirds 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.

The four raptor nests identified near the Proposed Action Area would be protected with sensitive area buffers and construction timing restrictions per CPW recommendations (CPW 2008; Sinclair,

pers. comm.). The red-tailed hawk nest protective buffer would be established as a 1/3-mile radius, excluding those areas where the nest is shielded by topography. Construction activities would not occur within a red-tailed hawk sensitive area buffer during February 15 to July 15 with the following exception: construction may be initiated prior to February 15, but must operate on a daily basis until completion through the sensitive area. Construction activities would not occur within 0.5-mile of Needle Rock between March 15 and July 31 to protect nesting peregrine falcons (CPW 2008). If a new active raptor nest is discovered within 1/3 mile of the Proposed Action during construction, construction would cease until Reclamation could complete evaluations and consultations with FWS and CPW. Sensitive areas for raptors would be prominently marked on the construction drawings with their timing restrictions.

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 the Proposed Action. In compliance with the Colorado River Basin Salinity Control Act, the wetland and riparian habitat value that would be lost due to implementation of the Proposed Action would be replaced with a nearby Habitat Replacement Site (see Section 2.2.9).

Another similar project in the nearby area (Pilot Rock Piping Project) could be constructed concurrently with the Proposed Action. Both the Proposed Action and the Pilot Rock Pipeline Project have the potential to temporarily affect the land use and movement patterns of big game in the area during construction. Due to the spatially incremental and concentrated nature of the projects, and the extent and availability of big game range and habitat in the area, and timing limitations imposed on the east part of the Proposed Action area to protect wintering big game, measurable impacts to big game due to project construction activities are not anticipated.

The Proposed Action would contribute to the larger-scale spatial relocation of riparian and wetland wildlife habitat collectively resulting from piping projects around the region. The distribution patterns of wildlife dependent on riparian and wetland habitat are changing along with the distribution of riparian and wetland habitat across the landscape, as habitat replacement sites are developed to compensate for losses caused by the piping projects.

### **3.2.11 – Threatened & Endangered Species**

The only species listed as threatened or endangered under the Endangered Species Act of 1973, as amended, with the potential to be affected by the Proposed Action are the four endangered Colorado River basin fish species: the bonytail, the Colorado pikeminnow, the humpback chub, and the razorback sucker. None of the four endangered Colorado River fishes occurs in the Proposed Action Area and the Proposed Action 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 endangered fishes result from continuing irrigation practices in the Gunnison Basin. The average historic depletion rate from NRDC's system operations is estimated as 6,381 acre-feet per year, and the average historic depletion rate from LRDC's system is estimated as 809 acre-feet per year. Some of NRDC's depletions are from a federal facility (Crawford Reservoir), and some of these depletions are direct diversions from the Smith Fork Creek. Historic depletions by federal facilities in the Gunnison Basin are covered under the umbrella of the Gunnison Basin Programmatic Biological Opinion (PBO) (FWS 2009), which avoids the likelihood of jeopardy and/or adverse modification of critical habitat for the endangered fishes.

*No Action Alternative:* There would be no effect on the four Colorado River endangered fishes or their designated downstream critical habitat from the No Action Alternative.

*Proposed Action:* The potential reduction in selenium loading to the Colorado River and Gunnison River basins as a result of the cumulative efforts of the Colorado River Basin Salinity Control Program is improving water quality within designated critical habitat for the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail throughout the Colorado river and Gunnison river basins (SMPW 2011), as well as improving habitat for amphibians, birds, and other fish.

The annual water depletion to the Colorado River and Gunnison River basins from irrigation by the Ditch Companies' systems would not change as a result of the Proposed Action. To ensure NRDC's and LRDC's depletions resulting from direct diversions from Smith Fork Creek are covered under the Gunnison Basin PBO, NRDC and LRDC would execute Recovery Agreements with FWS (Appendix B). The final executed agreements would be appended to the Final EA.

### **3.2.12 – 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.

Alpine Archaeological Consultants conducted Class III cultural resource inventories of the Proposed Action Area. All ditch reaches involved with the Proposed Action were inventoried in a 200-foot-wide corridor, as well as the habitat replacement site and potential borrow/staging areas. An additional potential borrow area in the Gould Reservoir basin, approximately 8 direct miles south of the Proposed Action Area, was surveyed as part of a previously-approved salinity control project. The inventories resulted in the documentation of several sites (ditch segments, an historic agricultural site, an historical log cabin) within the Proposed Action Area that supports their eligibility 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. These adverse effects are mitigated through a variety of measures developed and agreed to in consultation with the Colorado SHPO.

*No Action Alternative:* The No Action Alternative would have no effect on cultural resources.

*Proposed Action:* As a result of the Class III cultural resources inventory of the Proposed Action Area, and in consultation with the Colorado State Historic Preservation Officer (Colorado SHPO), Reclamation has determined that the Proposed Action would have an adverse effect on several ditch elements involved with the Proposed Action, which are resources eligible for listing in the NRHP. A Memorandum of Agreement (MOA) is in the process of being executed between Reclamation and the Colorado SHPO, with NRDC participating as an invited party, outlining appropriate actions to mitigate the adverse effects of the Proposed Action (the MOA would be included in the Final EA). The MOA would also establish that any post-review discoveries trigger an Unanticipated Discovery Plan (UDP). The UDP would outline procedures that would be followed in order to protect potential archaeological materials or cultural resources discovered during implementation of the Proposed Action. The MOA would be appended to the Final EA. The Proposed Action would

contribute to an area-wide adverse effect on NRHP eligible cultural resources which is occurring as a result of irrigation piping projects. These adverse effects are addressed with mitigative measures required by the Colorado SHPO.

### **3.2.13 – Soils & Farmlands of Agricultural Significance**

The soils units mapped by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) in the Proposed Action Area are generally sandy or stony loams that are a source of salinity in irrigation water in the region. There is an ongoing trend to pipe earthen irrigation ditches in such soils in the region (see Figure 2). Soils mapped by NRCS in the Proposed Action Area are:

- Cerro loam, 1 to 6 percent slopes (44.4 percent of the project area) consists of glacial outwash or old complex landslide deposits. This soil occurs on linear-shaped fans and terraces at elevations of 6,200 to 8,000 feet, and is present throughout the Proposed Action Area.
- Saraton-Agua Fria complex, 20 to 50 percent slopes (15.1 percent of the project area) consists of cobbly, stony outwash alluvium derived from basalt. This soil occurs on benches, mesas, and terraces at elevations of 5,800 to 7,000 feet and is present throughout the Proposed Action Area.
- Haplaquolls, flooded (12.1 percent of the project area) consists of fine loam sandy or stratified, gravelly sand loamy parent material. This soil occurs on alluvial flats, channels, floodplains, and stream terraces at elevations of 4,800 to 7,000 feet and is present in the southwest part of the Proposed Action Area.

The Cerro loam mapped in the Proposed Action Area is classified by NRCS as prime farmland if irrigated under the Farmland Protection Policy Act (NRCS 2007).

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

*Proposed Action:* Under the Proposed Action Alternative, installation of the buried pipe would disturb soils in the previously-disturbed ditch prism, or adjacent to roads, or in currently farmed areas. Staging activities would take place on existing irrigated pasture 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 irrigated lands. The Cerro loam soil in the irrigated agricultural lands in the Proposed Action Area are designated as agriculturally significant by NRCS (see description above). Some agriculturally significant soils may be directly disturbed by the Proposed Action, but would be put back into production the following irrigation season. No farmlands would be permanently altered or removed from production as a result of the Proposed Action, and no interruption to agricultural production would occur.

The ditches involved with the Proposed Action convey irrigation water to agriculturally significant soils downstream of the Proposed Action Area; however, no change in the configuration of irrigated lands would occur because of the Proposed Action. No part of the irrigation season is expected to be lost during implementation of the Proposed Action.

Overall, the Proposed Action would give the Ditch Companies the ability to better manage the irrigation water with efficiencies gained from piping the systems. Soil erosion from irrigation water conveyances would be substantially reduced where ditch reaches are proposed for replacement with buried pipe. Therefore, no direct adverse effects on soils or agriculturally significant lands are expected to occur due to implementation of the Proposed Action. The Proposed Action contributes to the growing amount of piped irrigation conveyances in the region, which are collectively reducing soil erosion on a larger scale.

Soil conservation techniques would be used as part of the construction of the Proposed Action, including retaining and redistributing topsoil following construction, minimizing vegetation grubbing as much as possible to help prevent erosion (i.e., leaving natural woody vegetation in place, especially on slopes and toes of slopes), and reseeded following construction.

### 3.3 – Summary

Table 3 provides a summary of environmental consequences for the resources evaluated in this EA. Resource impacts are outlined for both the No Action and the Proposed Action Alternatives. Mitigation, if required, is also described.

Table 3. Summary of Impacts for the No Action Alternative and Proposed Action Alternative.

