



— BUREAU OF —  
RECLAMATION

# **Environmental Assessment and Finding of No Significant Impact for the North Delta Canal Phase 1 Extension Project**

**Colorado River Basin Salinity Control Program  
Western Colorado Area Office, Upper Colorado Region**



## **Mission Statements**

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

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

# Finding of No Significant Impact

## 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 a Proposed Action authorizing the use of Federal funds to implement the North Delta Irrigation Company's ("Company's) North Delta Canal Phase 1 Extension Project in Delta County, Colorado. Through Cooperative Agreement No. R15AS00037, Reclamation is providing the majority of the funding for the project through the Colorado River Basin Salinity Control Program and is therefore the lead agency for the purposes of compliance with NEPA for the Proposed Action. An Environmental Assessment (EA) was prepared to address the potential impacts to the human environment due to implementation of the Proposed Action.

## Alternatives

The EA analyzed the No Action Alternative and the Proposed Action Alternative to authorize and fund the implementation of the North Delta Canal Phase 1 Extension 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 affected locality is the existing North Delta Canal, about 6 miles east-by-northeast of the City of Delta, in southcentral Delta County, Colorado. Affected interests include Reclamation, the U.S. Bureau of Land Management (BLM), Company shareholders, and adjacent landowners. The project does not have national, regional, or state-wide importance.

## Intensity

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

## **1. Impacts may be both beneficial and adverse.**

The Proposed Action will impact resources as described in the EA. Implementation of the Proposed Action will result in beneficial effects related to reduction of salt and selenium loading in the Colorado River basin.

Best Management Practices (BMPs) and mitigating measures were incorporated into the design of the Proposed Action 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. The predicted long-term effects are adverse effects to irrigation structures as cultural resources eligible for listing in the National Register of Historic Places (NRHP); loss of the ditch's artificial wetland and riparian habitat; and water depletions to downstream critical habitat for Colorado River endangered fishes. The long-term effect on cultural resources is being mitigated by the preparation of archival documentation. 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). To ensure the historic water depletions of the ditch system are covered under the umbrella of the PBO, the Company entered into a Recovery Agreement with the U.S. Fish and Wildlife Service (FWS) (FWS TAILS: 06E24100-2018-F-0161). Implementation of the Proposed Action will result in beneficial effects related to the reduction of salt and selenium loading in the Gunnison and Colorado River basins.

As discussed in detail in the EA, none of the environmental effects are considered significant. None of the effects from the Proposed Action, together with other past, current, and reasonably foreseeable actions, rise to a significant cumulative impact.

## **2. 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.

## **3. Unique characteristics of the geographic area.**

There are no unique park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas that would be negatively affected by the Proposed Action.

## **4. 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 Proposed Action 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.

**5. 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.

**6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

Implementing the action will not establish a precedent for future actions with significant effects and will not represent a decision in principle about a future consideration.

**7. 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 or approved plans; however, significant cumulative effects are not predicted, as described in Section 3.12 of the EA.

**8. 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 Colorado State Historic Preservation Officer (SHPO) has concurred with a determination of adverse effect to the irrigation structures involved in the Proposed Action. Reclamation has entered into a Memorandum of Agreement with the SHPO and the Company to mitigate the impacts to the affected structures.

**9. 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 North Delta Canal system results in a historic average annual depletion of approximately 5,972 acre-feet from the Gunnison River watershed. Due to the historic depletions, 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 Company entered into a Recovery Agreement with FWS (FWS TAILS: 06E24100-2018-F-0161). The Company'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.

## **10. Whether the action threatens a violation of federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment.**

The Proposed Action does not violate any federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, the Proposed Action is consistent with applicable land management plans, policies, and programs. State, local, and interested members of the public were given the opportunity to participate in the environmental analysis process.

## **Environmental Commitments**

- BMPs shall be implemented, as specified in the EA, to protect water quality and soils; to minimize ground and vegetation disturbance; to protect wildlife resources; and to minimize the spread of weeds (BMPs described in the EA are incorporated herein by reference).
- Required permits, licenses, clearances, and approvals as described in the EA shall be acquired prior to implementation of the Proposed Action.
- If previously undiscovered cultural or paleontological resources are discovered during construction, construction activities must immediately cease in the vicinity of the discovery and Reclamation must be notified. In this event, the SHPO shall be consulted, and work shall not be resumed until consultation has been completed, as outlined in the Unanticipated Discovery Plan in the MOA.

- If threatened or endangered species are discovered during construction, construction activities shall halt until consultation is completed with the U.S. Fish and Wildlife Service and protection measures are implemented. Additional surveys shall be required for threatened or endangered species if construction plans or proposed disturbance areas are changed.

Approved by:

*for* Mark Warner  
Ed Warner  
Area Manager, Western Colorado Area Office

12-19-19  
Date

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## LIST OF ACRONYMS AND ABBREVIATIONS

a.k.a.	also known as
BLM	U.S. Department of the Interior Bureau of Reclamation
BMP	Best Management Practice
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health & Environment
CFR	Code of Federal Regulations
cfs	cubic feet per second
CPW	Colorado Department of Natural Resources Division of Parks & Wildlife
CWA	Clean Water Act
EA	Environmental Assessment
EPA	U.S. 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
HQS	Habitat Quality Score
LLC	Limited Liability Company
MBTA	U.S. Migratory Bird Treaty Act
MOA	Memorandum of Agreement
mi	Mile
NAAQS	National Ambient Air Quality Standards
NCA	National Conservation Area
NDIC	North Delta Irrigation Company
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
NRHP	National Register of Historic Places
OAHP	Colorado Office of Archaeology and Historic Preservation
PBF	Physical and biological feature (formerly primary constituent element)
PBO	Programmatic Biological Opinion
PL	Public Law
PM	Principal Meridian
PUP	Pesticide Use Proposal
PVC	Polyvinyl chloride
Reclamation	U.S. Department of the Interior Bureau of Reclamation
SHPO	State Historic Preservation Office
SMPW	Selenium Management Program Workgroup
SRMA	Special Recreation Management Area
TAILS	Advanced Tracking and Integrated Logging System
THV	Total Habitat Value
UDP	Unanticipated Discovery Plan
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VRM	Visual Resource Management

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# 1 INTRODUCTION

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA) to disclose and evaluate the potential environmental effects of North Delta Irrigation Company's (NDIC's or "Applicant's") proposed extension of their North Delta Canal Phase 1 Salinity Control Project (hereinafter, "Project" or "Proposed Action" or "Phase 1 Extension"). The location of the Proposed Action is in Delta County, Colorado (Figure 1 [Appendix A]).

Rare Earth Science, LLC prepared this EA on behalf of the U.S. Department of the Interior Bureau of Reclamation (hereinafter "Reclamation"), which is authorized by the Colorado River Basin Salinity Control Act to provide funding assistance for the Proposed Action. Reclamation awarded a financial assistance agreement to NDIC for the North Delta Canal Phase 1 Salinity Control Project (Phase 1 Project) under the 2015 Funding Opportunity Announcement (FOA) R15AS00037 and Cooperative Agreement R16AC00010. The Phase 1 Project entailed replacing approximately 6.1 miles of the open, unlined North Delta Canal with a total of approximately 4.3 miles of buried irrigation pipe. The Phase 1 Project is expected to finish under budget, and NDIC requested that the remaining funds under the agreement be applied to the proposed Phase 1 Extension.

There are two classifications of land affected by the Proposed Action: Federal land and private land. The Federal land is public land administered by the U.S. Bureau of Land Management (BLM). On BLM land, the Proposed Action would occur within an historic prescriptive easement previously acknowledged by BLM.

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 Background

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 flood irrigation practices.

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. Once constructed, the facilities are owned, operated, maintained, and replaced by the applicant at their own expense.

Figure 2 [Appendix A] shows the locations of Program projects completed and/or recently funded in the vicinity of the Proposed Action.

## 1.2 Purpose & Need for the Proposed Action

The Phase 1 Project eliminated canal seepage loss and thereby reduced salinity in the Colorado River basin by an estimated 4,383 tons of salt per year. The Proposed Action would eliminate seepage loss from an additional 0.5 miles of the open unlined portion of the North Delta Canal, further reducing salinity loading by 229 tons per year. 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.

The purpose of the Proposed Action is to comply with the Colorado River Basin Salinity Control Act (Reclamation's federal nexus). The need for the Proposed Action is to reduce salinity concentrations in the Colorado River basin to address downstream natural resource concerns in the Lower Gunnison Basin and the Colorado River Basin. The Proposed Action will provide benefits for a broad spectrum of downstream water users, as explained in Section 1.1, above.

## 1.3 Overview of Proposed Action

The Proposed Action is to provide funding to NDIC to complete an extension of the North Delta Canal Phase 1 Salinity Control Project.<sup>1</sup> The Proposed Action would replace approximately 0.5 miles of open, unlined North Delta Canal with buried pipe. The Proposed Action is described in further detail in Section 2 of this EA.

## 1.4 Alternatives Considered but Not Carried Forward

Several alternatives were considered during the conceptual design process for the Project but were not proposed to Reclamation by NDIC because they were determined to be technically challenging, economically prohibitive, and potentially more destructive to existing habitat than the Proposed Alternative.

NDIC recently commissioned a Master Plan to evaluate numerous options for improving the future operations of the North Delta Canal Irrigation System (Applegate 2015). NDIC analyzed alternatives to piping, including lining the canal with an impermeable membrane covered with shotcrete and relocating the main canal diversion downstream on the Gunnison River to eliminate the need to repair or replace aging infrastructure. The lining alternative would have been less expensive than the Proposed Action, but the federal funding opportunity for this alternative was deemed infeasible due to the cost-benefit ratio. Relocation of the main canal diversion would have required operation of a pump station, which was initially deemed feasible in the Master Plan; however, due to unforeseen changes (i.e. changes in power rates and subsequent changes in the design requirements of an associated solar plant), this alternative would have been prohibitive due to construction, operation and maintenance costs.

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<sup>1</sup> <https://www.usbr.gov/uc/envdocs/ea/NorthDeltaCanalPhase1-SalinityControlProject-FinalEAandFONSI.pdf>

## 1.5 Setting & Location of the Proposed Action

The Proposed Action Area lies in the Gunnison River watershed, about 6 miles east-by-northeast of the City of Delta, in southcentral Delta County, Colorado, in Township 15 South, Range 94 West of the 6th Principal Meridian, Section 6 (Figure 1 [Appendix A]).

## 1.6 Relationship to Other Projects

Other salinity control projects in progress or recently implemented in the general vicinity include the following (Figure 2 [Appendix A]):

- Cattleman's Ditches Pipeline Project Phase I & II
- C Ditch Company's C Ditch/Needle Rock Pipeline Project
- Clipper Irrigation Salinity Control Project 4, Zanni Lateral Pipeline Project, and Center Lateral Pipeline Project
- Grandview Canal Piping Project
- Rogers Mesa Water Distribution Association's Slack and Patterson Laterals Piping Project
- Minnesota Canal and Minnesota L75 Lateral Piping Projects
- Upper and Lower Stewart Ditch Pipeline Projects
- Bostwick Park Water Conservation District's Siphon Lateral Salinity Control Project
- Forked Tongue/Holman Ditch Company's Salinity Control Project
- Fire Mountain Canal Piping Project
- North Delta Canal Phase 1 Salinity Control Project
- Gould Canal Improvement Projects A & B
- Uncompahgre Valley Water Users Association (UVWUA) East Side Laterals Piping Project Phase 9

## 1.7 Scoping, Coordination, & Public Review

Scoping for this EA and for the North Delta Canal Phase 1 Salinity Control Project 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 Alternative:

- U.S. Fish and Wildlife Service, Western Colorado Ecological Services Field Office, Grand Junction, CO
- U.S. Army Corps of Engineers, Colorado West Regulatory Branch, Grand Junction, CO
- Colorado Office of Archaeology and Historic Preservation, Denver, CO
- Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)
- Delta County Historic Landmarks Board and Delta County Historical Society
- Advisory Council on Historic Preservation

Concerns raised during recent similar projects (see Section 1.6) and related informal consultations with Colorado Parks and Wildlife, Gunnison, Colorado, also helped identify potential concerns for the Proposed Action.

In compliance with NEPA, the Draft EA was made available for public comment (see Section 5). Notice of the availability of the Draft EA was distributed to landowners and NDIC shareholders adjacent to the Proposed Action, and the organizations and agencies listed in Appendix B. No comments were received.

