RECLAMATION
Managing Water in the West

Environmental Assessment and Finding of No Significant Impact

Uncompahgre Valley Water Users Association East Side Laterals Piping Project Phase 9

U.S. Department of the Interior
Bureau of Reclamation
Upper Colorado Region
Western Colorado Area Office
Grand Junction, Colorado

November 2018

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

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

EAST SIDE LATERALS PIPING PROJECT PHASE 9

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 of authorizing the use of Federal funds to implement the Uncompahgre Valley Water Users Association's (UVWUA's) East Side Laterals Piping Project Phase 9 in Delta and Montrose Counties, Colorado. Reclamation is providing the majority of the funding for the project through the Colorado River Basinwide Salinity Control Program, and is therefore the lead agency for the purposes of compliance with the NEPA for this Proposed Action. The 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 East Side Laterals Piping Project Phase 9.

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 EO, GK, EU, GB, and GB-A Laterals of the federal Uncompahgre Project, located east of the City of Delta, in southcentral Delta County, Colorado and north of the Town of Olathe, in northeast Montrose County. Affected interests include Reclamation, the U.S. Bureau of Land Management (BLM), UVWUA shareholders, and adjacent land owners. 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 canal laterals' 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). 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 the EA in Section 3.12.

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 Uncompahgre Project irrigation structures involved in the Proposed Action. Reclamation has entered into a Memorandum of Agreement with the SHPO and UVWUA 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**. Reclamation consulted with FWS regarding the effects on threatened or endangered species and critical habitat from the Proposed Action. In the 2009 Gunnison River PBO (TAILS:65413-2009-F-0044), FWS concurred that depletions associated with operation of Reclamation projects in the Gunnison Basin may affect, and are likely to adversely affect, the four endangered Colorado River fishes and their critical habitat on the Gunnison and Colorado Rivers. The terms and conditions from that consultation are being followed. In the project specific consultation (FWS TAILS: 06E24100-2018-I-0638), FWS concurred the Proposed Action may affect, and is not likely to adversely affect, the threatened Colorado hookless cactus and western yellow-billed cuckoo, and will not adversely modify proposed critical habitat for the yellow-billed cuckoo.

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.

- In the event that uninventoried 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:

11-13-18
Date

Ed Warner
Area Manager, Western Colorado Area Office

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BLM	U.S. Department of the Interior Bureau of Land Management
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
CWCB	Colorado Water Conservation Board
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
ESA	U.S. Endangered Species Act
FONSI	Finding of No Significant Impact
FWS	U.S. Fish & Wildlife Service
GMU	Game Management Unit
HQS	Habitat Quality Score
HUC	Hydrology Unit Code
iPaC	Environmental Conservation Online System Information for Planning and Conservation
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
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
OHV	Off-highway vehicle
PBF	Physical and biological feature (formerly primary constituent element)
PBO	Programmatic Biological Opinion
PIP	Plastic irrigation pipe
PM	Particulate matter
PUP	Pesticide Use Proposal
PVC	Polyvinyl chloride
RCPP	Regional Conservation Partnership Program
Reclamation	U.S. Department of the Interior Bureau of Reclamation
RMP	Resource Management Plan
ROW	Right of Way
SHPO	State Historic Preservation Office
SMPW	Selenium Management Program Workgroup
SPCC	Spill Prevention, Control, and Countermeasures
SRMA	Special Recreation Management Area
TAILS	Advanced Tracking and Integrated Logging System
THV	Total Habitat Value
TMDL	Total Maximum Daily Load

UDP	Unanticipated Discovery Plan
UFO	Uncompahgre Field Office
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
UVWUA	Uncompahgre Valley Water Users Association
VRM	Visual Resource Management

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 the Uncompahgre Valley Water Users Association's (UVWUA's or "Applicant's") proposed UVWUA East Side Laterals Phase 9 Piping Project (hereinafter, "Project" or "Proposed Action"). The Proposed Action is located in Delta and Montrose counties, Colorado, east of the City of Delta and north of the Town of Olathe (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 UVWUA for the Project under Funding Opportunity Announcement (FOA) R15AS00037 and Agreement R16AC00016. Funding assistance for construction costs for the Proposed Action has also been committed by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Regional Conservation Partnership Program (RCPP), and the State of Colorado Non-Point Source Program. As the main funding agency, Reclamation is the lead federal agency for the NEPA analysis of the Proposed Action. The NRCS is participating as a cooperating agency in this EA. Ongoing operation and maintenance of the constructed project would be funded through annual UVWUA water user assessments.