Resource	Impacts: No Action Alternative	Impacts: Proposed Action Alternative
Water Rights and Use	No Effect	No effect or possible beneficial long-term effect of improving irrigation water delivery efficiencies and management.
Water Quality	Salt and selenium loading from the Proposed Action Area would continue to affect water quality in the Colorado River Basin	An estimated salt loading reduction of 2,952 tons per year to the Colorado River Basin will result from implementation of the Proposed Action. The Proposed Action is also expected to reduce selenium loading into the Gunnison River (the amount has not been quantified). Improved water quality would likely benefit downstream aquatic species by reducing salt and selenium loading in the Gunnison and Colorado rivers. The Proposed Action contributes to ongoing regional efforts to improve water quality and reduce salinity basinwide.
Air Quality	No Effect	Minor short-term effects due to dust and exhaust created by construction equipment; no long-term effect or possible beneficial long-term effect due to a reduction in maintenance vehicle trips.



<b>Resource</b>	<b>Impacts: No Action Alternative</b>	<b>Impacts: Proposed Action Alternative</b>
Access, Transportation & Safety	No Effect	Minor temporary disruptions to local public roadways from construction traffic entering and existing roadways. No long-term effects.
Noise	No Effect	Short-term noise impacts to area residents and recreators on the BLM Needle Rock Natural Area during daylight hours. These impacts could be combined with one other similar project potentially taking place simultaneously in the local area.
Wilderness Study Area	No Effect	The Proposed Action would be authorized by BLM in the Needle Rock Natural Area consistent with BLM Policy for managing WSAs (BLM Manual 6330), which allows renewals of existing rights-of-way in WSAs and exceptions to the wilderness non-impairment standard for valid existing rights (VERs). The Proposed Action would create a temporary surface disturbance within the existing ditch corridor. Various environmental commitments (CHAPTER 4) would ensure that the Proposed Action would cause the least impairment possible.
Visual Resources	No Effect	Short-term impacts during construction, medium-term impacts following construction until revegetation is complete.
Vegetative Resources and Weeds	No Effect	Impacts to vegetation where construction would occur in upland areas. Estimated long-term loss of riparian/wetland habitat due to elimination of seepage from the involved ditch segments would be replaced with a Habitat Replacement Site (see Section 3.2.9). 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. Weed control measures would be implemented as a part of the Proposed Action, and piping of the ditch systems would remove open water and seepage from the Proposed Action Area—both important contributors to the spread and propagation of weeds.

Resource	Impacts: No Action Alternative	Impacts: Proposed Action Alternative
Wildlife Resources	No effect on terrestrial and avian wildlife; salt and selenium loading from the Proposed Action Area would continue to affect aquatic dependent species	Short-term temporary adverse effect to local wildlife during construction. Short-term localized effects of the Proposed Action combined with another nearby potentially concurrent project are not expected to adversely impact big game. Timing Limitations in the East Project Area were developed with BLM and CPW to protect wintering elk and mule deer. Long-term effects include loss of riparian habitat. A Habitat Replacement Site would be constructed to mitigate for the long-term loss of riparian habitat due to the Proposed Action (see Section 2.2.9). No “take” of nesting migratory birds would occur since vegetation grubbing would take place outside the primary nesting season. Long-term impacts due to loss of riparian nesting habitat for both migratory birds and raptors along the current ditch would be offset with the Habitat Replacement Site. A raptor survey found four active raptor nests within CPW-recommended buffer distances (CPW 2008) and these nest areas would be subject to CPW and BLM timing limitations. 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. These activities are resulting in the redistribution of riparian and wetland-dependent wildlife across the landscape.
Threatened & Endangered Species	Salt and selenium loading from the Proposed Action Area would continue to affect the four Colorado River basin endangered fishes and their critical habitat downstream.	Water depletions would continue at historic levels, and would continue to adversely affect downstream designated critical habitat for the four Colorado River federally endangered fishes. However, under the PBO, the Upper Colorado River Endangered Fish Recovery Program serves as mitigation for these impacts, and Recovery Agreements are being executed between FWS and NRDC and FWS and LRDC to ensure compliance with the ESA (Appendix B). The Proposed Action would improve habitat quality by contributing to the reduction of salt and selenium loading in the Gunnison and Colorado rivers.

Resource	Impacts: No Action Alternative	Impacts: Proposed Action Alternative
Cultural Resources	No Effect	The Proposed Action would have an adverse effect on NRHP eligible cultural resources. The adverse effect would be mitigated with a MOA between Reclamation and the Colorado SHPO (Appendix C). The Proposed Action would contribute to an area-wide adverse effect on NRHP eligible cultural resources, all of which are being addressed with mitigative measures required by the Colorado SHPO.
Agricultural Resources and Soils	No Effect	The Proposed Action would temporarily disturb the ground surface in the Action Area. BMPs/Environmental Commitments would conserve soils and minimize the potential for erosion in the Proposed Action Area. The Proposed Action would not permanently affect productive irrigated farm areas or soils of agricultural significance. The Proposed Action would contribute to the growing amount of piped irrigation conveyances in the region, which helps reduce soil erosion on a larger scale.

## CHAPTER 4 – ENVIRONMENTAL COMMITMENTS

This section summarizes the environmental commitments (contractor plan or certification requirements, BMPs, design features, and general NEPA compliance items) to protect resources and mitigate adverse impacts from the Proposed Action to a non-significant level. The actions in the following environmental commitment list will be implemented as an integral part of the Proposed Action and shall be included in the contractor bid specifications.

Note that any construction activities proposed outside of the inventoried Proposed Action Area or the planned timeframes would first require additional review by Reclamation to determine if the existing surveys and information are adequate to evaluate additional impacts to cultural resources and special status plants and wildlife, including threatened, endangered, or migratory bird species. Additional NEPA documentation may be required.

Table 4. 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
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.”	Jurisdictional Wetlands	RGP-5, Section 404, Clean Water Act of 1972 as amended

Type	Environmental Commitment	Affected Resource	Authority
General NEPA Compliance	A Memorandum of Agreement (MOA) is expected to be executed in order to mitigate the Proposed Action's adverse effects to cultural resources and included with the Final EA (Appendix C).	Cultural Resources	National Historic Preservation Act of 1966; Archaeological Resources Protection Act of 1979
General BMP	Construction limits and staging areas shall be clearly flagged or marked onsite to avoid unnecessary plant loss or ground disturbance.	Vegetation, Weeds, Habitat, Wildlife	Delta County Weed Management Plan (2020) BLM ROW Permit Stipulation
General BMP	Construction limits shall be clearly flagged on the Hathaway property to ensure no travel outside the historic prescriptive ditch right-of-way occurs during construction.	Access	
General BMP	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 (2020) BLM ROW Permit Stipulation

Type	Environmental Commitment	Affected Resource	Authority
General BMP	<p>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 proposed 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.</p> <p>On BLM land, removed vegetative material shall be cut, chopped, or mowed, and spread, arranged, and/or mulched onsite such that it provides erosion control and a nursery environment for recolonizing plants.</p>	Soil, Vegetation, Weeds, Habitat	<p>Delta County Weed Management Plan (2020)</p> <p>BLM ROW Permit Stipulation</p>
General BMP	Vegetation removal shall be confined to the smallest portion of the Proposed Action Area necessary for completion of the work.	Soil, Vegetation, Weeds, Habitat	<p>Delta County Weed Management Plan (2020)</p> <p>BLM ROW Permit Stipulation</p>
General NEPA Requirement	Vegetation removal 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	Topsoil, or top material, shall be stockpiled and then redistributed as top dressing after completion of construction activities.	Soil, Vegetation, Weeds, Habitat	<p>Delta County Weed Management Plan (2020)</p> <p>BLM ROW Permit Stipulation</p>

Type	Environmental Commitment	Affected Resource	Authority
General BMP	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
General BMP	In the Needle Rock Natural Area, grubbed material and slash including large trees and large boulders shall be reserved and then distributed on the reseeded surface and sides of the construction prism to provide a nursery environment for establishing seedlings and help prevent erosion.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (2020) BLM ROW Permit Stipulation
General BMP	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	The construction contractor shall transport, handle, and store any fuels, lubricants, or other hazardous substances involved with the Proposed Action 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	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



Type	Environmental Commitment	Affected Resource	Authority
General BMP	Ground disturbances and construction areas shall be limited to only those areas necessary to safely implement the Proposed Action.	Soil, Vegetation, Weeds, Habitat, Wildlife	Archaeological Resources Protection Act of 1979; Paleontological Resources Preservation Act of 2009
General BMP	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 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 anticipated MOA (to be included in the final EA). Stipulations in the MOA shall be incorporated into the final EA by reference. 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 threatened or endangered species are encountered during construction, the Ditch Companies 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.	Wildlife	Endangered Species Act of 1973 as amended

Type	Environmental Commitment	Affected Resource	Authority
General NEPA Compliance	Construction activities shall take place only in accordance with the schedule restrictions outlined in this EA.	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 1/3-mile of the Proposed Action 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	<p>Nesting Raptors:</p> <p>No construction within 0.5-mile of the documented peregrine falcon nest on Needle Rock during the period of March 15 through July 31, or until fledging and dispersal of young.</p> <p>Red-tailed hawk: no construction activity within 1/3 mile of a nest February 15 through July 15, with the following exception: construction within 1/3 mile of a nest could begin prior to February 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).</p> <p>These timing restrictions and sensitive areas shall be noted on Project construction drawings.</p>	Wildlife	<p>Migratory Bird Treaty Act of 1918</p> <p>BLM RMP TL-20 Wildlife Sensitive Raptor Nest<sup>3</sup></p>

<sup>3</sup> BLM's RMP TL-20 (Wildlife sensitive raptor nest) states: "Prohibit surface use and surface-disturbing and disruptive activities within an 805-meter (0.50-mile) radius of active raptor nests as mapped in the RMP, BLM's GIS database, or other data provided by local, state, federal, or tribal agencies that are analyzed and accepted by the BLM, during the following time periods, or until fledging and dispersal of young: American Peregrine Falcon: March 15 to July 31."