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

- Indian Trust Assets and Native American Religious Concerns (not applicable). 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, will affect Indian trust assets or Native American sacred sites. To confirm this finding, Reclamation provided the Ute tribes with historic presence in the region 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. The Ute Mountain Ute Tribe and the Ute Indian Tribe (Uintah and Ouray Reservation) had no comments, and the Southern Ute Indian Tribe had no concerns regarding the Proposed Action.
- Environmental Justice & Socio-Economic Issues (not applicable). The Proposed Action Area does not occur on Indian reservation lands or within disproportionately adversely affected minority or low-income populations. The Proposed Action 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, will have an environmental justice effect.
- Jurisdictional Wetlands and Other Waters of the U.S. (not applicable). The Proposed Action would affect surface and shallow subsurface hydrology supplied to wetland and riparian areas in the Proposed Action Area associated with the canal and canal seepage. Written confirmation was received from the U.S. Army Corps of Engineers on October 28, 2019, verifying that the Clean Water Act (33 USC 1344) exemption for Farm or Stock Pond or Irrigation Ditch Construction or Maintenance is applicable to the Proposed Action (included as Appendix C).
- Wild and Scenic Rivers, Land with Wilderness Characteristics, or Wilderness Study Areas (not applicable). No Wild and Scenic Rivers, land with wilderness characteristics, or Wilderness Study Areas exist in the Proposed Action Area.

## 2 PROPOSED ACTION & ALTERNATIVES

As explained in Section 1.3, the alternatives evaluated in this EA include a No Action Alternative and the Proposed Action. The resource analysis contained within this document, along with other pertinent information, will guide Reclamation's decision about whether or not to fund the Proposed Action for implementation. The Proposed Action is analyzed in comparison to a No Action Alternative in order to determine potential effects.



## 2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide funding to NDIC for the North Delta Canal Phase 1 Salinity Control Project Extension.

## 2.2 Proposed Action Alternative

Under the Proposed Action Alternative, Reclamation would authorize NDIC to use funding remaining from the North Delta Canal Phase 1 Salinity Control Project to complete the North Delta Canal Phase 1 Salinity Control Project Extension. The specific location of the Proposed Action Alternative is provided in Section 1.3 and shown on Figure 3 (Appendix A). Table 1 (below) and Figure 3 (Appendix A) provide a summary of project components.

Approximately 0.5 miles of the open, earthen North Delta Canal and a 190-foot-long trestle flume that carries canal water across Currant Creek would be replaced with buried pipe (Figure 3 [Appendix A]). One irrigation turnout would be replaced and potentially fitted with measuring devices. A concrete inlet structure with a trash rack would be installed at the initiation of the buried pipeline, and the end of the project would daylight to the existing earthen canal. The pipe replacing the earthen canal would be 54-inch and 60-inch diameter profile wall high density polyethylene (HDPE) bell & spigot pipe. 54-inch diameter fused HDPE pipe would be installed as an inverted siphon to replace the trestle flume.

**Table 1. Summary of Project Components for the Proposed Action**

Component	Total	Comment
Existing canal to be piped	0.5 miles	Beginning on North Delta Canal approximately 440 feet upstream (east) of the existing canal trestle flume and proceeding to a point just east of the town of Austin. The concrete culvert that carries the canal under Highway 92 would remain in place and unaffected.
Existing trestle flume to be replaced with an inverted siphon	190 feet	The trestle flume components would be demolished and hauled to the Delta County landfill. Concrete supports would either be excavated and disposed or cut off at ground level and left in place.
Irrigation structures	2	A concrete inlet structure with a trash rack would be installed at the origin of the Proposed Action, and one irrigation outlet would be replaced along the buried pipeline.
Staging area	0.77 acre	One equipment and materials staging area south of the canal on previously disturbed privately-owned ground would be used for the Proposed Action.
Access ways	0.7 miles	The entire project alignment has an access road along the canal prism, which would be accessed from existing public roads or a private/BLM route. The staging area would be accessed from an existing private road and a connector road from the canal on BLM. No alterations of existing roads would be required. The linear footage of accessways indicated does not include the canal prism itself.

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 Section 3 (Affected Environment & Environmental Consequences), and are summarized in Section 4 (Environmental Commitments).

The following paragraphs provide descriptions of the various aspects of the Proposed Action. No water storage, pump stations, compressor stations, or new irrigated areas would be associated with the project.

### *Pipeline Installation*

Installation of the pipeline would involve using trackhoes and possibly a bulldozer to grub canal bank vegetation and fill and bed the existing canal. An excavator would then trench in the prepared bed to place the pipe, and a trackhoe would position the pipe in the trench. The pipe would be buried, and the alignment smoothed with trackhoes (without back-dragging the blade) to match the surrounding land contours and restore drainage patterns. If adequate fill for pipe bedding cannot be generated from within the construction footprint, fill would be purchased and transported to the project area in dump trucks from a local commercial source. To generate fill material onsite, a screen or crusher bucket may be used in the construction footprint to prepare the fill material. Topsoil (the upper layer of soil on the ground surface) would be segregated and replaced following recontouring of the ground surface after pipe installation.

The installation of the inverted siphon across Carrant Creek would be performed during the winter when the creek flow is relatively low. The existing trestle flume would be demolished and disposed in the Delta County landfill. The concrete supports for the trestle would either be excavated and removed, or cut off at the ground surface. During construction, a coffer dam would be placed in the creek on the upstream side of the crossing and a temporary pipe would be installed to carry water over or under the installation trench. The siphon pipe under the creek would be backfilled and anchored with lean concrete to a depth of 6 inches over the pipe. Natural gravels from the excavation would then be placed on top and the stream bed returned to the existing grade. There is the possibility of encountering large boulders or bedrock in pipe trenches or the inverted siphon trench 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 licensed blasting contractor with an approved blasting plan. 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. The noise associated with such blasting would resemble a muffled “pop” from a firearm.

No road crossings would be made by the pipeline installation. The canal would continue to flow in its existing concrete box culvert under Highway 92. The new pipeline would discharge to the existing concrete box culvert upstream of Highway 92, and re-enter the pipeline on the north side (downstream) of Highway 92. The pipe outlet and inlet would be secured with concrete collars.

### *Staging and Borrow Activities*

One approximately 0.77-acre staging area on private land on previously disturbed ground south of the canal has been identified for the Proposed Action (Figure 3 [Appendix A]). The staging area would be used to store pipe and other project supplies and equipment. Pipe arriving and

leaving the staging area would be transported on 50-foot flatbed trucks. Front end loaders with pallet forks would likely be used to handle pipe in the staging area.

### *Access*

The section of North Delta Canal involved in the Proposed Action is in historic prescriptive easements on private and BLM lands. All private landowners in the footprint of the Proposed Action where activities would take place outside the historic prescriptive easement have agreed to allow the activities of the Proposed Action to be conducted on their lands. Access easement agreements either have been or would be executed with these landowners prior to construction. BLM has previously acknowledged the historic easement involved with the Proposed Action, which is approximately 50 feet either side of the canal centerline and/or the existing footprint.

The total width of the construction area (disturbance footprint) for the Proposed Action is anticipated to be 75 feet wide or less. In most areas, the width of the construction area would be confined to the existing canal prism (less than a total of approximately 75 feet wide). Construction footprints would be limited to only those necessary to safely implement the Proposed Action. All access ways for construction of the Proposed Action would be on the existing canal prism from Main Street just east of Austin, Highway 92, or an existing private road / BLM routes as shown on Figure 3 (Appendix A). No new roads would be established for the Proposed Action.

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

Restoration activities would occur on all surface disturbances caused by construction of the Proposed Action. Vegetation slash would be hauled off-site to the staging area and chipped or burned at that location or hauled to a county landfill. All non-irrigated disturbed areas would be seeded with a drought-tolerant seed mix approved by Reclamation and BLM (Appendix D), appropriate for the surrounding native vegetation, and monitored subject to agreements between NDIC and landowners. Where irrigated lands are revegetated, the seed mix would be a weed-free hay mix acceptable to the landowner.

Noxious weeds would be controlled in disturbed areas in accordance with county standards (Delta County 2010). Woody noxious weeds within the Proposed Action Area would be mechanically removed during construction. After construction, NDIC would control herbaceous noxious weeds as necessary for the life of the project through the use of herbicides.

### *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 a previous piping project on North Delta Canal, NDIC developed a Habitat Replacement Site that generated enough excess credit to provide replacement habitat for the Proposed Action. That Habitat Replacement Site is described in the NEPA documentation for the North Delta Canal Phase 1 Salinity Control Project.

### *Schedule*

Construction would occur incrementally across the Proposed Action Area during the irrigation off-season, between approximately October 15 through April 15 (but with any vegetation grubbing occurring outside the period of April 1 through July 15 to protect nesting migratory

birds). This period is specified because it falls during a time when irrigation water is not flowing in the canal, and it lies outside periods of sensitivity for nesting migratory birds. These sensitive periods are explained in Section 3.7 and listed in the Environmental Commitments (Section 4).

It is anticipated that the Proposed Action would be completed during a single irrigation off-season, although construction could extend into a second irrigation off-season depending on project progress.

### *Permits & Authorizations*

If the Proposed Action is approved, the following permits, plans, and authorizations 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.

## **3 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES**

This section discusses resources that may be affected by the Proposed Action and the No Action Alternative.

For each resource, the potentially affected area and/or interests are identified, existing conditions described, and potential impacts and environmental consequences predicted under the No Action and Proposed Action Alternatives. BMPs or other mitigative or protective measures described below are considered part of the Proposed Action and are taken into consideration when predicting environmental consequences. A summary of impacts/environmental consequences of the Proposed Action is included at the end of this section.

### **3.1 Water Rights & Use**

NDIC currently operates two river diversions to supply the system. The main headgate is located on the Gunnison River upstream of the Proposed Action, and the other is located on Tongue Creek. Water rights held by NDIC allow for diversion rates of 49.675 cubic feet per second (cfs) from the Gunnison River and 30 cfs from Tongue Creek but the combined amount

between the two points cannot exceed 49.675 cfs. The full decree is typically not available during drought years and flows are significantly reduced during times of high demand from shareholders (Applegate 2015). The estimated average historic annual amount of water diverted from the Gunnison basin tributaries due to operation of the North Delta Canal is approximately 15,000 acre-feet for irrigation of approximately 1,669 acres of hay, grass pastures, and other crops.

No Action: 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, NDIC would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by improving the system. The Proposed Action would not include new water storage or the irrigation of new lands. No adverse effects on irrigation water rights in the Gunnison or Colorado River Basins would occur due to implementation of the Proposed Action. The Proposed Action would also create a significant risk reduction for NDIC, because of the poor condition of the trestle flume over Currant Creek. Piping the canal under Currant Creek would significantly reduce maintenance and risk of system failure.

### 3.2 Water Quality

Irrigation practices in the region and in the North Delta 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.

No Action: Under the No Action Alternative, the salt annually contributed to the Colorado River Basin from this segment of the North Delta Canal system would continue. Current selenium loading levels would continue.

Proposed Action: In the long term, the Proposed Action would eliminate seepage from the earthen North Delta Canal, reducing salt loading to the Colorado River Basin. The Proposed Action is also expected to reduce selenium loading into the Gunnison River basin. 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.

Project construction would take place in the canal prism when water is not present. In the Currant Creek corridor, best management practices would be implemented during construction to minimize erosion and protect water quality. 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 2.2 and Section 4).

Although the Proposed Action would disturb some riparian vegetation associated with the canal, the "irrigation exemption" from Section 404 of the Clean Water Act applies to the Proposed Action, because the Proposed Action is an irrigation canal maintenance and construction project. NDIC received verification of the irrigation exemption in writing

from the U.S. Army Corps of Engineers that no Section 404 Permit is required for the Proposed Action (Appendix C).

### 3.3 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 2019). Minor impacts to air quality from routine maintenance of North Delta Canal include dust from occasional travel in light vehicles along the Proposed Action corridor.

No Action: There would be no effect on air quality in the Proposed Action Area from the No Action Alternative. The canal system would continue to operate in its current configuration 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. Dust from construction activities 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 in magnitude to those currently occurring for the existing canal.

### 3.4 Access, Transportation, & Safety

North Delta Canal currently operates in historic prescriptive easements on private land and BLM land (collectively, the “right-of-way”). Use of the proposed access way and staging area would be with permission of the landowners.

The main transportation routes in the vicinity of the Proposed Action are Colorado State Highway 92 and Main Street (Figure 3 [Appendix A]). 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 may be present near the Proposed Action. The utility entities include the Delta Montrose Electric Association (electricity and fiber optic internet), TDS Telecom, and Black Hills Energy (natural gas).