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). The BLM has a connected action of amending an existing right-of-way (COC-67472).

After a public review period for the Draft EA, Reclamation, NRCS, and BLM determined that a Finding of No Significant Impact (FONSI) for the Proposed Action is warranted.

1.1 Background

The Colorado River and its tributaries provide municipal and industrial water to about 40 million people and irrigation water to nearly 4.5 million acres of land in the United States. The river also serves about 3.3 million people and 500,000 acres in Mexico. 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. From 2005 to 2015, an approximate average of 7.5 million tons of salt flowed into the Colorado River annually, and by the year 2035, 1.68 million tons of salt per year will need to be diverted from the system in order to meet water quality standards in the basin (Reclamation 2017). 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. PL 110-246 of June 18, 2008 amended the Salinity Control Act, establishing the Basin States Program, and authorizing Reclamation to take advantage of new, cost-effective opportunities to control salinity anywhere in the basin.

Both the Basinwide Salinity Control Program and the Basin States Program fund 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 Proposed Action will replace part of an existing unlined open irrigation canal system (the Uncompahgre Project) with buried pipe, which would eliminate ditch seepage loss by approximately 1,059 acre-feet per year and reduce salinity in the Colorado River basin by an estimated 6,030 tons of salt per year. An additional beneficial effect of the Proposed Action would be the reduction of selenium in the Colorado River basin (SMPW 2011) by an estimated 241 to 482 pounds per year (UVWUA 2015).

The purpose of the Proposed Action is to comply with the Colorado River Basin Salinity Control Act (Reclamation's federal nexus); to increase the efficiency of the existing delivery system by preventing water loss through both evaporation and deep percolation, furthering the purpose of NRCS' Lower Gunnison Project (NRCS' federal nexus); and to comply with the Federal Land Policy and Management Act of 1976 (BLM'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, and to amend an existing right-of-way grant on BLM land. 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 & Alternatives

The Proposed Action entails Reclamation and NRCS providing funding to UVWUA to replace a total of approximately 20.4 miles of open, unlined East Side laterals with a total of approximately 16.5 miles of buried irrigation pipe (including an approximately 1.1-mile-long pipe outside of existing lateral alignments). Approximately 5.1 miles of an existing ditch lateral would be backfilled and abandoned.

Part of the Proposed Action would take place on private land and part of the Proposed Action would take place on public land administered by the BLM.

The pipeline component of the Proposed Action was designed and engineered by Reclamation's Western Colorado Area Office in Grand Junction, Colorado. The Proposed Action would also include activities at a proposed Habitat Replacement Site designed by a private consultant to mitigate for habitat losses which would result from implementation of the Project. The Habitat Replacement Site lies on private land along the Uncompahgre River approximately

5 miles southwest of the City of Delta. The Proposed Action is described in more detail in Section 2 and the Figures (see Appendix A) included with this EA.

In accordance with NEPA and the Council on Environmental Quality regulations, a No Action Alternative is presented and analyzed in this EA in order to provide a baseline for comparison to the Proposed Action. Under the No Action Alternative, Reclamation and NRCS would not provide funding to UVWUA to pipe portions of the East Side laterals. Seepage from these structures would continue to contribute to salt and selenium loading in the Colorado River basin. Riparian and wetland habitats associated with the ditches would likely remain in place and continue to provide benefits to local wildlife.

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 because they were determined to be technically challenging, economically prohibitive, and/or potentially more destructive to existing habitat than the Proposed Alternative.