Type	Environmental Commitment	Affected Resource	Authority
General NEPA Compliance	The raptor nest survey shall be repeated in Spring 2024 if construction work is anticipated to continue past December 15, 2024. The survey must only be repeated for the remaining construction area, within the required buffer distances explained in CPW 2008.	Wildlife	Migratory Bird Treaty Act of 1918
General BMP / Design Feature	Work shall proceed from east to west in the East Project Area, and no construction shall take place in the East Project Area during the period of February 1 through April 15 to protect wintering big game. These restrictions shall be noted on Project construction drawings.	Wildlife	Coordination with BLM & CPW due to timing non-conformance with BLM RMP
General BMP	Following construction, 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
General BMP	All drainage patterns that intersect the ditch shall be shaped to their natural flow patterns following ditch piping. Low water crossings and/or rolling dips shall be preferred where appropriate instead of culverts, especially on BLM land.	Soil, Vegetation, Habitat	Clean Water Act of 1972 as amended
General BMP	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 (2020)

Type	Environmental Commitment	Affected Resource	Authority
General BMP	Re-seeding in areas surrounded by native vegetation shall occur following Project construction at appropriate times and with appropriate methods, using a drought tolerant, weed-free seed list approved by BLM and adopted by Reclamation (see Appendix A of the EA). The Ditch Companies shall coordinate with private landowners to reseed any disturbances to irrigated areas.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (2020)
General BMP	Weed control shall be implemented by the Ditch Companies or their contractor in accordance with current Delta County weed control standards. The Ditch Companies shall provide a Pesticide Use Proposal (PUP) to BLM prior to weed treatment on BLM land.	Soil, Vegetation, Weeds, Habitat	Delta County Weed Management Plan (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 for the Proposed Action.

### 5.2 – Public Involvement

Notice of the public review period and availability of the Draft EA was be distributed to private landowners adjacent to the Proposed Action, and the organizations and agencies listed in Appendix D. The Draft was made available for public comment for a 30-day period beginning November 2, 2021. The Final EA is available on Reclamation’s website. Publicly-available electronic versions of

the EA meet the technical standards of Section 508 of the Rehabilitation Act of 1973, so that the documents can be accessed by people with disabilities using accessibility software tools.

During the public comment period, Reclamation received one comment document containing 10 distinct, substantive comments. A summary of the comments and responses to the comments are provided in Appendix E, along with the original comment document.

## CHAPTER 6 – PREPARERS

The following table lists the individuals who participated in the preparation of this EA.

Table 5. List of Preparers

Name	Agency	Title	Areas of Responsibility
Lesley McWhirter	USBR (now retired)	Environmental and Planning Group Chief	EA review, vegetation, wildlife
Jenny Ward	USBR	Environmental Protection Specialist	EA review, cultural resources
Dawn Reeder	Rare Earth Science (Consultant to the Ditch Companies)	Principal Biologist	General authorship, mapping

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## CHAPTER 8 – ABBREVIATIONS AND ACRONYMS

Abbreviation or Acronym	Definition
ACEC	Area of Critical Environmental Concern
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
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
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
GIS	Geographic information system
Interior	U.S. Department of the Interior
ISA	Instant Study Area

Abbreviation or Acronym	Definition
LRDC	Lone Rock Ditch Company
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NRDC	Needle Rock Ditch Company
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
ONA	Outstanding Natural Area
PBO	Programmatic Biological Opinion
PM	Particulate matter
PUP	Pesticide Use Proposal
RCPP	Regional Conservation Partnership Program
Reclamation	U.S. Bureau of Reclamation
RMP	Resource Management Plan (see BLM 2020 reference)
ROW	Right-of-way
SHPO	State Historic Preservation Officer
TDS	Total dissolved solids
USACE	U.S. Army Corps of Engineers
VER	valid existing right
VRM	Visual Resource Management
WSA	Wilderness Study Area

# APPENDIX A – SEED LIST

BLM-recommended/Reclamation-adopted seed list:

**Sagebrush  
Semidesert Loam  
Mid Elevations (5,500-  
7,000')**

<b>PROJECT NAME:</b>	Needle Rock Ditch
<b>PROJECT ACRES:</b>	
<b>DATE:</b>	10/18/2021

Code	Common Name	Cultivar	Genus	species	Lbs PLS/acre
ACHY	INDIAN RICEGRASS	rimrock	ACHNATHERUM	hymenoides	4
ELEL5	BOTTLEBRUSH SQUIRRELTAIL	Tusas	ELYMUS	elymoides	3
SPCR	SAND DROPSEED	UP/X-VNS	SPOROBOLUS	cryptandrus	0.25
ELTR	Slender Wheatgrass	White River	Elymus	trachycaulus	3
POSE	SANDBURG BLUEGRASS	UP	POA	secunda	0.5
POFE	Muttongrass	UP/Ruin Canyon	POA	fendleriana	
KOMA	Prairie Junegrass	UP Sims Mesa	Koeleria	macrantha	0.25
CLSE	Rocky Mt Bee Plant	X-VNS	Cleome	serrulata	1
HEAN3	ANNUAL SUNFLOWER	X-VNS	HELIANTHUS	annuus	0.5
<b>TOTAL</b>					<b>9.5</b>

## **APPENDIX B – ESA COMPLIANCE DOCUMENTATION**



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
445 West Gunnison Ave, Suite 240  
Grand Junction, Colorado 81501



IN REPLY REFER TO:  
FWS/IR05/IR07

TAILS 06E24100-2022-F-0064

January 27, 2022

## Memorandum

To: Ed Warner, Area Manager, Western Colorado Area Office, Bureau of Reclamation, Grand Junction,

From: for Western Slope Supervisor, U.S. Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado **JOHN CLAYTON**  
Digitally signed by JOHN CLAYTON  
Date: 2022.02.02 13:42:31 -07'00

Subject: Request for Consultation under Section 7 of the Endangered Species Act for the Needle Rock-Lone Rock Ditch Piping Project, Delta County, Colorado

In accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and the Interagency Cooperation Regulations (50 CFR 402), the Fish and Wildlife Service (Service) transmits this correspondence to serve as the final biological opinion (BO) for the Needle Rock-Lone Rock Ditch Piping Project in Delta County, Colorado.

We acknowledge your determination that the project would have no effect on the Canada lynx (*Lynx canadensis*); Gunnison Sage-grouse (*Centrocercus minimus*); Mexican spotted owl (*Strix occidentalis lucida*); and the Yellow-billed cuckoo (*Coccyzus americanus*). However, neither 7(a)(3) of the Act, nor implementing regulations under 7(a)(2) of the Act require the Service to review or concur with this determination; therefore the Service will not address these species further. We do however appreciate you informing us of your analysis for these species.

The subject project involves a historic average annual depletion estimated for the Needle Rock Ditch to be 1,745 acre-feet per year (AF/yr) for native streamflow diversions from the Smith Fork River and 214 AF/yr for the exchange water as part of the Smith Fork Project. The average annual historic depletion rate from the Lone Rock Ditch is 130 AF/yr from the Smith Fork River.

INTERIOR REGION 5  
MISSOURI BASIN

KANSAS, MONTANA\*, NEBRASKA, NORTH DAKOTA,  
SOUTH DAKOTA

\*PARTIAL

INTERIOR REGION 7  
UPPER COLORADO RIVER BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

The two ditch systems currently divert water from two separate locations on the Smith Fork River. Together, the historic water depletions for these two projects total 2,089 AF/yr. The Needle Rock and Lone Rock project involves no new diversions from, or depletions to, the Gunnison River. However, the historic water depletions adversely affect the listed Colorado pikeminnow (*Ptychocheilus lucius*), Humpback chub (*Gila cypha*), Bonytail chub (*Gila elegans*) and the Razorback sucker (*Xyrauchen texanus*) and their critical habitat.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated on January 22, 1988. The Recovery Program was intended to be the reasonable and prudent alternative for individual projects to avoid the likelihood of jeopardy to the endangered fishes from impacts of depletions to the Upper Colorado River Basin. In order to further define and clarify the process in the Recovery Program, a section 7 agreement was implemented on October 15, 1993, by the Recovery Program participants. Incorporated into this agreement is a Recovery Implementation Program Recovery Action Plan (RIPRAP) which identifies actions currently believed to be required to recover the endangered fishes in the most expeditious manner.