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

Proposed Action: Short-term temporary impacts related to public transportation, access and safety would result from the Proposed Action. Although all construction activities related to the Proposed Action would take place entirely in the prescriptive right-of-way for the canal, access to work areas or the designated access route to the Proposed Action Area would be off Highway 92 or Main Street, both public roads. Implementation of the Proposed Action may cause brief delays along these public roadways near the Proposed Action Area from construction vehicles entering or leaving the canal right-of-way. Appropriate traffic signage would be used to notify drivers of active construction ingress/egress. NDIC and the construction contractor would coordinate with Delta

County and sheriff departments when traffic or access would be delayed or significantly re-routed.

There would be no need for construction of new access roads for the Proposed Action. There are no known public bridges with weight restrictions that would be used by construction vehicles. All utilities would be located and marked, and if necessary, relocated or raised, prior to any construction activities in the Proposed Action Area. To ensure human safety, pipe trenches left open while unattended (e.g. overnight) would be covered.

### 3.5 Vegetative Resources & Weeds

In general, landcover surrounding the project elements on private lands is predominantly irrigated grass or alfalfa hayfields or disturbed ruderal areas that support agricultural production. The condition of the hayfields is good (productive) to fair (weedy). Landcover surrounding the project elements on BLM land is shrub riparian (the Currant Creek corridor at the trestle flume location) and sparsely-vegetated, rocky semi-desert shrublands in the vicinity of the canal. The narrow Currant Creek corridor is dominated by non-native Russian olive (*Elaeagnus angustifolia*), non-native salt cedar (*Tamarix* sp.), rabbitbrush (*Ericameria* sp.), greasewood (*Sarcobatus vermiculatus*), and volunteer pasture grasses. Outside the immediate floodway are greasewood flats with dense infestations of Russian knapweed (*Acroptilon repens*). Conspicuous plants in the semi-desert shrublands above the canal and upstream of the trestle flume on BLM lands were very sparsely scattered shadscale (*Atriplex confertifolia*), greasewood, and galleta (*Hilaria jamesii*).

Water flowing seasonally in the canal has created narrow margins of riparian habitat along the canal itself. These margins are vegetated intermittently with coyote willow (*Salix exigua*), wild rose (*Rosa woodsii*), reed canarygrass (*Phalaris arundinacea*), Russian olive, and salt cedar. A few mature cottonwoods (*Populus deltoides*) are present where the access road meets the canal corridor. The canal prism has intermittent heavy infestations of Russian knapweed. Vegetation along the canal corridor is routinely disturbed due to use and maintenance activities. NDIC occasionally grubs vegetation out of the canal and from the canal banks with heavy machinery, and manages noxious weeds on the canal prism by spot-spraying seasonally, as resources permit.

Around the staging area are mature greasewood shrublands, and the staging area itself is previously disturbed ground (mostly bare ground with scattered herbaceous weeds).

Weeds in the Proposed Action Area are the nonnative weed trees Russian olive and salt cedar (*Tamarix* sp.), and herbaceous weeds such as Russian knapweed, cheatgrass (*Bromus tectorum*), field bindweed (*Convolvulus arvensis*), and whitetop (*Cardaria draba*). Additional weedy or invasive species observed along the canal included Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), sweetclover (*Melilotus* sp.), and common mullein (*Verbascum thapsus*). Flowing water in the canal is a vector for the continued spread of weeds. Vehicles, people, and wildlife traveling on the canal prism can also contribute to the spread of weeds.

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

Proposed Action: Under the Proposed Action Alternative, construction activities would directly disturb canal prism vegetation and other previously disturbed areas (such as the

staging area), and dust from operating equipment and vehicles could also temporarily affect nearby natural vegetation. Across the entire project, vegetation removal and construction footprints would be confined to the smallest portion of the canal prism or construction ROW necessary for safe completion of the work.

Following construction, the disturbed areas adjacent to natural plant communities would be recontoured and reseeded with a BLM-approved drought-tolerant seed mix (Appendix D) appropriate for the habitat. Disturbed agricultural areas would be smoothed 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. Reseeded semi-desert native grasses and forbs are expected to become established in disturbed upland areas within a few years following construction in non-irrigated areas. Riparian vegetation associated with the Currant Creek crossing would be affected in the disturbance footprint, but is expected to become re-established within a few growing seasons, with no resulting permanent loss.

The Proposed Action would directly disturb and result in the permanent loss of approximately 0.53 acres of relatively low quality riparian vegetation associated with the open canal and seepage from the canal. The mature cottonwoods where the access road meets the canal corridor would not be removed. Following construction, the riparian vegetation formerly associated with the canal would be replaced with hay cultivar species (adjacent to agricultural areas) or by upland vegetation compatible with the semi-desert-type community, both by reseeding and natural recolonization. Recognizing that the wetland and riparian vegetation associated with canal 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 (Zeman 2019). Consistent with the Colorado River Basin Salinity Control Act, to compensate for the loss of habitat values that resulted from implementation of the North Delta Canal Phase 1 Salinity Control Project, NDIC developed a Habitat Replacement Site. Excess replacement habitat developed at that Site would be applied to the current Proposed Action.

To curtail the spread of noxious weeds, environmental commitments (such as cleaning vehicles and equipment prior to bringing them onsite—see Section 4 of this EA) would help minimize the risk of such infestations, and ongoing weed management efforts by NDIC would be implemented during revegetation of construction alignments. In the long-term, piping the canal would remove an important vector of weed seed transport—open water. Seeps from the earthen canal that currently support herbaceous and woody noxious weeds would be dried and the ability of the environment to support these weeds would be diminished.

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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.



### 3.6 Wildlife Resources

Vegetation communities supported by the open canal, 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 overall range of black bear and mountain lion (CPW 2019). Colorado Parks & Wildlife (CPW) describes the entire Proposed Action Area as a mule deer resident population area, concentration area and winter concentration area (CPW 2019). Big game in the Proposed Action Area experiences a baseline level of disturbance from residential activities, trains traveling daily on the Union Pacific Railroad, people and vehicles traveling on nearby roads, and ranching and farming activities.

A variety of small mammals, reptiles, and amphibians also inhabit the general area. Those that would be likely to use the canal corridor or adjacent areas include small ground-dwelling mammals, such as badger, white-tailed prairie dog, several species of mice, voles, shrews, and cottontail rabbit. Striped skunk, raccoon, red fox, coyote, bobcat, beaver, western terrestrial garter snake, smooth green snake, Woodhouse's toad, western chorus frog, northern leopard frog and tiger salamander could also be using the area.

No Action: Under the No Action Alternative, terrestrial and amphibian wildlife habitat would remain in its current condition, and no displacement of wildlife would occur. Salinity loading of the Colorado River Basin would continue at current rates, which will continue to affect water quality within the drainage, potentially affecting the wildlife using the area.

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 big game would include short-term disturbances and periodic displacement while construction is underway. Disturbances to mule deer in a winter concentration area during harsh winter months or in a particularly severe winter would cause the greatest harm due to the lack of food availability and expenditure of energy. However, given the existing level of anthropogenic disturbances, big game in this area would be somewhat habituated to disturbances. Additionally, during times of extreme weather conditions (e.g. deep snow cover, extreme freezing temperatures, excessively muddy conditions), construction activities would be limited due to logistics. The Proposed Action would create incremental disturbance in the Project area, allowing big game near the construction activity to find refuge and limit the amount of energy expended. During construction, pipeline trenches left open overnight would be kept to a minimum and covered to reduce potential for entrapment of big game or livestock 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.

Direct impacts to small animals, especially burrowing amphibians, reptiles, and small mammals, could include direct mortality and displacement during construction activities, both in the irrigated pasture areas and the exiting canal alignment. However, these species and habitats are relatively common throughout the area and population-level impacts would not be likely; therefore, impacts would be minor.

Bird and amphibian species dependent on wetland and riparian habitats would experience a long-term (greater than five years) loss of habitat as described in Section 3.5. 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 mitigated with a nearby Habitat Replacement Site created and maintained by NDIC during the implementation of the North Delta Canal Phase 1 Salinity Control Project (see Section 3.5).

Improved water quality would likely benefit downstream aquatic species in the region (amphibians, birds, and fish) by reducing salt and selenium loading in the Gunnison and Colorado river basins.

### 3.7 Special Status Species

#### ***Migratory Birds***

Migratory birds, including songbirds and raptors (birds of prey), find nesting and/or other habitat in the Proposed Action Area. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and bald and golden eagles are also protected under the Bald and Golden Eagle Protection Act of 1940. Birds of conservation concern with the potential to occur in the Proposed Action Area (FWS 2019) are bald eagle (wintering and potentially nesting), golden eagle (year-round), and Brewer's sparrow (breeding, migrating, wintering [year-round]). The most common raptor in the area is the red-tailed hawk.

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 (CPW 2008). Bald eagles nest during the period between October 15 and July 31 (CPW 2008). A nesting raptor database review (CPW 2018) and survey was conducted in the Proposed Action Area during May 2019 to identify active raptor nests—none were identified. Documented bald eagle communal roosts and nests in Delta County lie outside the recommended buffer distances for human encroachment (CPW 2008). Several songbird species are expected to nest in the Proposed Action corridor. A baseline level of disturbance in the area to migratory birds and raptors occurs from recreational, residential, and farming and ranching activities.

A dozen species of migratory songbirds are expected to migrate through or winter in the Proposed Action Area. Wintering and migrating raptors could include red-tailed hawk, rough-legged hawk, ferruginous hawk, and golden eagle. Bald eagles are common hunters during winter on the Gunnison River and local mesas around the Proposed Action, especially on open and agricultural ground where ground-dwelling rodents provide prey. The entire Proposed Action Area lies within CPW-mapped bald eagle winter range and bald eagle winter foraging grounds (CPW 2019). Bald eagles often shelter in communal roosts. The nearest active bald eagle communal roost site is farther than 2 miles from the Proposed Action and outside the ½-mile CPW-recommended buffer distance (CPW 2008; CPW 2019).

**No Action:** In the absence of the Proposed Action, migratory songbird and raptor nesting and foraging habitat would remain unchanged from its current condition. Salinity and selenium loading in the Colorado River Basin would continue at current rates, which would continue to affect water quality within the drainage, potentially affecting the migratory birds using the area.

**Proposed Action:** Direct impacts to migratory songbirds and raptors would include minor short-term disturbance and displacement from the Proposed Action Area during construction. Disturbance from construction would cause temporary displacement of wintering and migrating songbirds and raptors; however, effects would be minor because adult birds have the flexibility to move away to other suitable areas. Wintering, foraging and migrating habitat for songbirds and raptors (including eagles) in the vicinity of the Proposed Action Area is extensive, and foraging habitat is not unique or exceptional in the Proposed Action Area compared to surrounding areas. No bald eagle active nest sites or roost locations are mapped within CPW-recommended buffer distances of the Proposed Action.

There would be no direct effect to nesting songbirds since pre-construction vegetation grubbing would occur outside the primary nesting season. In compliance with the Colorado River Basin Salinity Control Act, the wetland and riparian habitat value (potential nesting habitat for certain migratory birds) that would be lost due to implementation of the Proposed Action has been mitigated at the nearby Reclamation-approved Habitat Replacement Site created by NDIC during a previous project (see Section 3.5).

Project activities taking place outside the recommended buffer distances and seasonal restrictions for Colorado nesting raptors (CPW 2008) would have no measurable effects on raptors. The majority of activities planned for the Proposed Action take place outside core raptor nesting season (April 1 through July 15).

If a new active raptor nest is discovered within 1/3 mile of the Proposed Action during construction, or bald eagle roost site or nest site is discovered within 1/4 mile of the Proposed Action during construction, construction would cease until Reclamation could complete evaluations and consultations with FWS and CPW.

### ***Threatened & Endangered Species & Their Critical Habitats***

The Endangered Species Act (ESA) of 1973 protects federally listed endangered, threatened and candidate plant and animal species (“T&E species”) and their critical habitats. The following federally-listed species were determined to occur or have the potential to occur within or near the Proposed Action Area. These determinations were developed by reviewing published range maps and habitat requirements of each of the species on a list of potential species in the Proposed Action Area provided by FWS (FWS 2019).

#### ***Colorado Hookless Cactus***

Colorado hookless cactus was listed as threatened in 1973 at 44 FR 58868-58870, due to habitat threats and unregulated collection and commercial trade by nurseries and private collectors. No critical habitat has been designated. The east end of the Proposed Action Area contains suitable habitat for hookless cactus. A survey conducted in May 2019 by Rare Earth Science examined a 100-foot corridor on either side of the canal centerline, access road, and staging area. Colorado hookless cactus was not found during this survey.