1.5 Location & Environmental Setting of the Proposed Action Area

The Proposed Action Area lies in the Uncompahgre River watershed, east of the City of Delta, in southcentral Delta County, and north of the Town of Olathe, in northeast Montrose County, Colorado (Figure 1 [Appendix A]).

There are three general physical locations involved in the Proposed Action: the North Project Area, the South Project Area, and the Habitat Replacement Site (Figures 3, 3a, 3b, and 3c [Appendix A]):

- The North Project Area is in Sections 11, 12, 13 and 14, Township 15 South (T15S), Range 95 West (R95W) of the 6th Principal Meridian (6th PM); Sections 7, 8, 16, 17, 18, 20, 21, 28, 29, 31, 32, and 33, T15S, R94W, 6th PM; Sections 11, 12, and 14, T51N, R10W, New Mexico Meridian; and Sections 8, 17, 19, and 20, T51N, R9W, 6th New Mexico Meridian, all in Delta County. The North Project Area lies on a combination of BLM land and private property in the Peach Valley area east of the City of Delta. It encompasses the existing EO Lateral of the Selig Canal north of the Delta-Montrose county line to a point east of the intersection of H75 and Horn roads; the existing EU Lateral of the Selig Canal from near Last Chance Road north to D50 Road; the existing GK Lateral of the East Canal from D50 Road to near the intersection of H and 2050 roads; and a new EO-Feeder Lateral that would extend between the GK and EO laterals in Sections 8, 17, and 18, T15S, R94W (Figure 3a [Appendix A]).

- The South Project Area is in Sections 28, 30, and 34, T51N, R10W, New Mexico Meridian and Section 3, T50N, R10W, New Mexico Meridian, all in Montrose County (Figure 3b [Appendix A]). The South Project Area lies on private land. It includes the GB and GB-A laterals of the East Canal between 5950 Road and U.S. Route 50 in Section 3 and extends north into Section 28 along the east side of U.S. Route 50 (Figure 3b [Appendix A]).

- The Habitat Replacement Site is in the southwest part of Section 32, T51N, R10W, 6th PM (Figure 3c [Appendix A]) and lies on private land. The Habitat Replacement Site

encompasses approximately 8.4 acres near the Uncompahgre River in mostly non-native riparian vegetation.

The Proposed Action lies in the Colorado Plateau physiographic province, and has an arid continental climate characterized by low humidity and moderately low precipitation (averaging about 10 inches annually). The average elevation in the Proposed Action Area is about 5,500 feet above mean sea level. Current uses on these lands and in the vicinity are livestock grazing, irrigated agriculture, rural residential, and recreation.

The East Side laterals are part of the federally-owned Uncompahgre Project facilities constructed by Reclamation beginning in 1904 and turned over to UVWUA, a not-for-profit entity, for operation and maintenance in 1932. The Uncompahgre Project delivers irrigation water from the Gunnison and Uncompahgre rivers to 3,500 users irrigating just over 84,000 acres in the Uncompahgre Project Area. A total of approximately 2,764 acres of corn, hay crops, grass pasture, and other crops are watered by the East Side Laterals involved in the Proposed Action. The irrigation season typically runs from April through October, for an average of 210 days per year. On-farm irrigation is accomplished using ditches, gated pipe, or sprinkler systems. Drainage from the crops irrigated with the laterals involved in the Proposed Action eventually returns to the Uncompahgre River, west of the Proposed Action Area (Figure 1 [Appendix A]).

Landcover in the vicinity of the Proposed Action Area consists primarily of irrigated agricultural lands and semi-desert shrublands (Figure 4 [Appendix A]). Within the agricultural and natural upland vegetation matrix, areas adjacent to the open ditch laterals and downgradient areas receiving ditch leakage have converted to riparian and/or wetland habitats. The banks of the existing ditch laterals are sparsely vegetated with coyote willow, cattails and other grass-like wetland plants, and stands of common ruderal herbaceous and noxious weeds. These plant communities are subject to intensive maintenance (ditch cleaning, weed treatments). The downgradient areas receiving ditch seepage support a similar array of plants found on the ditch banks and occasional cottonwoods and non-native salt-cedar and Russian olives.