On December 4, 2009, the Service issued a final Gunnison River Basin Programmatic Biological Opinion (PBO) (this document is available for viewing at the following internet address: <http://www.coloradoriverrecovery.org/documents-publications/section-7-consultation/GUPBO.pdf>). The Service has determined that projects that fit under the umbrella of the Gunnison River PBO would avoid the likelihood of jeopardy and/or adverse modification of critical habitat for depletion impacts. The Gunnison River PBO states that in order for actions to fall within the umbrella of the PBO and rely on the RIPRAP to offset its depletion, the following criteria must be met.

1. A Recovery Agreement must be offered and signed prior to conclusion of section 7 consultation. You have forwarded the Recovery Agreement signed by the Water User.
2. A fee to fund recovery actions will be submitted as described in the proposed action for new depletion projects greater than 100 acre-feet/year (AF/yr). The 2022 fee is \$22.80 per AF and is adjusted each year for inflation.
3. Reinitiation stipulations will be included in all individual consultations under the umbrella of this programmatic.
4. The Service and project proponents will request that discretionary Federal control be retained for all consultations under this programmatic.

The Recovery Agreement has been signed by the Water User and the Service (attached). The depletions associated with this project are historic depletions which do not make contributions to fund recovery actions. The Bureau of Reclamation has agreed to condition its approval documents to retain jurisdiction should section 7 consultation need to be reinitiated. Therefore, the Service concludes that the subject project meets the criteria to rely on the Gunnison PBO to



offset depletion impacts and is not likely to jeopardize the continued existence of the species and is not likely to destroy or adversely modify designated critical habitat. The reinitiation criteria, outlined in the Gunnison PBO, apply to all projects under the umbrella of the PBO. Therefore, if the PBO is reinitiated, reinitiation of this biological opinion would follow as well.

The Service and the Recovery Program track all water depletions that are covered under the Gunnison PBO and other water depletion PBOs within the Upper Colorado River Basin on a quarterly basis. A summary of those depletions are available at:

<http://www.coloradoriverrecovery.org/documents-publications/section-7-consultation/consultation-list.html>. Also, in accordance with the Section 7, Sufficient Progress, and Historic Projects Agreement, the Service reviews cumulative accomplishments and shortcomings of the Recovery Program in the upper Colorado River basin. Per that Agreement, the Service uses the following criteria to evaluate whether the Recovery Program is making “sufficient progress” toward recovery of the four listed fish species:

- actions which result in a measurable population response, a measurable improvement in habitat for the fishes, legal protection of flows needed for recovery, or a reduction in the threat of immediate extinction;
- status of the fish populations;
- adequacy of flows;
- and magnitude of the impact of projects.

Through these bi-annual Sufficient Progress reviews the Service evaluates the best available and current information to determine if the Recovery Program continues to offset depletion effects identified in existing Section 7 consultations including the depletions covered by these PBOs. In the most recent assessment (dated February 12, 2021), the Service determined that sufficient progress has been made towards recovery. Sufficient Progress reports can be found at: <http://www.coloradoriverrecovery.org/documents-publications/section-7-consultation/sufficient-progress-letters.html>.

If you have any questions regarding this consultation or would like to discuss it in more detail, please contact Kathleen Gissing of our Western Slope Field Office at (970) 628-7183 Email: [Kathleen\\_gissing@fws.gov](mailto:Kathleen_gissing@fws.gov).

Ed Warner, Area Manager, BOR

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Attachment: Recovery Agreement

cc: FWS/UCREFRP, Lakewood; Email: [Kevin\\_McAbee@fws.gov](mailto:Kevin_McAbee@fws.gov)

## GUNNISON BASIN RECOVERY AGREEMENT

This RECOVERY AGREEMENT is entered into this 27th day of January, 2022, by and between the **United States Fish and Wildlife Service** (Service) and **The Needle Rock Ditch Company** (Water User).

WHEREAS, in 1988, the Secretary of Interior, the Governors of Wyoming, Colorado and Utah, and the Administrator of the Western Area Power Administration signed a Cooperative Agreement to implement the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program); and

WHEREAS, the Recovery Program is intended to recover the endangered fish while providing for water development in the Upper Basin to proceed in compliance with state law, interstate compacts and the Endangered Species Act; and

WHEREAS, the Colorado Water Congress has passed a resolution supporting the Recovery Program; and

WHEREAS, on December 4, 2009, the Service issued a programmatic biological opinion (2009 Opinion) for the Gunnison River Basin and the operation of the Wayne N. Aspinall Unit concluding that implementation of specific operation of the Aspinall Unit, implementation of a Selenium Management Plan and specified elements of the Recovery Action Plan (Recovery Elements), along with existing and a specified amount of new depletions, are not likely to jeopardize the continued existence of the endangered fish or adversely modify their critical habitat in the Gunnison River subbasin and Colorado River subbasin downstream of the Gunnison River confluence; and

WHEREAS, Water User is the owner of the **Needle Rock Ditch** system, which causes or will cause depletions to the Gunnison River subbasin from its **Needle Rock Ditch system diversion** on the Smith Fork of the Gunnison River with the implementation of a **Salinity Control Project** (Water Project); and

WHEREAS, Water User desires certainty that its depletions can occur consistent with section 7 and section 9 of the Endangered Species Act (ESA); and

WHEREAS, the Service desires a commitment from Water User to the Recovery Program so that the Program can actually be implemented to recover the endangered fish and to carry out the Recovery Elements.

NOW THEREFORE, Water User and the Service agree as follows<sup>1</sup>:

1. The Service agrees that implementation of the Recovery Elements specified in the 2009 Opinion will avoid the likelihood of jeopardy and adverse modification under section 7 of the ESA, for depletion impacts caused by Water Users Water Project. Any consultations under section 7 regarding Water Projects depletions are to be governed by the provisions of the 2009 Opinion. The Service agrees that, except as provided in the 2009 Opinion, no other measure or action shall be required or imposed on Water Project to comply with section 7 or section 9 of the ESA with regard to Water Projects depletion impacts or other impacts covered by the 2009 Opinion. Water User is entitled to rely on this Agreement in making the commitment described in paragraph 2.

2. Water User agrees not to take any action which would probably prevent the implementation of the Recovery Elements. To the extent implementing the Recovery Elements requires active cooperation by Water User, Water User agrees to take reasonable actions required to implement those Recovery Elements. Water User will not be required to take any action that would violate its decrees or the statutory authorization for Water Project, or any applicable limits on Water Users legal authority. Water User will not be precluded from undertaking good faith negotiations over terms and conditions applicable to implementation of the Recovery Elements.

3. If the Service believes that Water User has violated paragraph 2 of this Recovery Agreement, the Service shall notify both Water User and the Management Committee of the Recovery Program. Water User and the Management Committee shall have a reasonable opportunity to comment to the Service regarding the existence of a violation and to recommend remedies, if appropriate. The Service will consider the comments of Water User and the comments and recommendations of the Management Committee, but retains the authority to determine the existence of a violation. If the Service reasonably determines that a violation has occurred and will not be remedied by Water User despite an opportunity to do so, the Service may request reinitiation of consultation on Water Project without reinitiating other consultations as would otherwise be required by the Reinitiation Notice section of the 2009 Opinion. In that event, the Water Projects depletions would be excluded from the depletions covered by 2009 Opinion and the protection provided by the Incidental Take Statement.

4. Nothing in this Recovery Agreement shall be deemed to affect the authorized purposes of Water Users Water Project or The Service statutory authority.

5. This Recovery Agreement shall be in effect until one of the following occurs.

a. The Service removes the listed species in the Upper Colorado River Basin from the endangered or threatened species list and determines that the Recovery Elements are no longer needed to prevent the species from being relisted under the ESA; or

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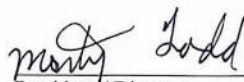
<sup>1</sup>Individual Recovery Agreement may be changed to fit specific circumstances.

b. The Service determines that the Recovery Elements are no longer needed to recover or offset the likelihood of jeopardy to the listed species in the Upper Colorado River Basin; or

c. The Service declares that the endangered fish in the Upper Colorado River Basin are extinct; or

d. Federal legislation is passed or federal regulatory action is taken that negates the need for [or eliminates] the Recovery Program.

6. Water User may withdraw from this Recovery Agreement upon written notice to the Service. If Water User withdraws, the Service may request reinitiation of consultation on Water Project without reinitiating other consultations as would otherwise be required by the Reinitiation Notice section of the 2009 Opinion.