#### ***Western Yellow-Billed Cuckoo and Proposed Critical Habitat***

The western yellow-billed cuckoo was listed as threatened in 2014 (79 FR 59992–600038), after several years as a candidate for listing. Critical habitat was proposed for the species on August

15, 2014, at 79 FR 48548–48652, including cottonwood riparian forests and woodlands along the Gunnison River both upstream (about 10 direct miles away) and downstream (about 6 direct miles away) from the Proposed Action. There is no proposed critical habitat in the Proposed Action Area. Cuckoos arrive in Colorado as early as May 15 and depart as late as September 15. No part of the Proposed Action Area contains suitable breeding habitat for western yellow-billed cuckoos.

### *Colorado River Endangered Fishes & Their Designated Critical Habitat*

The Colorado River basin has four endangered fishes: the bonytail, the Colorado pikeminnow, the humpback chub, and the razorback sucker. Decline of the four endangered fishes is due at least in part to habitat destruction (diversion and impoundment of rivers) and competition and predation from introduced fish species. In 1994, the FWS designated critical habitat for the four endangered fish species at Federal Register 56(206):54957-54967, which in Colorado includes the 100-year floodplain of the upper Colorado River from Rifle to Lake Powell, and the Gunnison River from Delta to Grand Junction. 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. The closest designated critical habitat and the closest potential populations of the Colorado pikeminnow, and razorback sucker are in the Gunnison River near the Uncompahgre River confluence, west of the City of Delta. The bonytail has recently been stocked in the Gunnison River and humpback chubs have been recorded.

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 are resulting from continuing irrigation practices in the Gunnison Basin. The historic depletion rate from NDIC's system operations is estimated as 5,972 acre-feet per year. 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. Many private irrigation companies in the region have also executed Recovery Agreements with FWS to ensure that their historic depletions are covered under the PBO and they can continue to operate consistently with Section 7 of the ESA.

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).

**No Action:** In the absence of the Proposed Action, historic water depletions would continue, and salt and selenium loading from the Proposed Action Area would continue at current rates, continuing to indirectly affect the endangered fishes and their downstream critical habitat. Impacts to western yellow-billed cuckoo and its proposed critical habitat would remain unchanged.

**Proposed Action:** The potential impacts of the Proposed Action on threatened and endangered species are as follows:

*Colorado Hookless Cactus.* Based on the survey results and the lack of suitable habitat across the majority of the Proposed Action Area, it is expected that the Proposed Action would have no effect on Colorado hookless cactus.

*Western Yellow-Billed Cuckoo.* The construction timing of the Proposed Action would occur during the irrigation off-season (between October 15 and April 15) when cuckoos would not be present in the area. Given that there is no overlap between the timing of the Proposed Action and the breeding season of western yellow-billed cuckoo, and given that there is a lack of suitable nesting and foraging habitat, the Proposed Action would have no effect on western yellow-billed cuckoo.

*Western Yellow-Billed Cuckoo Proposed Critical Habitat.* There would be no effect to proposed critical habitat for western yellow-billed cuckoo. The Proposed Action lies entirely outside proposed critical habitat. *Colorado River Basin Endangered Fishes.* The Proposed Action Area does not lie within the ranges of the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. Based on previously issued biological opinions that all depletions (including historical) within the Upper Colorado River Basin may adversely affect the four fishes, the Proposed Action may affect, and is likely to adversely affect, the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail, due to historical depletions.

*Colorado River Basin Endangered Fishes Critical Habitat.* Consumptive loss of water in the Gunnison and Colorado River basins due to agricultural irrigation practices from the canal system involved with the Proposed Action results in depletions from the Colorado River Basin, affecting downstream critical habitat for the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. The estimated historic average annual depletion rate due to operation of the NDIC system (consumptive use) is 5,972 acre-feet. This amount is not expected to change as a result of the Proposed Action. Following a Section 7 of the ESA consultation with FWS for the North Delta Canal Phase 1 Salinity Control Project, NDIC executed a Recovery Agreement with FWS (Attachment E) to ensure their depletions are covered under the Gunnison Basin PBO and in compliance with the ESA (FWS TAILS: 06E24100-2018-F-0161). Therefore, in accordance with the Gunnison Basin PBO (FWS 2009), the Proposed Action would not destroy or adversely modify the designated critical habitat for the Colorado River endangered fishes. Additionally, reduction in selenium loading to the Gunnison basin as a result of the Proposed Action would contribute to the overall success of the Gunnison Basin Selenium Management Program (SMPW 2011).

### ***BLM Sensitive Species***

The Proposed Action is partially located on BLM lands, managed by the Uncompahgre Field Office (UFO). The total amount of potentially affected areas of BLM land is approximately 2.3 acres. BLM Sensitive species are designated by the BLM's state director by field office or management unit (BLM 2015). BLM Sensitive Species with the potential to occur in the Proposed Action Area and not already considered in the Migratory Birds or Threatened & Endangered Species discussions above are fringed myotis (a bat), Townsend's big-eared bat, big free-tailed bat, spotted bat, white-tailed prairie dog, midget faded rattlesnake, and northern leopard frog. Presence of these species were determined by reviewing published range maps and habitat requirements of each of the BLM Sensitive Species on the state director's list, and through informal technical consultation with BLM-UFO Biologist Kenneth Holsinger (during the North Delta Canal Phase 1 Salinity Control Project analysis).

No Action: The No Action Alternative would have no effect on BLM Sensitive species or their habitats.

Proposed Action: Implementation of the Proposed Action would potentially result in temporary disturbance (from construction activities) to BLM Sensitive Species including fringed myotis (a bat), Townsend's big-eared bat, big free-tailed bat, spotted bat, and white-tailed prairie dog. The bats are expected to forage in the Proposed Action Area during summer and early fall and could be temporarily displaced by construction activities. Relatively little upland shrubs or woodlands serving as foraging habitat for bats would be temporarily disturbed as a result of the Proposed Action. A few scattered prairie dog burrows may be present within the Proposed Action Area, and would be destroyed during construction. Midget faded rattlesnake potentially present around the project area could be disturbed or harmed by project construction. Northern leopard frogs could be impacted by construction, and implementation of the Proposed Action would result in the loss of northern leopard frog breeding habitat. However, impacts to these BLM Sensitive Species would be localized and not lead to population-level declines. To the extent that the loss of riparian or wetland habitat would affect foraging opportunities for BLM Sensitive snakes, bats, or breeding and overwintering habitat for the northern leopard frog, these habitat losses would be mitigated by the existing Habitat Replacement Site created for the North Delta Canal Phase 1 Salinity Control Project (see Section 3.7).

The reduction of salinity and selenium expected to occur downstream in the watershed due to the Proposed Action may provide some benefit for BLM Sensitive fish habitat in downstream waters (similar to the benefits provided to the downstream endangered fish habitat described above).

### 3.8 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 a Class III cultural resource inventory of the Proposed Action Area. All areas involved with the Proposed Action were inventoried in a 100-foot-wide corridor. The proposed staging area and access roads were also examined. The inventories resulted in the documentation of a new segment of the North Delta Canal that supports its eligibility for listing in the National Register of Historic Places (NRHP).

No Action: 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 the documented segment of the North Delta Canal (including the trestle flume) involved with the Proposed Action, which is a resource eligible for listing in the NRHP. A Memorandum of Agreement (MOA) has been executed between Reclamation, BLM, and the Colorado SHPO, with NDIC participating as an invited party, to mitigate the adverse effects of the Proposed Action (Appendix F). The MOA stipulates that Level II documentation be completed and any post-review discoveries trigger an Unanticipated Discovery Plan (UDP; Appendix B to the MOA). The UDP outlines procedures that would be followed in order to protect potential archaeological materials or cultural resources discovered during implementation of the Proposed Action. In

addition, the MOA stipulates that the Level II documentation be made available to the public via the Reclamation Western Colorado Area Office's cultural resources webpage (<https://www.usbr.gov/uc/wcao/rm/cr/index.html>).

### 3.9 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 silty clay and clay loams derived from marine shale. These soils are classified by NRCS as moderately to highly susceptible to erosion by wind and water.

In accordance with the Farmland Protection Policy Act, NRCS characterizes some of the mapped soil units in the Proposed Action Area as farmlands of national or statewide significance (NRCS 2006). About 0.3 miles of the proposed pipeline and about 0.3 acre of the staging area are in soil mapped as "Prime Farmland."

No Action: 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 current North Delta Canal would continue as it has in the past.

Proposed Action: Under the Proposed Action Alternative, construction activities would cause temporary disturbance to soils that are either not in irrigated agricultural production, or soils directly adjacent to irrigated agricultural lands. Some of the irrigated agricultural lands are designated as agriculturally significant by NRCS (see description above). However, 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. North Delta Canal conveys irrigation water to agriculturally significant lands; however, no change in the configuration of irrigated lands would occur as a result 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 NDIC the ability to better manage the irrigation water with efficiencies gained from piping the system. Efficiencies gained may result in a longer irrigation season, and potentially in increased agricultural productivity. Water contact with saline soils would be reduced in the system as a result of the Proposed Action, which would help reduce salinity and selenium loading in the Colorado River basin. Soil erosion from irrigation water conveyances would be significantly reduced in the canal reach 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.

### 3.10 Noise

A moderate baseline level of noise and visual disturbance occurs in the Proposed Action Area, associated with the residential community of Austin, Highway 92 traffic, the Union Pacific Railroad, farming and ranching activities, and NDIC's operation and routine maintenance of the North Delta Canal system. NDIC's operation and maintenance activities 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.

**No Action:** The No Action Alternative would have no effect on baseline human-induced noise levels in the area.

**Proposed Action:** During construction of the Proposed Action, noise levels would increase above baseline noise levels in the Project area. Noise would be associated with heavy equipment use and vehicle and equipment trips between staging areas and work areas. Effects from heavy equipment noise would be limited to the duration of construction, occurring incrementally across the Project area during of the irrigation off-season. These disturbances would occur during daylight hours (typically 7 am to 4 pm), Monday through Saturday. Following construction, baseline levels of noise could potentially decrease in the Proposed Action Area since piping the canal would eliminate the need for canal vegetation cleaning operations. In the long-term, noise from light-duty traffic would occur on the pipeline alignment during regular maintenance checks or trips to the system's headgate.

### 3.11 Public Land Resources

Public lands in the general vicinity provide visual beauty, recreational opportunities for the public, and livestock grazing by permit. Public lands involved in the Proposed Action Area are lands administered by BLM's Uncompahgre Field Office as part of the Gunnison Gorge National Conservation Area (NCA) planning area and managed under the Gunnison Gorge NCA Resource Management Plan (RMP; BLM 2004). NDIC facilities on public lands involved in the Proposed Action operate within a prescriptive historic easement acknowledged by BLM on these lands.

Within the planning area, these BLM lands are in Management Unit 3-3 (MU3-3) of the Gunnison River Special Recreation Management Area (SRMA), and outside (north of) the Gunnison Gorge NCA boundary. The RMP assigns Visual Resource Management (VRM) Class II to BLM lands involved with the Proposed Action Area. Class II areas allow for visible changes that do not attract attention. The BLM lands involved in the Proposed Action are partially visible from Highway 92 and adjacent rural residences and private lands. No official recreation trails or other developed recreational public access resources exist on BLM lands involved in the Proposed Action Area, and public access is limited due to adjacency of private lands and terrain. There is no livestock grazing allotment on the BLM land involved with the Proposed Action.

**No Action:** There would be no effect to public land resources from the No Action Alternative.

**Proposed Action:** The total amount of potentially affected areas of BLM land is approximately 1.4 acres, consisting of previously disturbed land. Due to the location of the Proposed Action, some construction activity in the Proposed Action Area would be visible to the general public from Highway 92 and nearby rural residences. The long-term level of change to the visual characteristics of the landscape in and around the Proposed Action Area during and following construction would be low, and not out of character with the surrounding landforms, or with the rural and agricultural character of the vicinity. The visual changes would be compatible with Class II area management guidance, in that the buried pipe alignment and removal of the trestle flume would not represent a visible change to the landscape that would attract attention or detract from the scenic views from Highway 92 of the prominent rocky bluffs that rise above the Proposed Action Area. There would be no impacts to public recreation, either during or



following construction of the Proposed Action, since there are no official public trails on BLM land involved with the Proposed Action, and public access is limited by adjacency of private lands and terrain. Public lands grazing permit holders would not be affected by the Proposed Action since there are no active permits on the BLM land involved with the Proposed Action.

### 3.12 Cumulative Impacts

Cumulative impacts are direct and indirect impacts on the resources potentially affected by the Proposed Action, which result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts can also be characterized as additive or interactive. An additive impact emerges from persistent additions from one kind of source, whether through time or space. An interactive—or synergistic—impact results from more than one kind of source.