1.6 Relationship to Other Projects

The Proposed Action is Phase 9 of UVWUA's ongoing East Side Laterals Piping Project effort, which began in 1998 to improve the Uncompahgre Project irrigation water delivery system. Phases 1 through 8 involved piping and/or lining of other East Side Laterals of the system in order to reduce salt and selenium loading to the Colorado River Basin and increase water delivery efficiency to users. Previous phases were accomplished as standalone projects, with a variety of funding sources, including Basinwide Salinity Control and Basin States Program funds.

Additionally, a 2.3-mile section of the GK Lateral of the East Canal upstream of the Proposed Action was piped with funding from the Colorado River Storage Project (CRSP) in 2017.

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 (south of the Town of Crawford, in the Alkali Creek, Iron Creek, and Crystal Creek drainages)

- C Ditch Company's C Ditch/Needle Rock Pipeline Project (3 miles north of the Town of Crawford in the Cottonwood Creek drainage)

- Clipper Irrigation Salinity Control Project 4, Zanni Lateral Pipeline Project, and Center Ditch Pipeline Project (2.5 miles southeast of the Town of Hotchkiss and immediately west of the Town of Crawford in the Cottonwood Creek drainage)

- Grandview Canal Piping Project (just south of the Town of Hotchkiss in the Smith Fork River drainage).

- Rogers Mesa Water Distribution Association's Slack and Patterson Laterals Piping Project (about 3 miles west of the Town of Hotchkiss)

- Minnesota Canal Piping Project (near the Town of Paonia in the North Fork of the Gunnison River drainage)

- Lower Stewart Ditch Pipeline Project (near the Town of Paonia in the North Fork of the Gunnison River drainage)

- Bostwick Park Water Conservation District's Siphon Lateral Salinity Control Project (near the City of Montrose)

- Forked Tongue/Holman Ditch Company's Salinity Control Project (near the Town of Eckert in the Tongue Creek drainage)

- Fire Mountain Canal Piping Project (near the towns of Paonia and Hotchkiss in the North Fork of the Gunnison River drainage)

- North Delta Canal Salinity Control Project I (northeast of the City of Delta)

1.7 Scoping, Coordination, & Public Review

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

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

Concerns raised during similar projects (see Section 1.6) also helped identify potential concerns for the Proposed Action.

In compliance with NEPA, the Draft EA was available for public comment for a 30-day period (see Section 5). No public comments were received. Reclamation provided notice of the availability of the Draft EA to private landowners and UVWUA shareholders adjacent to the Proposed Action, and the organizations and agencies listed in Appendix B.

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). Indian trust assets may include lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. No Indian trust assets have been identified within the Proposed Action Area. The American Indian Religious Freedom Act was enacted to protect and preserve Native American traditional religious rights and cultural practices. These rights include, but are not limited to, access to sacred sites, freedom to worship through ceremonial and traditional rights, and use and possession of objects considered sacred. No Native American sacred sites are known within the Proposed Action Area. Neither the No Action Alternative, nor the Proposed Action, will have an effect on 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 tribes had no comment on the Proposed Action.

- Environmental Justice & Socio-Economic Issues (not applicable). Executive Order 12898 provides that federal agencies analyze programs to assure that they do not disproportionately adversely affect minority or low-income populations or Indian Tribes. 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. Written confirmation was received from the U.S. Army Corps of Engineers to verify that the Clean Water Act (33 USC 1344) exemption for Farm or Stock Pond or Irrigation Ditch Construction or Maintenance is applicable to the pipeline and canal abandonment components of the Proposed Action.

- 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 and guide BLM's decision whether or not to issue the

amended ROW. 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 and NRCS would not provide funding to UVWUA to pipe portions of the East Side laterals. Irrigation practices and seepage from the unlined open laterals would continue to contribute to salt and selenium loading in the Colorado River basin. Riparian and wetland habitats associated with the unlined open canal laterals would likely remain in place and continue to provide some benefits to local wildlife.