 Monty Todd  
President / Director  
The Needle Rock Ditch Company

12-2-21  
Date

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JOHN CLAYTON  
Date: 2022.02.02  
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for Western Slope Supervisor  
U.S. Fish and Wildlife Service

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Date

## GUNNISON BASIN RECOVERY AGREEMENT

This RECOVERY AGREEMENT is entered into this 27th day of January, 2022, by and between the **United States Fish and Wildlife Service** (Service) and **The Lone Rock Ditch Company** (Water User).

WHEREAS, in 1988, the Secretary of Interior, the Governors of Wyoming, Colorado and Utah, and the Administrator of the Western Area Power Administration signed a Cooperative Agreement to implement the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program); and

WHEREAS, the Recovery Program is intended to recover the endangered fish while providing for water development in the Upper Basin to proceed in compliance with state law, interstate compacts and the Endangered Species Act; and

WHEREAS, the Colorado Water Congress has passed a resolution supporting the Recovery Program; and

WHEREAS, on December 4, 2009, the Service issued a programmatic biological opinion (2009 Opinion) for the Gunnison River Basin and the operation of the Wayne N. Aspinall Unit concluding that implementation of specific operation of the Aspinall Unit, implementation of a Selenium Management Plan and specified elements of the Recovery Action Plan (Recovery Elements), along with existing and a specified amount of new depletions, are not likely to jeopardize the continued existence of the endangered fish or adversely modify their critical habitat in the Gunnison River subbasin and Colorado River subbasin downstream of the Gunnison River confluence; and

WHEREAS, Water User is the owner of **Lone Rock Ditch**, which causes or will cause depletions to the Gunnison River subbasin from its diversion on the Smith Fork of the Gunnison River with the implementation of a **Salinity Control Project** (Water Project); and

WHEREAS, Water User desires certainty that its depletions can occur consistent with section 7 and section 9 of the Endangered Species Act (ESA); and

WHEREAS, the Service desires a commitment from Water User to the Recovery Program so that the Program can actually be implemented to recover the endangered fish and to carry out the Recovery Elements.



NOW THEREFORE, Water User and the Service agree as follows<sup>1</sup>:

1. The Service agrees that implementation of the Recovery Elements specified in the 2009 Opinion will avoid the likelihood of jeopardy and adverse modification under section 7 of the ESA, for depletion impacts caused by Water Users Water Project. Any consultations under section 7 regarding Water Projects depletions are to be governed by the provisions of the 2009 Opinion. The Service agrees that, except as provided in the 2009 Opinion, no other measure or action shall be required or imposed on Water Project to comply with section 7 or section 9 of the ESA with regard to Water Projects depletion impacts or other impacts covered by the 2009 Opinion. Water User is entitled to rely on this Agreement in making the commitment described in paragraph 2.

2. Water User agrees not to take any action which would probably prevent the implementation of the Recovery Elements. To the extent implementing the Recovery Elements requires active cooperation by Water User, Water User agrees to take reasonable actions required to implement those Recovery Elements. Water User will not be required to take any action that would violate its decrees or the statutory authorization for Water Project, or any applicable limits on Water Users legal authority. Water User will not be precluded from undertaking good faith negotiations over terms and conditions applicable to implementation of the Recovery Elements.

3. If the Service believes that Water User has violated paragraph 2 of this Recovery Agreement, the Service shall notify both Water User and the Management Committee of the Recovery Program. Water User and the Management Committee shall have a reasonable opportunity to comment to the Service regarding the existence of a violation and to recommend remedies, if appropriate. The Service will consider the comments of Water User and the comments and recommendations of the Management Committee, but retains the authority to determine the existence of a violation. If the Service reasonably determines that a violation has occurred and will not be remedied by Water User despite an opportunity to do so, the Service may request reinitiation of consultation on Water Project without reinitiating other consultations as would otherwise be required by the Reinitiation Notice section of the 2009 Opinion. In that event, the Water Projects depletions would be excluded from the depletions covered by 2009 Opinion and the protection provided by the Incidental Take Statement.

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5. This Recovery Agreement shall be in effect until one of the following occurs.

a. The Service removes the listed species in the Upper Colorado River Basin from the endangered or threatened species list and determines that the Recovery Elements are no longer needed to prevent the species from being relisted under the ESA; or

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<sup>1</sup>Individual Recovery Agreement may be changed to fit specific circumstances.

b. The Service determines that the Recovery Elements are no longer needed to recover or offset the likelihood of jeopardy to the listed species in the Upper Colorado River Basin; or

c. The Service declares that the endangered fish in the Upper Colorado River Basin are extinct; or

d. Federal legislation is passed or federal regulatory action is taken that negates the need for [or eliminates] the Recovery Program.

6. Water User may withdraw from this Recovery Agreement upon written notice to the Service. If Water User withdraws, the Service may request reinitiation of consultation on Water Project without reinitiating other consultations as would otherwise be required by the Reinitiation Notice section of the 2009 Opinion.

   
President / Director

The Lone Rock Ditch Company

JOHN

CLAYTON

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for Western Slope Supervisor  
U.S. Fish and Wildlife Service

  
Date

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Date

## **APPENDIX C – CULTURAL RESOURCE COMPLIANCE DOCUMENTATION**

**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**

**WHEREAS**, the Bureau of Reclamation (Reclamation) and the Needle Rock Ditch Company (NRDC) plan to pipe 6.8 miles of the Needle Rock Ditch, the Lone Rock Ditch, and associated laterals (Project); and

**WHEREAS**, Reclamation plans to fund NRDC to pipe the Needle Rock Ditch, the Lone Rock Ditch, and associated laterals, as authorized by the Basinwide Program under the Colorado River Basin Salinity Control Program, and the Bureau of Land Management (BLM) plans to approve the portions of the Project located on lands managed by the BLM, thereby making the Project a federal undertaking subject to review under Section 106 of the National Historic Preservation Act (NHIPA), 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 3.3 miles of the Needle Rock Ditch, 1.7 miles of the Lone Rock Ditch, 1.8 miles of laterals, and 1.3 miles of access roads, and a 100 foot-wide buffer around a borrow pit and two habitat replacement areas, totaling 279.6 acres on private lands and 3.5 acres on lands managed by the Bureau of Land Management (BLM), 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 Needle Rock Ditch (5DT1594) is eligible for inclusion on the National Register of Historic Places (NRIIP) under Criterion A, that segment 5DT1594.4 supports the integrity of that overall linear resource, and that the Project will result in adverse effects to the historic property; and

**WHEREAS**, the BLM has participated in the consultation, and has chosen to participate in this Memorandum of Agreement (Agreement) as a Signatory; and

**WHEREAS**, the NRDC, 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 as an invited signatory; 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 April 5, 2021 letter inviting the tribes to participate in the proposed undertaking. 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 Montrose County Commissioners, the Delta County Historic Landmarks Board, the Montrose County Historic Landmarks Advisory Board, and the Hotchkiss Crawford Historical Museum via an April 1, 2021 letter to invite the local governments and other potentially interested entities to participate in the proposed undertaking. The Montrose County Historic Landmarks Advisory Board responded that they have no concerns about the project. The Delta County Commissioners, the Montrose 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); and

**NOW, THEREFORE**, pursuant to Section 106 of the NHPA, Reclamation, BLM, 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 NRDC will develop and video record a presentation on the origins of the Needle Rock and Lone Rock ditches, and will include a discussion on how the ditches were established, how the construction of the ditches influenced the development of the area and the local economy, and who the key players were who aided in the inception of the canal structures. The video will be edited to include views of historical documents such as the first Shareholder Certificates, photographs, and meeting minutes from 1890. A map showing the locations of the Needle Rock and Lone Rock ditches will be included in the video.
  - a. Prior to any modification of the Needle Rock Ditch (5DT1594), NRDC shall ensure that necessary information for the development of the video is collected, including but not limited to additional research and scanning of images and documents held by NRDC.
  - b. NRDC will submit a draft outline of the presentation 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. NRDC shall consider signatory comments and revise the draft accordingly. Once a draft is agreed to by the signatories, NRDC will finalize and record the presentation.

- c. The presentation will be uploaded online and a link to the video will be included on 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 presentation to all signatory parties within three (3) years of the execution of this Agreement. A letter containing a link to the presentation will also be sent to the Delta County Commissioners, the Montrose County Commissioners, the Delta County Historic Landmarks Board, the Montrose County Historic Landmarks Advisory Board, the Hotchkiss Crawford Historical Museum, the 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 NRDC on behalf of Reclamation shall implement the discovery plan included as Attachment B of this Agreement.