The analysis of cumulative impacts for the Proposed Action considers both spatial (geographic) boundaries and temporal limits of impacts, on a resource-by-resource basis. Spatial and temporal analysis limits vary by resource, as appropriate (see Table 2 for the spatial and temporal limits of analysis for each resource). Spatial analysis limits were selected to be commensurate with the impacts on, and realm of influence of, each resource type. The temporal limits of analysis were established as 50 years for each resource type (a standard timeframe for cumulative impacts analysis), except for resource types perceived to have only temporary impacts (impacts that end following construction of the Proposed Action or within a few seasons following construction).

The direct and indirect effects of past and ongoing (present) actions are reflected in the current conditions described in the affected environment above in each of the resource topics of Section 3. Reasonably foreseeable future actions are *specific* actions, and not speculative actions, in that they have approved NEPA documentation or approved plans with the potential to impact the same resources affected by the Proposed Action.

**Table 2. Cumulative Impacts Analysis Spatial & Temporal Limits by Resource**

Resource	Spatial Limits of Analysis	Temporal Limits of Analysis
Water Rights and Use	North Delta Canal service area	50 years
Water Quality	North Delta Canal service area	50 years
Air Quality	Proposed Action Area plus 1-mile buffer	Duration of Proposed Action Construction
Access, Transportation, Safety	Proposed Action Area	Duration of Proposed Action Construction

Resource	Spatial Limits of Analysis	Temporal Limits of Analysis
Vegetative Resources and Weeds	Proposed Action Area plus 1-mile buffer	50 years
Wildlife Resources	Proposed Action Area plus 1-mile buffer	50 years
Threatened and Endangered Species	Proposed Action Area plus 1-mile buffer	50 years
Cultural Resources	Proposed Action Area	50 years
Agricultural Resources and Soils	Proposed Action Area	50 years
Noise	Proposed Action Area plus ¼-mile buffer	Duration of Proposed Action Construction
Public Land Resources (Recreational, Visual, Grazing Resources)	Public lands within the Proposed Action Area	50 years

There are currently no known reasonably foreseeable future actions potentially affecting resources within the spatial and temporal limits of this analysis (Table 2). Therefore, the Proposed Action would not contribute to cumulative impacts on resources when combined with effects from reasonably foreseeable future actions.

### 3.13 Summary of Impacts

Table 3 summarizes the predicted impacts/environmental consequences of the No Action and Proposed Action Alternatives analyzed in this EA.

**Table 3. Summary of Impacts of the Proposed Action**

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Water Rights and Use	No Effect	No effect or possible beneficial effect.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Water Quality	Salt and selenium loading from the Proposed Action Area would continue to affect water quality in the Colorado River Basin	An unquantified salt loading reduction 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.
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 reduction in maintenance vehicle trips.
Construction Impacts	No Effect	Minor temporary disruptions to local public roadways from construction traffic entering and existing roadways. No long-term effects.
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 canal segments would be mitigated with a Habitat Replacement Site (constructed under the North Delta Canal Phase 1 Salinity Control Project; see Section 3.6). Weed control measures would be implemented as a part of the Proposed Action, and piping of the canal would remove open water and seepage from the Proposed Action Area—both important vectors for the spread of weeds.
Wildlife Resources	No Effect	Short-term temporary adverse effect to local wildlife during construction. A Habitat Replacement Site has been constructed to mitigate for the long-term loss of riparian and wetland habitat due to the Proposed Action (completed during construction under the North Delta Canal Phase 1 Salinity Control Project; see Section 3.6).

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Migratory Birds, Raptors	No Effect	No impacts to nesting migratory birds since vegetation grubbing would take place outside the primary nesting season. Long-term impacts due to loss of nesting habitat for both migratory birds and raptors along the current canal has been mitigated with a Habitat Replacement Site (constructed under the North Delta Canal Phase 1 Salinity Control Project; see Section 3.6). A raptor survey conducted during May 2019 and database review found no nesting raptors within CPW-recommended buffer distances (CPW 2008).
Threatened and Endangered Species	Salt and selenium loading from the Proposed Action Area would continue to affect aquatic dependent species	Water depletions (irrigation water consumption) would continue at historic levels, and would continue to adversely affect downstream designated critical habitat for the four Colorado River federally endangered fishes. However, the Upper Colorado River Endangered Fish Recovery Program serves as mitigation for these impacts, and a Recovery Agreement has been executed between FWS and NDIC to ensure compliance with the ESA (Appendix E). The Proposed Action would improve water quality by contributing to the reduction of salt and selenium loading in the Gunnison and Colorado rivers.
BLM Sensitive Species	Salt and selenium loading from the Proposed Action Area would continue to affect aquatic dependent species	The Proposed Action would affect breeding habitat for the BLM Sensitive northern leopard frog. It may also affect foraging habitat for BLM Sensitive snakes and bats that use riparian habitat in the Proposed Action Area. Impacts to these species would be localized and not result in population-level declines. Habitat losses would be mitigated at the Habitat Replacement Site. The Proposed Action would improve water quality by contributing to the reduction of salt and selenium loading in the Colorado River Basin, to the benefit of BLM Sensitive fishes downstream of the Proposed Action Area.
Cultural Resources	No Effect	The Proposed Action would have an adverse effect on an NRHP eligible cultural resource. The adverse effect would be mitigated with a MOA between Reclamation, BLM, and the Colorado SHPO (Appendix F).
Agricultural Resources and Soils	No Effect	The Proposed Action would temporarily disturb the ground surface in the Action Area. BMPs 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.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Noise	No Effect	The Proposed Action would temporarily elevate human-induced noise levels in the immediate Project area during construction activities. Effects would be short-term and minor. In the long-term, intermittent noise associated with canal maintenance, such as mechanical clearing of canal vegetation with heavy equipment, would decrease.
Public Land Resources (Visual Resources, Recreational Resources, Livestock Grazing)	No Effect	Construction activities related to the Proposed Action would be partially visible to the public (from Highway 92 and surrounding lands). Following construction, the visual change to the overall landscape would not attract attention once land contouring and revegetation efforts are complete. There would be no effect on public recreation or livestock grazing permit holders.
Cumulative Impacts	No Effect	There are currently no known reasonably foreseeable future actions potentially affecting resources within the spatial and temporal limits of this analysis (Table 2). Therefore, the Proposed Action would not contribute to cumulative impacts on resources when combined with effects from reasonably foreseeable future actions.

#### 4 ENVIRONMENTAL COMMITMENTS

This section summarizes the environmental commitments to protect resources and mitigate adverse impacts from the Proposed Action to a non-significant level. The actions in the following environmental commitment checklist will be implemented as an integral part of the Proposed Action and shall be included in the contractor bid specifications. If the Proposed Action is approved, NDIC shall use this checklist to document compliance with each environmental commitment. NDIC shall submit the relevant component of the completed checklist to Reclamation immediately following each phase of the Project, i.e., Pre-Construction, During Construction, and Post-Construction, along with documents generated to meet environmental commitments.

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 special status plants and wildlife, including threatened, endangered, or migratory bird species.

**Table 4. Environmental Commitment Checklist**

Environmental Commitment	Resource(s) that Benefit	Date of Compliance and Initials
<b><i>Pre-Construction</i></b>		
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	
A Stormwater Management Plan shall be prepared and submitted to Colorado Department of Public Health & Environment (CDPHE) by the construction contractor prior to construction disturbance.	Water Quality	
A Clean Water Act (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	
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	
A Memorandum of Agreement (MOA) is in place to mitigate the Proposed Action’s adverse effects to cultural resources (Appendix F). The MOA commits Reclamation to complete historic resource documentation of the historic property in accordance with the guidance for “Level II documentation,” and to post this documentation on the Reclamation Western Colorado Area Office’s cultural resources webpage.	Cultural Resources	
Construction limits shall be clearly flagged onsite to avoid unnecessary plant loss or ground disturbance.	Vegetation, Weeds, Habitat, Wildlife	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance and Initials
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	
Prior to construction, vegetative material shall be removed by mowing or chopping, and either 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 the proposed staging area to be burned. No burning shall take place on BLM land.	Soil, Vegetation, Weeds, Habitat	
Vegetation removal shall be confined to the smallest portion of the Proposed Action Area necessary for completion of the work.	Soil, Vegetation, Weeds, Habitat	
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.	Special status species	
Topsoil shall be stockpiled and then redistributed as top dressing after completion of construction activities.	Soil, Vegetation, Weeds, Habitat	
<b><i>During Construction</i></b>		
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, Soil	
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	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance and Initials
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	
Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.	Water Quality, Soil	
Construction equipment shall be parked, stored, and serviced only at an approved staging area.	Water Quality, Soil	
Ground disturbances and construction areas shall be limited to only those areas necessary to safely implement the Proposed Action.	Soil, Vegetation, Weeds, Habitat, Wildlife	
Pipeline trenches left open overnight shall be kept to a minimum and covered to reduce potential for hazards to people and 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, Grazing, Public Safety	
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 attached MOA. Stipulations in the MOA with the SHPO are incorporated herein by reference. Additional surveys shall be required for cultural resources if construction plans or proposed disturbance areas are changed.	Cultural Resources	



Environmental Commitment	Resource(s) that Benefit	Date of Compliance and Initials
In the event that threatened or endangered species are encountered during construction, NDIC 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.	Special Status Species	
Construction activities shall take place only in accordance with the schedule and any timing restrictions outlined in Sections 2.2 and 3.7 of this EA (no vegetation grubbing during the core migratory bird nesting season of April 1 through July 15).	Special Status Species	
If an active bald eagle nest or bald eagle roost site is discovered within ¼ mile of the Proposed Action during construction, or if any other 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.	Special Status Species	
<b>Post-Construction</b>		
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	
All drainage patterns that intersect the canal shall be shaped to their natural flow patterns following canal piping.	Soil, Vegetation, Habitat	
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	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance and Initials
<p>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 mix per BLM and Reclamation specifications (see Appendix D of the EA). NDIC shall coordinate with landowners to reseed any disturbances to irrigated areas.</p>	<p>Soil, Vegetation, Weeds, Habitat</p>	
<p>Weed control shall be implemented by NDIC or a contractor in accordance with current County weed control standards (Delta County 2010).</p>	<p>Soil, Vegetation, Weeds, Habitat</p>	
<p>Herbaceous noxious weeds shall be controlled as necessary after construction for the life of the project through the use of herbicides mixed with surfactants. NDIC shall coordinate with BLM on the use of any herbicides on lands managed by the BLM, and shall obtain Pesticide Use Proposals (PUPs) prior to treatments.</p>	<p>Soil, Vegetation, Weeds</p>	

## 5 CONSULTATION & COORDINATION

Reclamation’s consultation and coordination process presents other agencies, interest groups, and the general public with opportunities to obtain information about a given project and allows interested parties to participate in the project through written comments. The key objective is to facilitate a well-informed, active public that assists decision-makers throughout the process, culminating in the implementation of an alternative. This section explains consultation and coordination undertaken for the Proposed Action.

### 5.1 Agency Consultation

The following local, state, and federal agencies were contacted and/or consulted in the preparation of this EA. Additional entities were given the opportunity to comment during a public review period.

- U.S. Bureau of Land Management, Uncompahgre Field Office, Montrose, CO
- U.S. Fish and Wildlife Service, Western Colorado Ecological Services Field Office, Grand Junction, CO
- U.S. Army Corps of Engineers, Colorado West Regulatory Section, Grand Junction, CO
- Colorado Office of Archaeology and Historic Preservation, Denver, CO
- Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)

- Delta County Historic Landmarks Board and Delta County Historical Society
- Advisory Council on Historic Preservation

## 5.2 EA Comments

The Draft EA was released for a 14-day public review period ending on December 6, 2019 (via Reclamation's website at <http://www.usbr.gov/uc/wcao/envdocs/index.html>). No comments were received.

## 5.3 Distribution

Notice of the public review period and availability of the Draft EA was distributed to private landowners adjacent to the Proposed Action, and the organizations and agencies listed in Appendix B. This EA will also be available on Reclamation's website. Publicly-available electronic versions of the Draft and Final 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.

## 6 REFERENCES

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

BLM. 2004. Gunnison Gorge National Conservation Area Approved Resource Management Plan and Record of Decision. Gunnison Gorge NCA Office, Montrose, Colorado. [https://eplanning.blm.gov/epl-front-office/projects/lup/65261/97021/117177/GGNCA-RODRMP-Nov2004\\_web.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/65261/97021/117177/GGNCA-RODRMP-Nov2004_web.pdf)

CNHP (Colorado Natural Heritage Program). 1997+. Colorado rare plant guide. <http://www.cnhp.colostate.edu/rareplants/>. Last updated February 2017.

CPW (Colorado Parks and Wildlife). 2019. Public SAM Data Layer accessed in ArcGIS from the ArcGIS online server. Last updated by CPW on November 8, 2018.