2.2 Proposed Action Alternative

The specific locations of the Proposed Action Alternative are described in Section 1.3 and shown on Figures 3 (overview), 3a ("North Project Area"), 3b ("South Project Area"), and 3c (Habitat Replacement Site).

Under the Proposed Action Alternative, Reclamation and NRCS would authorize funding to UVWUA to implement Phase 9 of the East Side Laterals Piping Project (Figure 3). Reclamation would authorize funding for those components of the Proposed Action in the North Project Area (Figure 3a) and the Habitat Replacement Site (Figure 3c). NRCS would authorize funding for those components of the Proposed Actin in the South Project Area (Figure 3b). Overall, approximately 20.4 miles of open, unlined East Side canal laterals would be replaced with a total of approximately 16.5 miles of buried irrigation pipe (including an approximately 1.1-mile-long pipe outside of existing lateral alignments). Approximately 5.1 miles of an existing ditch lateral would be backfilled and abandoned. BLM would amend right-of-way COC-67472 to allow for the conversion of open ditch to pipe on those segments of the project which are located on BLM lands.

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. The habitat replacement project would occur on private land approximately 7 miles west of the pipeline components of the Proposed Action.

Pipeline Installation and Canal Decommissioning

The canal lateral segments proposed for piping include the EU (1.3 miles); GK (6.3 miles); the lower EO from 9.3 mile to 11.49 mile (2.2 miles); the upper EO from 0.93 mile to 4.26 mile (3.3 miles); and the GB and GB-A (3.4 miles). The center portion of the EO Lateral would be decommissioned and abandoned from headgate 4.26 to headgate 9.30 (5.1 miles). Irrigation water would be provided to the lower EO Lateral via a newly constructed 1.1-mile feeder pipeline (the EO Feeder) from the GK Lateral. These elements of the Proposed Action are shown on Figures 3a and 3b (Appendix A).

Pipe diameters would range from approximately 6 to 36 inches. The EO Feeder pipe diameter would be 18 inches. Pipe materials would be polyvinyl chloride (PVC) pipe rated at 125 psi. Table 1 summarizes the lengths of the proposed piping components, with a breakdown of components on BLM land vs. private land. Note that all pipe lengths should be considered estimates—however, the locations of the Proposed Action features and work alignments are not expected to change significantly.

Table 1. Summary of Piping Components for the Proposed Action

Component	Total Approx. Length	Approx. Length on BLM Land	Approx. Length on Private Land
Existing irrigation canal laterals	20.4 mi	3.2 mi	17.2 mi
Pipe to be buried in existing lateral alignments	15.4 mi	2.1 mi	13.3 mi
Pipe to be buried outside existing lateral alignments	1.1 mi	0 mi	1.1 mi
Total amount of buried pipe to be installed	16.5 mi	2.1 mi	14.4 mi
Abandoned lateral alignment to be decommissioned by backfilling	5.1 mi	1.1 mi	4.0 mi

The existing farm turnout structures on the newly piped sections would be replaced with new structures equipped with electronic flow meters and control valves. The section of the EO Lateral to be abandoned has no farm turnouts. Five new canal-to-lateral turnouts and 74 new farm turnouts would be installed on the laterals as part of the Proposed Action. No pumping or compressor stations or water storage facilities would be associated with the Proposed Action. The EO Feeder would supply pressurized water to the lower EO water users.

Installation of the pipeline in the existing lateral alignments would involve using trackhoes and possibly a bulldozer to grub vegetation and fill and bed the existing ditch laterals. An excavator would then trench in the prepared bed to place the pipe. Installation of the pipeline outside the existing lateral alignments (the EO Feeder) would be a simple trenching and pipe-laying operation, except at the crossing of the Peach Valley Arroyo, where the pipe would be bored under the arroyo. Excavation of the pipe trench and positioning the pipe in the trench would be performed with trackhoes. The decommissioned reach of the EO Lateral would be filled and smoothed with trackhoes to match the surrounding land contours and restore drainage patterns. Front end loaders with pallet forks would likely be used to handle pipe in the staging areas. Fill and borrow material would be transported in tandem dump trucks loaded with a trackhoe or loader. Pipe arriving at the staging areas would be transported on 50-foot flatbed trucks.