## **V. MONITORING AND REPORTING**

No later than December 31<sup>st</sup> of each year following the execution of this Agreement until its stipulations are carried out, it expires, or is terminated, NRDC 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 NRDC'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 NRDC, Reclamation, BLM, 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  
Bureau of Land Management, Uncompahgre Field Office

**INVITED SIGNATORIES:** Needle Rock Ditch Company

SIGNATORY PAGE

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

Colorado State Historic Preservation Office

Dr. Holly

Kathryn Norton

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Holly Kathryn Norton  
Date: 2022.01.28  
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By:

Date:


Dawn DiPrince, State Historic Preservation Officer

SIGNATORY PAGE

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,  
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REGARDING THE  
NEEDLE ROCK DITCH AND LONE ROCK DITCH PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA AND MONTROSE COUNTIES, COLORADO

Bureau of Reclamation, Western Colorado Area Office

By:  Digitally signed by Ed Warner  
Date: 2022.01.27 09:29:58 -0700 Date: \_\_\_\_\_  
Ed Warner, Area Manager

SIGNATORY PAGE

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

Bureau of Land Management, Uncompahgre Field Office

By: **SUZANNE COPPING** Digitally signed by  
SUZANNE COPPING  
Date: 2022.01.26  
11:29:59 -0700 Date: \_\_\_\_\_  
Suzanne Copping, Field Office Manager

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT  
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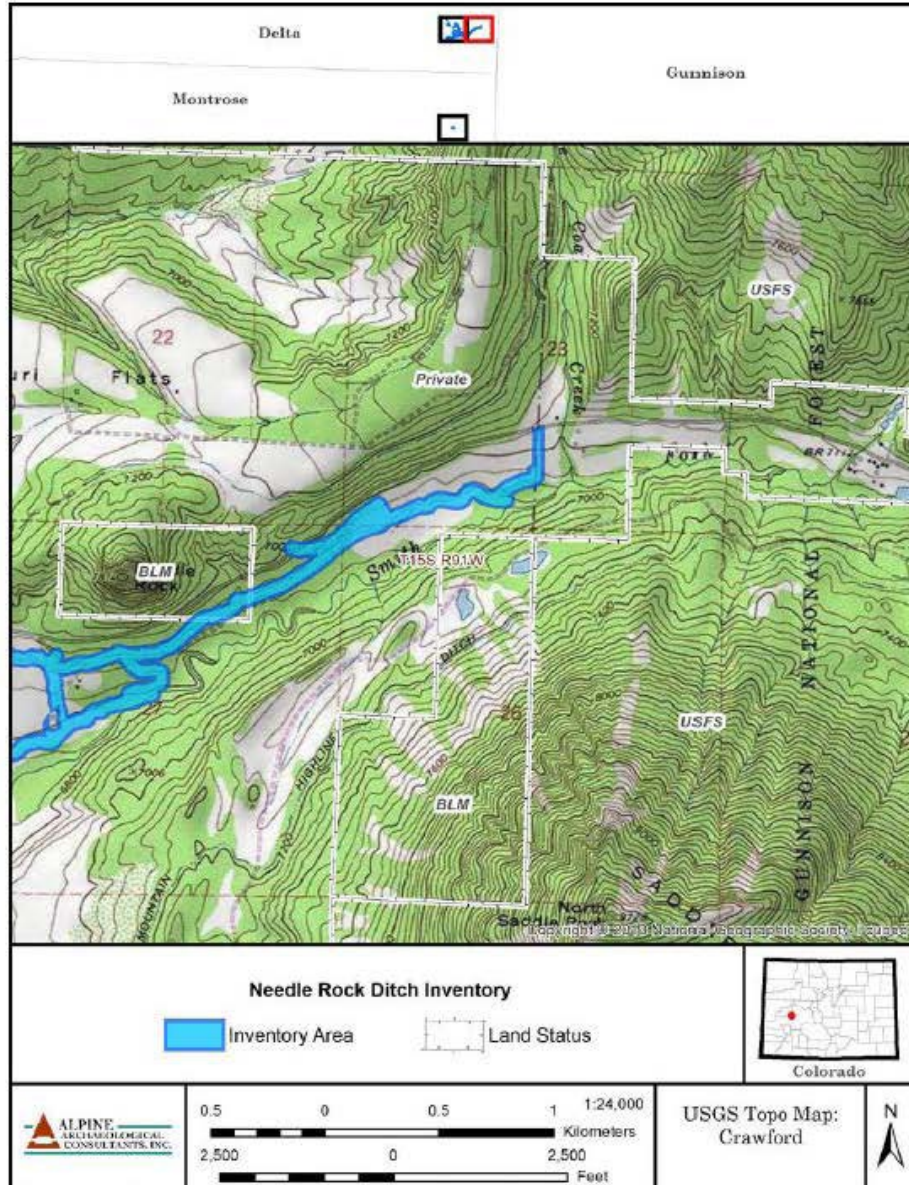
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THE BUREAU OF LAND MANAGEMENT UNCOMPAHGRE FIELD OFFICE,  
THE NEEDLE ROCK DITCH COMPANY,  
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COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA AND MONTROSE COUNTIES, COLORADO