CPW. 2018. Raptor nest database. Licensed geodatabase used by permission from Colorado Parks and Wildlife.

CPW. 2008. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. <https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf>

Delta County. 2010. Delta County Noxious Weed Management Plan. Adopted April 5, 2010. <http://www.deltacounty.com/DocumentCenter/View/1013>

EPA (U.S. Environmental Protection Agency). 2019. Current nonattainment counties for all criteria pollutants, updated June 30. <https://www3.epa.gov/airquality/greenbook/ancl.html>.

FWS (U.S. Fish & Wildlife Service). 2019. List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project (NDIC Extension Project). Consultation Code: 06E24100-2019-E-01182.

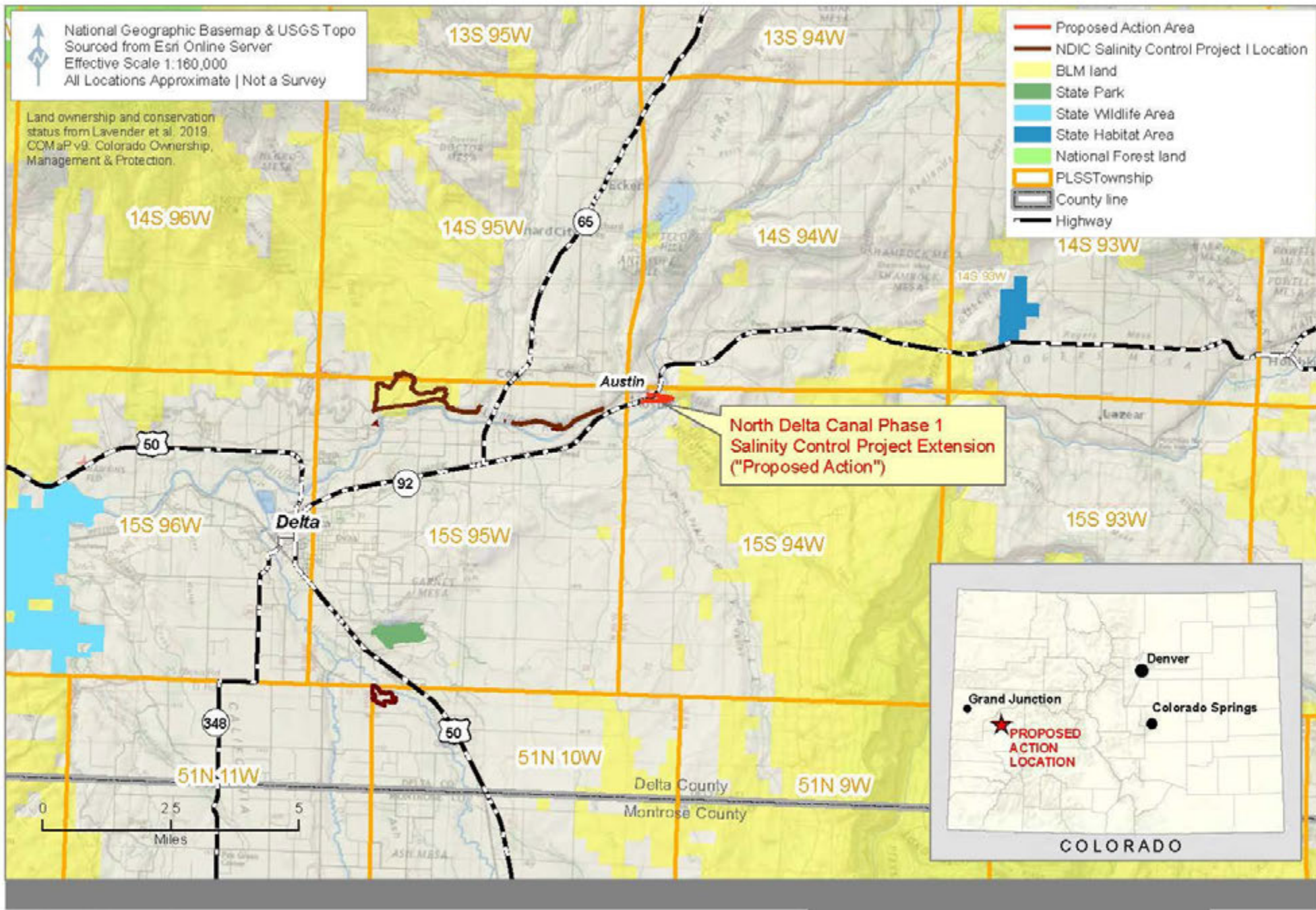
- FWS. 2009. Gunnison Basin Programmatic Biological Opinion. December 4. Memorandum to Area Manager, Western Colorado Area Office, Bureau of Reclamation, Grand Junction, Colorado from Colorado Field Supervisor, Ecological Services, Lakewood, CO. [http://www.usbr.gov/uc/wcao/rm/aspeis/pdfs/aspinalpbo\\_final.pdf](http://www.usbr.gov/uc/wcao/rm/aspeis/pdfs/aspinalpbo_final.pdf)
- NRCS (U.S. Department of Agriculture Natural Resources Conservation Service). 2006. Soil Survey Geographic (SSURGO) database for Database for Ridgway Area, Colorado, Parts of Delta, Gunnison, Montrose, and Ouray Counties, publication co677.
- OAHP (Office of Archaeology and Historic Preservation, History Colorado). 2013. Historic Resource Documentation Standards for Level I, II, and III Documentation. Publication 1595.
- Rare Earth (Rare Earth Science, LLC). 2019. Threatened & Endangered Species Inventory, North Delta Canal Phase 1 Salinity Control Project Extension, Delta County, Colorado. Prepared for the U.S. Bureau of Reclamation, Environmental Planning Group of the Western Colorado Area Office, Upper Colorado Region. In progress.
- Reclamation (U.S. Bureau of Reclamation). 2017. Quality of Water – Colorado River Basin. Progress Report No. 25. <https://www.usbr.gov/uc/progact/salinity/pdfs/PR25final.pdf>
- Reclamation. 2018. Basinwide Salinity Control Program: Procedures for Habitat Replacement. 14 pp. May.
- SMPW (Selenium Management Program Workgroup). 2011. Selenium Management Program: Program Formulation Document, Gunnison River Basin, Colorado. Compiled by U.S. Bureau of Reclamation. <http://www.usbr.gov/uc/wcao/progact/smp/docs/Final-SMP-ProgForm.pdf>
- Wickersham, L. (Editor). 2016. Colorado breeding bird atlas (2nd ed). Denver, CO: Colorado Bird Atlas Partnership & Colorado Division of Wildlife. Online dataset retrieved from <http://cobreedingbirdatlasii.org/index.html>
- Zeman, Michael (Wildlife and Natural Resources Concepts & Solutions, LLC). 2019. North Delta Irrigation Company Habitat Loss Assessment Report on North Delta Canal Phase 1 Extension Piping Project. September 4. 18 pp.

## **APPENDIX A**

### Figures

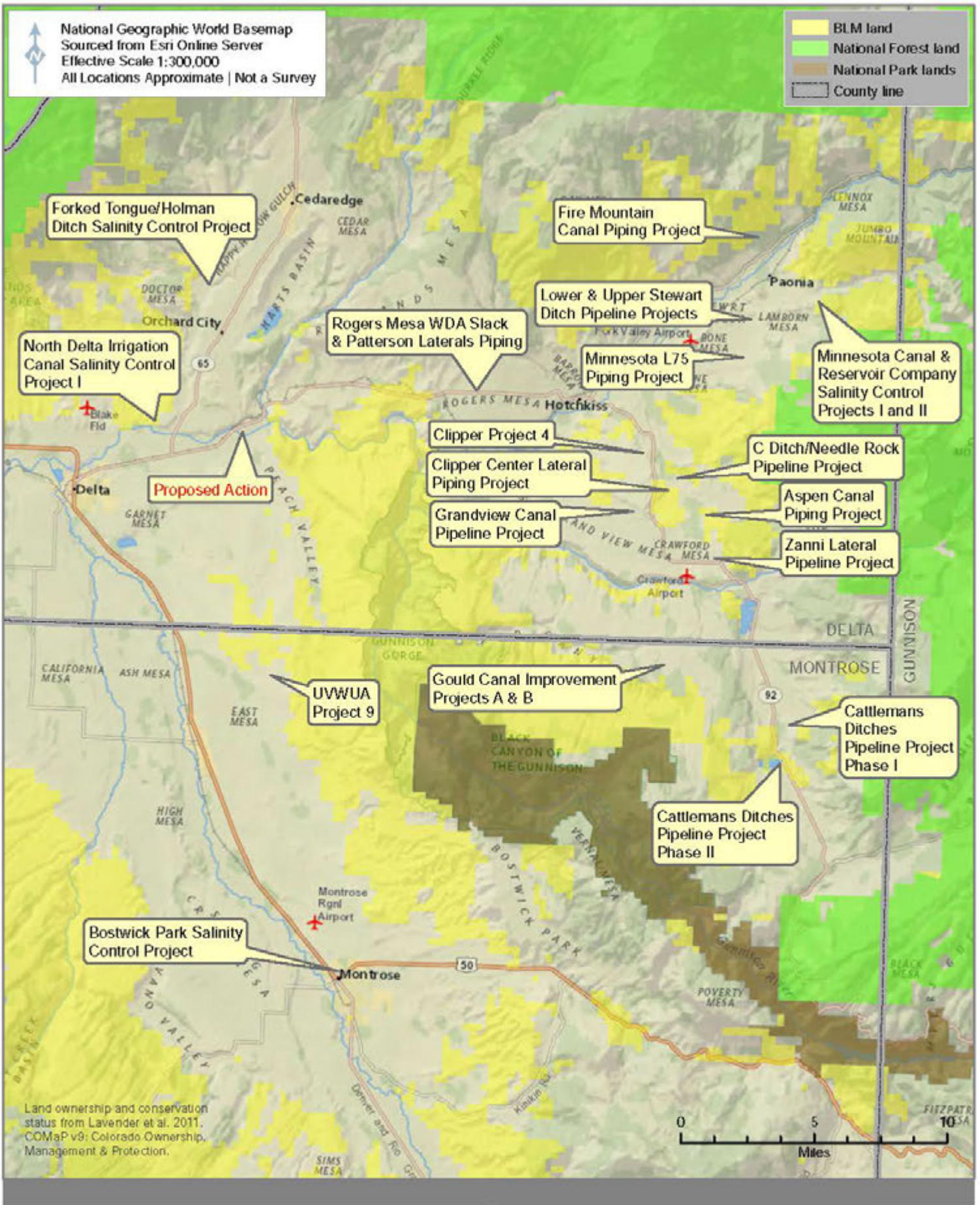
1. Regional & Local Locator Maps
2. Regional Salinity Control Projects
3. Project Configuration Map

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Land ownership and conservation status from Lavender et al. 2011. COMaP v9: Colorado Ownership, Management & Protection.