Photograph 1. Looking northeast along the EO Lateral in the North Project Area.

Photograph 2. Looking southwest along the GK Lateral in the North Project Area.

Photograph 4. View of where the EO Feeder would be installed, in the North Project Area.

Photograph 3. Looking southwest along the EU Lateral in the North Project Area.

Several construction borrow / staging areas have been identified for the Proposed Action (Figures 3a and 3b [Appendix A]). All staging and material borrow would take place on previously disturbed ground on private land. The material needed for construction fill would be generated within the construction footprint; however, if additional borrow material is needed, it would be obtained either from the borrow / staging areas designated for the Proposed Action, or from a commercial source.

The existing lateral alignments are in prescriptive easements on private and BLM lands. All private landowners in the footprint of the Proposed Action where activities would take place outside the prescriptive easement have agreed to allow the activities of the Proposed Action to be conducted on their lands. Right-of-way COC-67472 on BLM land would be amended to include the Proposed Action. UVWUA is securing dedicated easements through private lands for the new EO Feeder alignment. The easements are anticipated to be approximately 50 feet wide. The rights-of-way and easements for the Proposed Action and their specific locations will be clearly marked on the construction drawings. Dedicated easements for the EO Feeder would be recorded in Delta County when the as-built pipe alignment is completed and surveyed.

The Proposed Action would cross 8 paved county roads, 8 gravel county roads, and 9 gravel private farm roads. All but the EO Feeder road crossings would occur where the existing lateral culverts currently pass under the roads. In most cases, pipe would be placed in the existing culverts and the annulus space filled with concrete. If

using the existing lateral culverts is not feasible, then the road crossings would be open trench crossings.

Construction and access 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 lateral prisms, county roads, or existing private roads (Figures 3a, 3b, and 3c [Appendix A]). Some accessways may require some minor grading and smoothing to provide for truck travel to the project alignment. Accessways and road crossings would be returned to the same or better condition than they were prior to construction. There would be no permanent road in the newly established EO Feeder alignment.

Photograph 5. Looking north along the GB Lateral in the South Project Area.

Photograph 6. View across the Habitat Replacement Site in the Uncompahgre River corridor.

Restoration activities would occur on all surface disturbances caused by construction of the Proposed Action. Vegetation slash would be hauled off-site to one of the several identified proposed staging areas and chipped or burned at that location. All disturbed areas would be seeded with drought-tolerant seed mixes approved by Reclamation (and BLM on BLM lands), appropriate for the surrounding native vegetation, and monitored subject to BLM stipulations and agreements between UVWUA and individual land owners.

Noxious weeds would be controlled in disturbed areas according to right-of-way stipulations and county standards (Delta County 2010; Montrose County 2011). Woody noxious weeds within the Proposed Action Area would be mechanically removed during construction. After construction, UVWUA would control herbaceous noxious weeds as necessary for the life of the project through the use of herbicides mixed with surfactants. UVWUA would coordinate with BLM on the use of herbicides on lands managed by the BLM, and would obtain Pesticide Use Proposals (PUPs) prior to treatments.

Best Management Practices (BMPs) would be used to control erosion, minimize harm to wildlife, and minimize the spread of noxious weeds during and following construction. 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) under each resource topic, and are summarized in Section 4 (Environmental Commitments).

The piping component of the Proposed Action would occur incrementally across the Proposed Action Area during the irrigation off-season (approximately November through March). The proposed pipeline outside the existing lateral alignments (the EO Feeder) in the North Project Area could be installed at any time of year. Decommissioning and backfilling of the reach of the EO Lateral to be abandoned would be performed after proper operation of the EO Feeder has been verified and could also be performed at any time of the year. The timing of certain activities related to the Proposed Action would be subject to limitations to protect special status species and their habitats. These timing limitations are explained in Section 3.9 and listed in the Environmental Commitments in Section (Section 4).