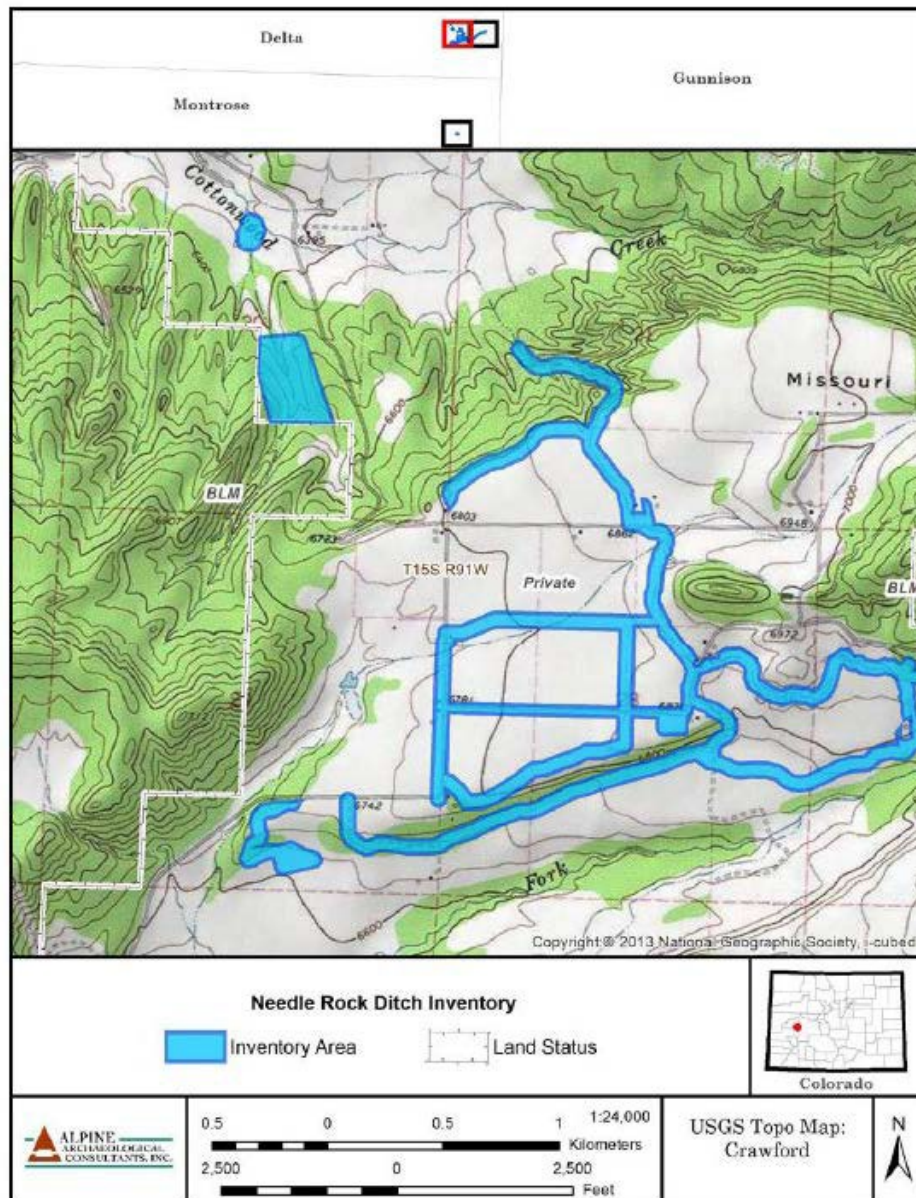
The Needle Rock Ditch Company

By: Monty Todd Date: 2-7-22  
Monty Todd, President

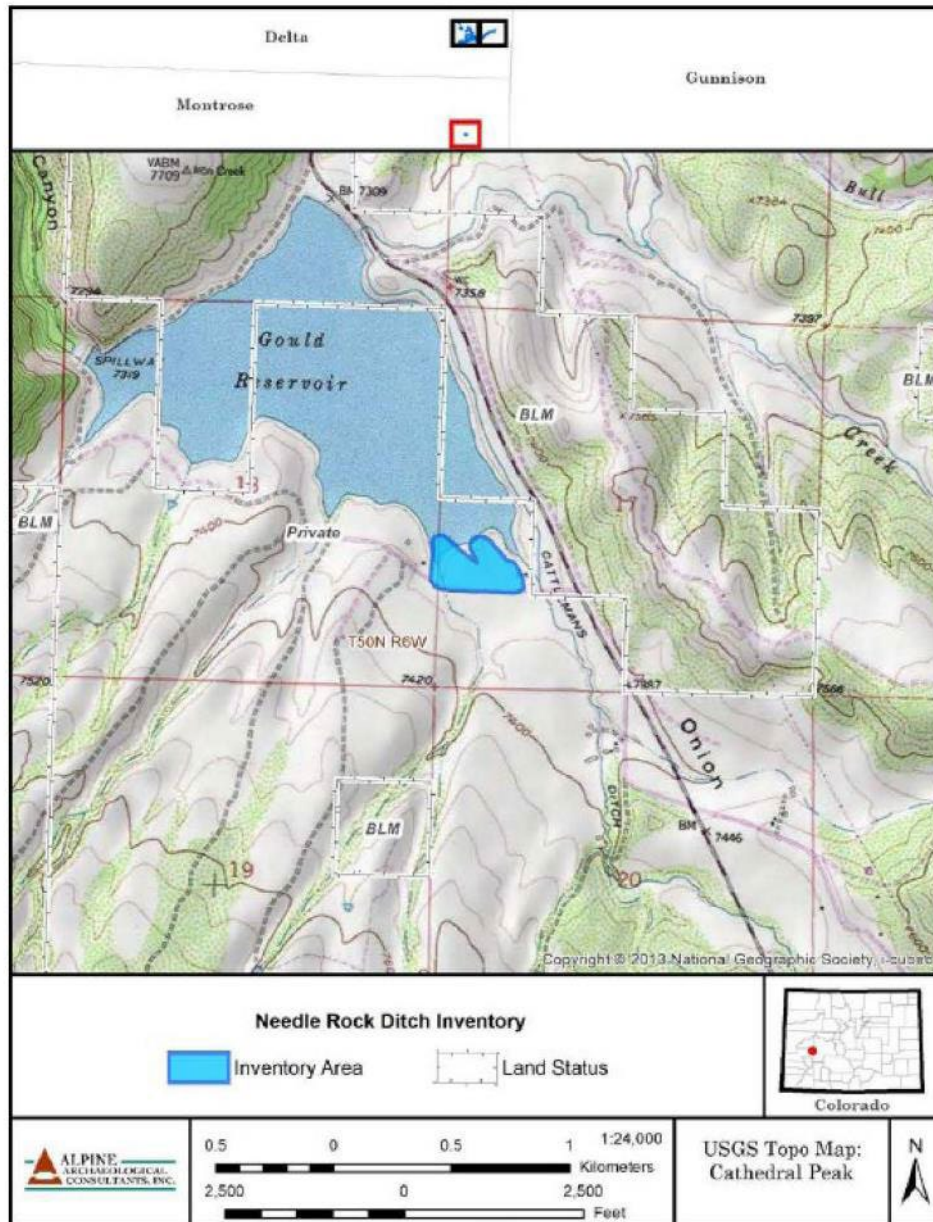


ATTACHMENT A – AREA OF POTENTIAL EFFECTS









ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN  
PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF  
CULTURAL RESOURCES  
THE NEEDLE ROCK DITCH COMPANY  
NEEDLE ROCK DITCH AND LONE ROCK DITCH PIPING PROJECT,  
SALINITY CONTROL PROGRAM,  
DELTA AND MONTROSE COUNTIES, COLORADO

### 1. INTRODUCTION

The Needle Rock Ditch Company (NRDC) plans to pipe 6.8 miles of the Needle Rock Ditch, the Lone Rock Ditch, and associated laterals. 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 NRDC 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:  
Monty Todd  
970-921-6511  
[nrditch@gmail.com](mailto:nrditch@gmail.com)

CR Manager:  
Kristin Bowen  
970-385-6540  
[kbowen@usbr.gov](mailto: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 NRDC 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.
- Notify BLM Archaeologist: If the discovery is determined to be located on BLM managed land, the CR Manager will contact the BLM archaeologist within 48 hours of the discovery.

BLM Archaeologist:  
 Collin Price  
 970-240-5303  
[cprice@blm.gov](mailto:cprice@blm.gov)

#### 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 both federal and private lands, and the requirements under the Native American Graves Protection and Repatriation Act (NAGPRA) apply (43 CFR Part 10). For all discoveries, the kinds of objects considered and referred to as NAGPRA items as defined in 43 CFR 10.2 (d) include: human remains, funerary objects, sacred objects, and objects of cultural patrimony. The requirements under State Law Colorado Revised Statute (CRS) 24-80 part 13 also apply. The Unmarked Human Graves Colorado Statute (CRS 24-80-1301-1305) applies if the human remains are on private lands.



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 and Montrose County Coroners and the Delta and Montrose County Sheriffs. 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 discovered on BLM-managed land, BLM will follow the regulations outlined in 43 CFR Part 10.4 and develop and implement a NAGPRA Plan of Action in consultation with the appropriate Indian tribes. 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.

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

CR Manager  
Kristin Bowen  
(970) 385-6540

BLM Archaeologist  
Collin Price  
(970) 240-5303

Delta County Coroner  
(970) 874-5918

Delta County Sheriff  
(970) 874-2000

Montrose County Coroner  
(970) 249-7755

Montrose County Sheriff  
(970) 252-4023

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, BLM, 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 BLM, 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 NRDC, Reclamation, BLM, and SHPO determine that compliance with state and federal laws is complete.

## **APPENDIX D – DISTRIBUTION LIST**

All landowners adjacent to the Proposed Action  
Black Hills Natural Energy  
Citizens for a Healthy Community  
Colorado Office of Archaeology and Historic Preservation  
Colorado Parks and Wildlife  
Colorado River Water Conservation District  
Colorado Water Conservation Board  
Crawford Area Chamber of Commerce  
Delta Montrose Electric Association  
Delta County Road & Bridge Department  
Delta County Independent  
TDS Telecom  
Town of Crawford  
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  
Western Slope Conservation Center

# APPENDIX E – SUMMARY OF THE PUBLIC COMMENTS ON THE DRAFT EA AND RESPONSES

One comment document was received during the comment period containing 10 distinct, substantive comments. The comment document follows this summary. The comments questioned Reclamation's use of facts or analyses in determining salinity savings and resources analyzed. In compliance with 40 CFR 1503.4, possible responses to these comments include:

- Modifying the alternatives or developing and evaluating new alternatives
- Supplementing, improving, or modifying the analyses
- Making factual corrections

Reclamation reviewed each comment and classified them according to topic or comment category below. 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.

## **Category: Groundwater**

Comment Numbers: 1, 3

**Summary comment:** Commenters use well water to irrigate their landscaping and are concerned that the project will result in a decrease in well water available for their irrigation.

**Response:** A discussion on groundwater and water rights has been added to Section 3.2.1 of the Final EA. There is the potential that landscaping or agricultural plantings which persist on water originating from the seeping canal may need to be irrigated once the canal is piped.

## **Category: Drinking Water Quality**

Comment Number: 2

**Summary comment:** Commenter expressed concern about the potential effect of the project on the water quality of their domestic well, which they assert has salinity levels within drinking water quality parameters.

**Response:** Impacts to drinking water quality are dismissed from analysis in Final EA Section 1.6, and are not carried forward for analysis in Chapter 3. There are no data to support the notion that removing high salinity canal seepage water would degrade domestic well water salinity levels. No impacts anticipated.

## **Category: Private Property Rights**

Comment Numbers: 4, 10

**Summary comment:** Commenter questioned the right of the ditch company to perform this work on private property.

**Response:** Rights-of-way and landownership are discussed in Section 3.2.4 of the Final EA. The ditch would not be accessed from outside the historic prescriptive canal corridor through the commenter's property. The Ditch Companies would provide the contractor with construction corridor widths as described in the EA to avoid disturbance outside the construction corridor. Flagging the construction corridor in areas of concern (e.g. the commenter's property) has been added as an environmental commitment in CHAPTER 4 of the Final EA.

**Category: Water Quality**

Comment Numbers: 5, 6, 7, 8, 9

**Summary comment:** Commenter questioned the quantification of salt removal from the Colorado River basin and the lack of references regarding this quantification, the benefit of removing 2,952 tons of salt/year from the basin, and how Reclamation determines the cost/benefit of salinity projects.

**Response:** A discussion on how salt removal is quantified and references have been added to Section 1.4.1 of the Final EA. A discussion on how salinity projects incrementally contribute to salinity control in the Colorado River basin is included in Section 3.2.2 of the Final EA. A discussion on Reclamation's Funding Opportunity Announcement (FOA) and funding award process has been added to Section 1.4.1 of the Final EA. The commenter misinterpreted Figure 14 of the USGS report cited in the comment (Richards et al. 2014). Figure 14 shows that SF1 is located upstream of Needle Rock and Lone Rock ditches. Therefore, the potential contributions of salinity from these ditches would be detected at SF2.