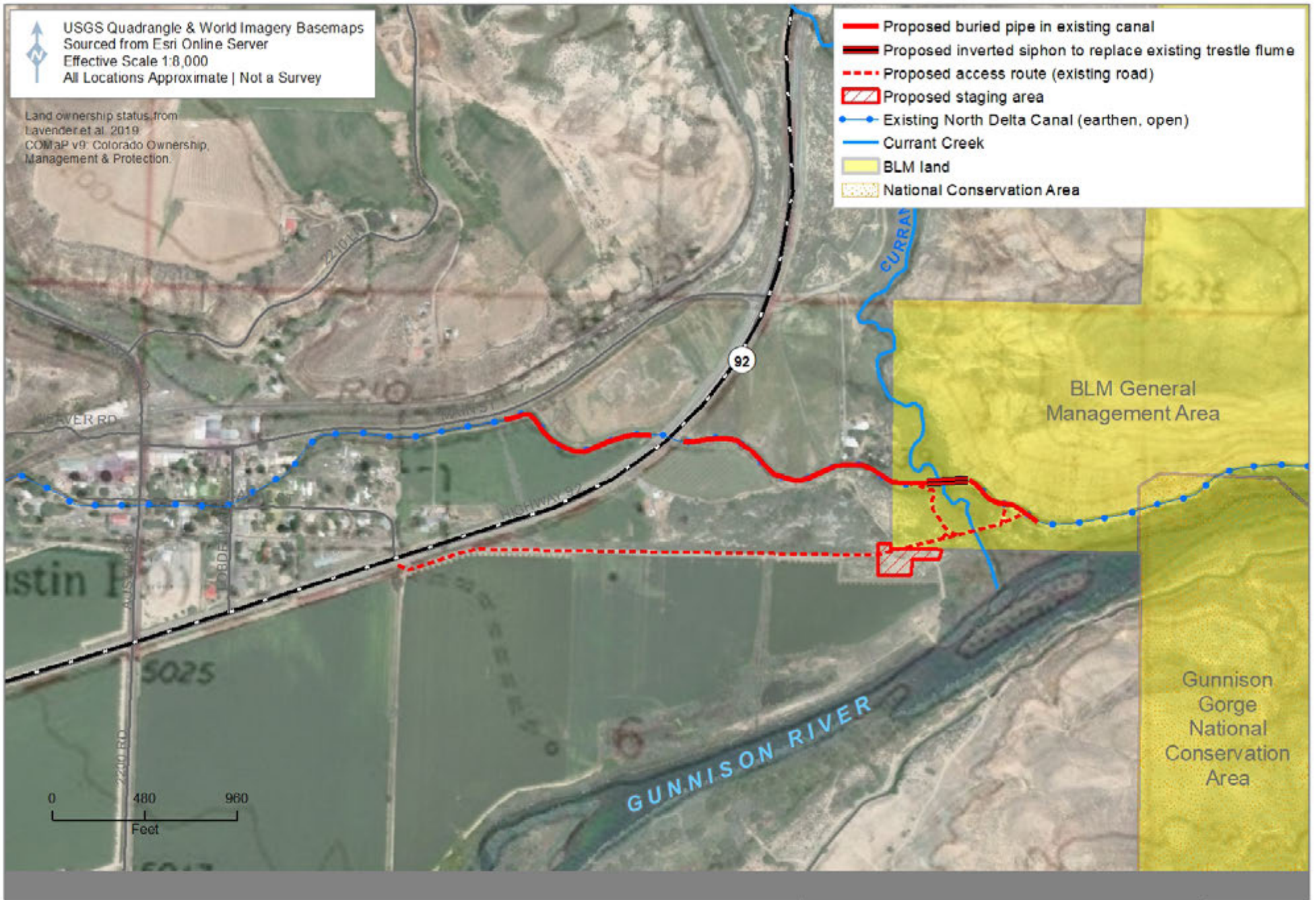
**Regional Salinity Control Projects**

**NDIC SALINITY CONTROL PROJECT I EXTENSION**

FIGURE 2

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## **APPENDIX B**

### Distribution List

All landowners adjacent to the Proposed Action  
Citizens for a Healthy Community  
City of Delta  
Colorado Department of Transportation  
Colorado Office of Archaeology and Historic Preservation Colorado Parks and Wildlife  
Colorado River Water Conservation District  
Colorado Water Conservation Board  
Delta Area Chamber of Commerce  
Delta Montrose Electric Association  
Delta County Planning & Development Department  
Delta County Road & Bridge Department  
Delta County Independent  
Trout Unlimited  
U.S. Army Corps of Engineers  
U.S. Bureau of Land Management  
U.S. Department of Agriculture Natural Resources Conservation Service  
U.S. Fish and Wildlife Service  
Western Slope Conservation Center

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## **APPENDIX C**

### **Section 404 Clean Water Act Compliance Documentation**

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**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT  
1325 J STREET  
SACRAMENTO CA 95814-2922

October 28, 2019

Regulatory Division (SPK-2018-00884)

Bureau of Reclamation  
Attn: Ms. Jennifer Ward  
445 W Gunnison Avenue  
Grand Junction, Colorado 81501  
[jward@usbr.gov](mailto:jward@usbr.gov)

Dear Ms. Ward:

This concerns the proposed North Delta Canal Phase I Salinity Control Project Extension which would replace approximately 0.5 mile of open, unlined North Delta Canal, including a 190-foot-long failing trestle flume over Currant Creek, with buried irrigation pipe. The proposed action is expected to reduce salinity loading in the Colorado River basin by an estimated 229 tons of salt per year. The approximately 5-acre project site is located on the North Delta Canal, in Section 6, Township 15 South, Range 94 West, 6<sup>th</sup> Principal Meridian, near State Highway 92, centered at Latitude 38.78224°, Longitude -107.94285°, approximately 6 miles east-northeast of the City of Delta, Delta County, Colorado.

Based on the information you have provided, we have determined that the proposed work is exempt from Section 404 of the Clean Water Act. Therefore, a Department of the Army permit is not required for this work. Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented on site to achieve this end.

Our disclaimer of jurisdiction is only for this activity as it pertains to Section 404 of the Clean Water Act and does not refer to, nor affect jurisdiction over any waters present on site. Other federal, state, and local laws may apply to your activities. Therefore, in addition to contacting other federal and local agencies, you should also contact state regulatory authorities to determine whether your activities may require other authorizations or permits.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2018-00884 in any correspondence concerning this project. If you have any questions, please contact me at the Colorado

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West Section, 400 Rood Avenue, Room 224, Grand Junction, Colorado 81501, by email at [w.travis.morse@usace.army.mil](mailto:w.travis.morse@usace.army.mil) or telephone at (970) 243-1199 X 1014. For more information regarding our program, please visit our website at [www.spk.usace.army.mil/Missions/Regulatory.aspx](http://www.spk.usace.army.mil/Missions/Regulatory.aspx).

Sincerely,



Travis Morse  
Senior Project Manager  
CO West Section

cc:

Ms. Dawn Reeder, Rare Earth Science, [dawn@rareearthscience.com](mailto:dawn@rareearthscience.com)  
Ms. Judy Axtman, North Delta Irrigation Company, [jaaxtman@gmail.com](mailto:jaaxtman@gmail.com)  
Ms. Lesley McWhirter, Bureau of Reclamation, [lmcwhirter@usbr.gov](mailto:lmcwhirter@usbr.gov)  
Ms. Amanda Ewing, Bureau of Reclamation, [aewing@usbr.gov](mailto:aewing@usbr.gov)  
Ms. Beth Karberg, Applegate Group, Inc., [bethkarberg@applegategroup.com](mailto:bethkarberg@applegategroup.com)  
Ms. Stephanie Connolly, Bureau of Land Management, [s.connolly@blm.gov](mailto:s.connolly@blm.gov)  
Ms. Jeanie McCulloch, Delta County, [planning@deltacounty.com](mailto:planning@deltacounty.com)

## **APPENDIX D**

### **Seed Mix Required for Non-Irrigated Areas**

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**BLM Standard Native Seed Mix For Adobe-Type Soils  
Below 6500'**

Price and seed availability vary, so not all species may be available at the time you need them, or priced affordably. However the major ones should usually available. The rate shown below is for a drilled seeding, or some other method that incorporates the seed into the soil. Rates should be doubled if the seed is to be aerially applied. If price or availability is a concern, reduce or leave out those species and increase percentages of remaining species correspondingly (column A in table below, total to this column should equal 100%, carry through changes in columns B, D, and E following instructions under column headings).

BLM places the following requirements on seed mixes which are put on BLM lands:

- 1) Use the following minimum PLS (Pure Live Seed) tolerances

PLS tested %	Tolerance % points
81-100	-7
61-80	-6
41-60	-5
21-40	-4
0-20	-3

- 2) All seed must comply with BLM and Colorado weed seed guidelines. There should be no prohibited species seed, and no more than allowable levels of restricted species seed. In addition, there should be no more than 0.5% total weed seed, less than 2% other seed, and no trash larger than ¼” in length. Seed shall not be stored in burlap bags.
- 3) The UFO places additional local restrictions on seed to minimize cheatgrass spread. If seed tests show any *Bromus tectorum* or *Bromus japonicus*, the BLM should be consulted with for approval. No mix placed on BLM shall contain more than 150 *Bromus tectorum* and/or *Bromus japonicus* seeds per pound.
- 4) BLM requires additional seed tests on seeding projects that are greater than 20 acres and/or require over 200 lbs of seed. For these seeding projects, the project proponent should have the seed supply company store the purchased seed prior to mixing, and pull samples to be sent to a certified laboratory, such as Colorado State Laboratory at the following address. Seed test results must comply with the criteria listed above before seed is mixed, shipped and applied to the project area:  
 Wyoming State Laboratory  
 749 Road 9  
 Powell, WY 82435
- 5) BLM will need copies of seed tags and test results for all seed applied regardless of project size.
- 6) Only State Certified weed free mulch shall be used

	A	B	C	D	E
Species	Desired % of planting	Multiplier (A x 0.01)	PLS lbs for full stand	PLS lbs per acre needed for mix (B x C)	PLS lbs per acre for project (D x # acres)
Bottlebrush squirreltail ( <i>Elymus elemoides</i> )	25	0.25	16	4	
Western Wheatgrass ( <i>Pascopyrum smithii</i> ) Variety Arriba	25	0.25	10	2.5	
Galleta Grass ( <i>Hilaria</i> or <i>Pleuraphis jamesii</i> )	10	0.1	16	1.6	
Indian Ricegrass ( <i>Acnatherum hymenoides</i> ) Variety Paloma	10	0.1	32	3.2	
Salina Wildrye ( <i>Leymus salinus</i> )	5	0.05	8	0.4	
Scarlet Globemallow ( <i>Sphaeralcea coccinea</i> )	2	0.02	6	0.12	
Annual sunflower ( <i>Helianthus annuus</i> )	3	0.03	10	0.3	
Winterfat ( <i>Eurotia</i> or <i>Krascheninnikovia lanata</i> )	5	0.05	5	0.25	
Shadscale ( <i>Atriplex confertifolia</i> )	5	0.05	5	0.25	
Mat saltbush ( <i>Atriplex corrugate</i> )	5	0.05	6	0.3	
Gardner saltbush ( <i>Atriplex gardneri</i> )	5	0.05	5	0.25	
Totals	100	1.0		13.17	

## **APPENDIX E**

### Endangered Species Act Compliance Documentation

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GUNNISON BASIN RECOVERY AGREEMENT

This RECOVERY AGREEMENT is entered into this 15<sup>th</sup> day of October, 2018, by and between the United States Fish and Wildlife Service (Service) and The North Delta Irrigation 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 North Delta Irrigation Canal (Water Project), which causes or will cause depletions to the Gunnison River subbasin; 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:

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 User's Water Project. Any consultations under section 7 regarding Water Project's 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 Project's 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 User's 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 Project's 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 User's Water Project or The Service's 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

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.

  
\_\_\_\_\_  
Water User Representative  
North Delta Irrigation Company

10-12-2018  
Date

  
\_\_\_\_\_  
Western Colorado Supervisor  
U.S. Fish and Wildlife Service

10/15/18  
Date

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## **APPENDIX F**

### **Cultural Resource Compliance Documents**

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**MEMORANDUM OF AGREEMENT  
AMONG  
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,  
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,  
THE NORTH DELTA IRRIGATION COMPANY,  
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA COUNTY, COLORADO**

**WHEREAS**, the Bureau of Reclamation (Reclamation) and the North Delta Irrigation Company (NDIC) plan to pipe 0.57 mile of the North Delta Canal (Project); and

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

**WHEREAS**, the Bureau of Land Management (BLM) has participated in the consultation, and has chosen to participate in the MOA as a Signatory; and

**WHEREAS**, Reclamation has defined the undertaking's area of potential effect (APE) as contained within a 100-foot-wide corridor centered on the North Delta Canal and one acre of work space, totaling 2 acres on BLM-managed land and 6.1 acres on private land, as described in Attachment A; and

**WHEREAS**, Reclamation as lead Federal agency has determined, in consultation with the Colorado State Historic Preservation Officer (SHPO), that the North Delta Canal (5DT1738.6) is eligible for listing on the National Register of Historic Places (NRHP) under Criterion A, and that the Project will result in an adverse effect to historic properties; and

**WHEREAS**, the NDIC as the sponsor of the Project, has participated in the consultation, and has been invited to participate in the Memorandum of Agreement (MOA) as a Signatory; and

**WHEREAS**, Reclamation consulted with the Southern Ute Indian Tribe, Ute Indian Tribe – Uintah and Ouray Reservation, and the Ute Mountain Ute Tribe via an August 30, 2019 letter to invite the tribes to participate in the proposed undertaking, and the Ute Mountain Ute Tribe and Ute Indian Tribe – Uintah and Ouray Reservation have not responded as of the signing of this document, and the Southern Ute Indian Tribe has chosen not to participate in the consultation; and

**WHEREAS**, Reclamation consulted with the Delta County Commissioners, the Delta County Historical Society, the City of Delta, and the Delta County Historic Landmarks Board via an August 30, 2019 letter to invite the local government to participate in the proposed undertaking, and they did not respond as of the signing of this document; 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 Council has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii);

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

### **STIPULATIONS**

Reclamation shall ensure that the following measures are carried out:

#### **I. MITIGATION**

Prior to any modification of the North Delta Canal, Reclamation will ensure that the canal (5DT1738.6) shall be recorded in accordance with the guidance for Level II Documentation found in "Historic Resource Documentation, Standards for Level I, II, and III Documentation" (Office of Archaeology and Historic Preservation Publication 1595, March 2013). The documentation will be of archival quality, and will include a detailed narrative history, plan mapping of the property, and photographic documentation of the portions of the historic property to be included in the project. Photographs will be black and white archival quality (4" x 6") prints. Features will be plotted on the maps with GPS waypoints and will be extensively described and indexed in the report. Representative design drawings consisting of one (1) cross section map will be prepared.

Stipulation I shall be satisfied prior to construction and/or any earth disturbances within the APE.

#### **II. GENERAL REQUIREMENTS AND STANDARDS**

Reclamation will submit a copy of the Level II Documentation to the SHPO within two (2) years of the execution of this MOA. The SHPO shall review and provide comments within thirty (30) calendar days of receipt. Once accepted by SHPO, SHPO shall receive a minimum of one archivally stable copy of the final recordation for its files and provide documentation of acceptance. The activities prescribed by the stipulations of this MOA shall be carried out by or under the direct supervision of a person or persons meeting, at minimum, the Secretary of the Interior Professional Qualifications Standards (48 FR 44738-39) (PQS) in the appropriate discipline. This does not preclude the use of properly supervised persons who do not meet the PQS.

#### **III. INFORMATION ACCESSIBILITY**

A Rehabilitation Act Section 508 compliant copy of the Level II Documentation will be placed on the Reclamation Western Colorado Area Office's cultural resource webpage (webpage). The SHPO shall receive notification once the document is placed on the webpage.



**IV. DURATION**

This MOA will expire if its terms are not carried out within two (2) 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 VIII below.

**V. POST-REVIEW DISCOVERIES**

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

**VI. MONITORING AND REPORTING**

No later than June 30<sup>th</sup> of each year following the execution of this MOA until its stipulations are carried out, it expires, or is terminated, NDIC on behalf of Reclamation shall provide all parties to this MOA 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 NDIC's efforts to carry out the terms of this MOA.

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

**VII. DISPUTE RESOLUTION**

Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA 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 MOA, 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 MOA that are not the subject of the dispute remain unchanged.

**VIII. AMENDMENTS**

This MOA 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.

**IX. TERMINATION**

If any signatory to this MOA 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 VI, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, Reclamation must either (a) execute an MOA 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 MOA by NDIC, BLM, Reclamation and SHPO and implementation of its terms evidence that Reclamation has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

**LIST OF ATTACHMENTS**

- Attachment A: Area of Potential Effect 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:**

- North Delta Irrigation Company

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT  
AMONG  
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,  
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,  
THE NORTH DELTA IRRIGATION COMPANY,  
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA COUNTY, COLORADO

Colorado State Historic Preservation Office

By: Shelly K. Norton Date: 10/29/19  
Steve Turner, AIA, State Historic Preservation Officer

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT  
AMONG  
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,  
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,  
THE NORTH DELTA IRRIGATION COMPANY,  
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA COUNTY, COLORADO

Bureau of Reclamation, Western Colorado Area Office

By: E. Ted Warner II Date: 10/22/19  
*for* Ed Warner, Area Manager

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT  
AMONG

THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,  
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,  
THE NORTH DELTA IRRIGATION COMPANY,  
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA COUNTY, COLORADO

Bureau of Land Management, Uncompahgre Field Office

By:  Date: 10/21/19  
Gregory Larson, Field Office Manager

SIGNATORY PAGE

MEMORANDUM OF AGREEMENT  
AMONG

THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,  
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,  
THE NORTH DELTA IRRIGATION COMPANY,  
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER

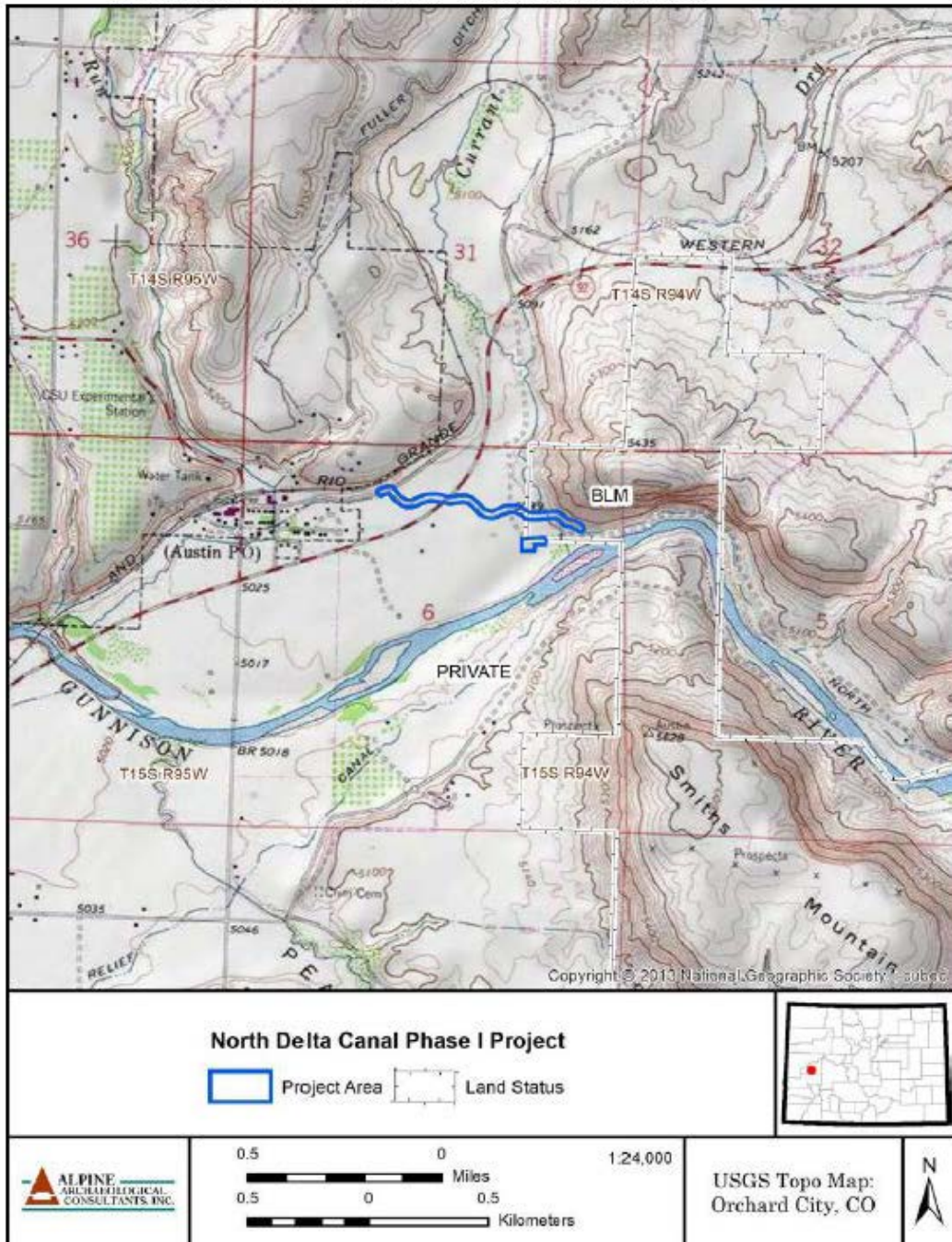
REGARDING THE  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT,  
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,  
LOCATED IN DELTA COUNTY, COLORADO

North Delta Irrigation Company

By:  Date: 10-18-2019  
Roy Lynn Nelson, President



ATTACHMENT A – AREA OF POTENTIAL EFFECT



**ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN****PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF  
CULTURAL RESOURCES****THE NORTH DELTA IRRIGATION COMPANY  
NORTH DELTA CANAL PHASE I EXTENSION PIPING PROJECT  
SALINITY CONTROL PROGRAM,  
DELTA COUNTY, COLORADO****1. INTRODUCTION**

The North Delta Irrigation Company (NDIC) plans to pipe approximately 0.57 mile of the North Delta Canal. The purpose of this project is to reduce the salt load in the Colorado River Basin. The following Unanticipated Discovery Plan (UDP) 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 NDIC 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 stop. The discovery location should be secured at all times.

**STEP 2: NOTIFY MONITOR.** If there is an archaeological monitor for the project, notify that person. If there is a monitoring plan in place, the monitor will follow its provisions. If there is not an archaeological monitor, notify the project manager.



**STEP 3: NOTIFY BUREAU OF RECLAMATION.** Contact the Project Overseer at the Bureau of Reclamation:

Project Manager:  
Roy Lynn Nelson  
970-216-0174  
[NDIC1913@gmail.com](mailto:NDIC1913@gmail.com)

Reclamation Project Overseer:  
Jennifer Ward  
970-248-0651  
[jward@usbr.gov](mailto:jward@usbr.gov)

The Project Manager or the Reclamation Project Overseer 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.

#### **4. FURTHER CONTACTS AND CONSULTATION**

##### **A. Project Manager's Responsibilities:**

- **Protect Find:** The NDIC 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.
- **Direct Construction Elsewhere On-site:** The NDIC Project Manager may direct construction away from cultural resources to work in other areas prior to contacting the concerned parties.
- **Contact CR Manager:** If there is a CR Program Manager, and that person has not yet been contacted, the Project Manager will do so.
- **Contact Project Overseer:** If the Project Overseer at the Bureau of Reclamation has not yet been contacted, the Project Manager will do so.
- **Identify Find:** The Project Manager will ensure that a qualified professional archaeologist examines the find to determine if it is archaeological.
  - If it is determined not archaeological, work may proceed with no further delay.
  - If it is determined to be archaeological, the Project Manager will continue with notification.

- If the find may be human remains or funerary objects, the Project Manager will ensure that a qualified physical anthropologist examines the find. If it is determined to be human remains, the procedure described in Section 5 will be followed.

#### B. Project Overseer's Responsibilities

- Notify BLM Archaeologist: If the discovery is determined to be located on BLM-managed land, the project overseer will contact the BLM archaeologist within 48 hours of the discovery.

BLM Archaeologist:  
Shane Rumsey  
970-240-5303  
[srumsev@blm.gov](mailto:srumsev@blm.gov)

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

Colorado State Historic Preservation Office:  
Mr. Steve Turner, AIA  
State Historic Preservation Officer  
History Colorado  
1200 Broadway  
Denver CO, 80203  
(303)866-3355

#### 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 Native American and/or determined to be of archaeological interest.

In the event possible human skeletal remains are discovered, work in that portion of the project shall stop immediately. The remains shall be covered and/or protected in place in such a way that minimizes further exposure of and damage to the remains, and Reclamation shall immediately notify the Delta County Coroner and the Delta County Sheriff. If the remains are found to have no forensic value, the coroner shall notify the SHPO, in accordance with applicable law. A plan of action shall be developed by SHPO in consultation with appropriate federally recognized 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 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 is the preferred option for treating human remains.

NDIC will comply with the procedures outlined, and will coordinate with the following contacts:

Reclamation CR Manager  
(970) 385-6500

BLM Archaeologist  
(970) 240-5303

Delta County Sheriff  
(970) 874-2000

Delta County Coroner  
(970) 874-5918

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 Project Manager will ensure the proper documentation and assessment of any discovered cultural resources in cooperation 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 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 Reclamation 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 NDIC, Reclamation, BLM, and SHPO determine that compliance with state and federal laws is complete.

WCAO - GRAND JUNCTION  
NOV 8 '19 PM12:42



NOV 04 2019

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

Re: NHPA Consultation for the North Delta Canal Phase I Extension Addendum Survey (Salinity Program) (HC #76477)

Dear Mr. Warner:

Thank you for your correspondence dated October 24, 2019 and received on October 28, 2019 by our office regarding additional consultation of the above-mentioned project under Section 106 of the National Historic Preservation Act (Section 106).

After review of the provided information, we do not object to the proposed Area of Potential Effects (APE) for the above project.

Our office has reviewed the scope of work and assessment of adverse effects, we concur with the recommended finding of *no historic properties affected* [36 CFR 800.4(d)(1)] under Section 106 for the additional area.

Should unidentified archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register eligibility criteria (36 CFR 60.4) in consultation with our office pursuant to 36 CFR 800.13. Also, should the consulted-upon scope of the work change, please contact our office for continued consultation under Section 106 of the National Historic Preservation Act.

If we may be of further assistance, please contact Jason O'Brien, Section 106 Compliance Manager, at (303) 866-2673 or [Jason.obrien@state.co.us](mailto:Jason.obrien@state.co.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Turner".

for  
Steve Turner, AIA  
State Historic Preservation Officer