**Category: Impacts to Wetland and Riparian Vegetation**

Comment Number: 7

**Summary comment:** Commenter referenced the discussion in the Smith Fork of the Gunnison River Watershed Assessment (Wang & Bowman 2016) which states that lining or piping irrigation ditches can negatively impact existing wetlands, small drainages and seeps which contribute aquatic and terrestrial habitat, and instream flows.

**Response:** Impacts to habitat are explained in Section 3.2.9 of the Final EA. The Salinity Control Program's habitat replacement requirements are discussed in Sections 2.2.9 and 3.2.9 of the Final EA.

WCAD - GRAND JUNCTION  
DEC 2 '21 AM 7:37

Dana & Barbara Hathaway  
4481 Clark Rd  
Crawford, CO 81415  
[dbhath@gmail.com](mailto:dbhath@gmail.com)  
[bhath76@gmail.com](mailto:bhath76@gmail.com)

WCG-JWard  
US Dept of Interior  
Bureau of Reclamation

Re: Response and Comments Needle Rock Piping Project

This is to acknowledge receipt of your 11/02/2021 letter on 11/08/2021 and your request of receipt to your office by 12/03/2021.

This letter is also to memorialize our Objection(s) to this Project as currently planned and proposed. This is also to describe the Preexisting and Historic water supply and irrigation systems on this property. The threat to these essential Conditions is the basis of rejection of the proposed pipe project.

4481 Clark Rd is 12 acres of land with a east west running Northern boundary. From this northern boundary the entire property slopes with moderate and small slopes toward the Smith Fork and valley bottom. The southern boundary which is also east west ends about half way to the Smith Fork.

The Needle Rock Ditch runs through our property at or very nearly the highest elevation of the northern boundary for approximately 570 feet. The ditch also runs in proximity to the northeast corner for another 217 feet.

The ditch now and historically provides Border Irrigation the the entire down-slope property . Comment 1  
Subirrigation is clearly evident in the Substantial Old Growth and vigorous present growth. For example a number of fir trees including two 60 foot tall blue spruce and a mature very tall Apricot tree are all within 40 feet down-slope of the Ditch. The south side of the ditch also supports healthy green grass.

This property also contains a 4,400 ft<sup>2</sup> deer fenced enclosed garden with 2 large flower beds and 4 raised gardens for vegetables. The house itself is surrounded by at least ½ acre of an additional enclosed garden. There are a total of 14 fruit trees on the property consisting of Apricot, Apple and Peach.

*All these property features exist only with extensive irrigation* consisting of sprinkler, drip and some hose daily watering. The sole source for this essential water is a historically highly productive well. This Well Permit number 253040-A was improved in 2003, At that time the production rate was measured at 15+ gpm. The well water is drinking quality and deemed good taste. This well has existed at this location for many years as part of a previous historic homestead. Laboratory analysis of the well water measures salinity well within drinking limits. Comment 2



The well supplies six fixed water taps and 10 zones of daily automated irrigation. Daily irrigation for the 10 zones is typically around 6 hours. We estimate daily water usage in the hundreds of gallons.

This well is electronically monitored for water depth. Depth data is recorded by time and date in an ASCII text file. We clearly see that before and after each daily watering cycle the water depth is held at an essentially constant 40 feet below ground level. This is a shallow well. We are adding electronic flow measurement and data recording to this well in order to quantify water usage.

*At the nearest point this well is only approximately 92 feet from the existing ditch and about 15-20 lower in elevation. We feel it is more than reasonable to conclude that this well is now and has been over many years fed by the proximity of the Needle Rock Ditch.* Comment 3

The loss or reduction of water from this well would have devastating effect on our property.

It has been suggested that we simply use our meager 3/32 ditch share to attempt to augment or replace well water loss. This is unacceptable for a number of reasons. Foremost it is highly unlikely that this will supply even a small fraction of the deficit. It causes the forfeit of our ditch share which is now a supplementary water source. Third we would be unfairly burdened with the design and cost of the necessary water connection(s).

It has also been suggested that once the piping is completed we “could” construct a “replacement ditch” or trench gain along the northern boundary to maintain border sub-irrigation. This places an unreasonable burden on us and is rejected.

We are represented by Kate Jaquith, Associate at Dufford Waldeck Law. We are advise that *No Easements exist for access to the ditch on our property. Therefore all access and work are provided by rights and limitations only under C.R.S. 37-86-103.* Comment 4

Further to this discussion, the Draft EA raises some significant questions. The entire premise of this project is a Salt and Mineral reduction into the Smith Fork. *We see a claim of 2,952 tons of salinity reduction per year in lower Gunnison Basin and Colorado River basin. There is no substantiation, reference or data in the Assessment to support this.* Comment 5

Remarkably, the only rigorous and scientific study of Salinity Loads and Selenium Loads in the Lower Gunnison Basin including the Crawford area is neither cited or referenced. Characterization of Salinity Loads and Selenium Loads in the Smith Fork Creek Region of the Lower Gunnison River Basin, Western Colorado, 2008-2009 is the Definitive Study which can be found referenced in many documents pertaining to surface and ground water in this area of Colorado. This study was “Prepared in Cooperation with the Bureau of Reclamation and the Colorado River Salinity Control Forum”, Department of Interior and Geological Survey. This Study is available online.

This is (the) an extensive analysis and Measurement of Salt and Mineral Loading in 10 Subbasins. Study and Measurement areas are mapped on page 25 figure 14. Site SF1 is the the only area in the vicinity of the Needle rock Ditch. Following the data for SF1, Table 11 and 12 reveals that SF1 has among the lowest Salinity loading of all the areas studied. *Comparing the total adjusted loads of SF1 is 3,390, 70,500 for SF2 and 42,070 for SF3 strongly suggests that the removal of 2,952 tons would have a negligible effect on Salt reduction. SF1 represents just 3% of the Salinity contained in SF2 and SF3. 3 Percent.* Comment 6

Furthermore, the successful removal of even this small amount of salt is highly questionable. As shown in Table 12 the salinity in SF1 Groundwater was measured at 0 tons and canal load added to subbasin is a meager 466. Please note as shown in Table 6, there is no SF1 data for Canal Seepage and deep percolation. If indeed the small Salinity contribution of SF1 is by very deep percolation the piping of Needle Rock Ditch will have little to no effect.

The Smith fork of the Gunnison River Water Shed Assessment December 20, 2016 is a detailed and highly relevant Study of water quality in the 3,761 acres of the Smith Fork. In contrast to Bureau of Reclamation Draft it extensively references the Benchmark Characterization of Salinity Loads Study as mentioned.

We feel that is a more balanced, detailed and Independent Analysis that focuses on the Overall Environmental Health of of this area in Colorado. This Study rigorously interprets the same Salinity data and comes to opposite Conclusions. Simply put on page 40 , " Lining or piping open ditches to reduce salinity could negatively impact existing wetlands, small drainage's and seeps which contribute aquatic and terrestrial habitat and instream-flows into the Smith Fork Drainage." This is is consistent with the negligible saintly found in SF1 groundwater. Comment 7

We reject the "one size fits all " engineering plan(s) at present. We are confident improvements in ditch water conservation and distribution are desirable and possible without a compromising the unique environment of the Smith Fork Watershed.

In summary, we are deeply troubled that The BOR seems to be prioritizing a possible but most likely a negligible reduction in salinity in Colorado River Basin over the very real and, in our situation disastrous, loss of environmental quality. We also left to question what possible cost benefit analysis justifies an Engineering project of this size, cost and complexity where the least, and even in the best case, minimal benefit will be obtained. Comment 8  
Comment 9

A review of the Limited Drawing Plans available to ditch owners appears to show pipe placement in the existing ditch. Please be advised that portions of the existing ditch have many turns and sharp bends. These require continuous and frequent dredging to remove silt and obstructions. Placing enclosed Pipe in these sharp bends will only accumulate the same obstructions while at the same time making their removal very difficult and expensive.

Also please be advised that while C.R.S. 37-86-103 permits maintenance and construction in an existing ditch it does not permit the movement and construction of a new ditch. Ditch owners have the right to refuse and prohibit the construction of revised and new ditches. Comment 10

Sincerely,

Dana & Barbara Hathaway



Cc

Kate Jacquith, Esq Dufford Waldeck Law  
Wayne Pullan, Regional Director Upper Colorado Basin  
Vanessa Hoff, Monty Todd, The Needle Rock Ditch Company  
Craig Ullmann, Applegate Group  
Katherine Hathaway

Jessica Wayman  
Irene & Kirk Stewart  
Jane F. Reed  
Kerry Donovan, Legislator  
Julie McCluskie, Legislator