Habitat Replacement

The habitat replacement project would occur on approximately 8.4 acres ("Habitat Replacement Site") of a private parcel encumbered by a perpetual conservation easement held by Colorado West Land Trust (Figure 3c [Appendix A]). The Habitat Replacement Site is a former livestock pasture and hayfield adjacent to the Uncompahgre River with a preponderance of non-native vegetation.

Habitat value lost due to the canal piping project will be offset at the Habitat Replacement Site in accordance with a Habitat Replacement Plan (Zeman 2018a). The plan would enhance the wildlife values of the parcel by planting native riparian trees and shrubs, seeding with native grasses and forbs, and controlling and removing noxious weeds, including areas of Russian olive and tamarisk. Implementation of the Habitat Replacement Plan would result in a healthier riparian corridor along the Uncompahgre River and a mosaic of wooded areas and meadows which would be attractive to a variety of wildlife.

Native shrubs and small trees would be planted by hand or with the assistance of a small tractor. Old ditches on the property would be upgraded to provide water to the new plantings by redirecting overflow from existing upgradient spring-fed ponds on the property. Russian olive and tamarisk removal would be accomplished with heavy equipment or by hand with chainsaws and brushcutters. Vegetation slash (i.e., non-native trees and shrubs removed from the site) would be produced by the Proposed Action. Slash would be chipped and shredded onsite and used on access paths in upland areas around the Habitat Replacement Site.

The timing of the work at the Habitat Replacement Site would correspond with the most effective and appropriate times for seedings, plantings, weed control, irrigation, and other site maintenance, with the following exception: Removal of non-native trees or shrubs would be avoided during the migratory bird nesting season (including the nesting season for western yellow-billed cuckoo).

The Habitat Replacement Plan (Zeman 2018a) would be implemented in accordance with the environmental commitments listed in Section 4. BMPs would be used to control erosion, minimize harm to wildlife, prevent spills of petroleum products, and minimize the spread of weeds during site plantings and maintenance (see Section 4). UVWUA would be responsible for maintenance of the Habitat Replacement Site for 50 years after its establishment.

Permits & Authorizations

If the Proposed Action is approved, the following permits, plans, and authorizations would be required prior to project implementation:

- BLM Right-of-Way Amendment, application in progress by Reclamation.
- Right-of-Way approvals from private landowners outside the prescriptive easement of the laterals with land involved in the Proposed Action, obtained by UVWUA.
- 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).
- Spill Prevention, Control, and Countermeasures (SPCC) 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. During preparation of this EA, information on issues and concerns was received from UVWUA, resource agencies, and other interested parties, as noted in the subsections below.

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

The Gunnison River basin encompasses approximately 8,000 square miles. Information on water rights within the Gunnison basin in general can be found in the report entitled “Gunnison River Basin Information, Colorado’s Decision Support Systems” (CWCB 2017).

The Uncompahgre Project stretches across a large part of western Colorado, operating 128 miles of canals, 438 miles of canal laterals, and 216 miles of drains in Reclamation’s Upper Colorado Region. The Uncompahgre Project draws water from the Uncompahgre and Gunnison rivers, irrigating just over 84,000 acres in Delta and Montrose Counties. Furrow irrigation is used for the majority of orchards, row crops, and pasture lands. Sprinkler irrigation is used on a limited number of fields, and some drip/micro-irrigation is used on some orchards and row

crops. Principal crops produced in the area include corn, alfalfa, beans, onions, potatoes, apples, pears, cherries, apricots, pasture forage, grass hay, wheat, barley, and oats.

The Uncompahgre Project canal laterals involved with the Proposed Action irrigate approximately 2,764 acres of land with water drawn from the Uncompahgre River at the Selig Canal and East Canal headgates. The water rights for the Uncompahgre Project are the Gunnison Tunnel Water Right of 1913 for 1,300 cfs from the Gunnison River; an 1882 Uncompahgre River Water Right for 1,225.64 cfs; and a Taylor Park Reservoir Storage Water Right of 106,230 acre-feet. Water in the laterals involved with the Proposed Action is delivered on a volume basis in 24-hour blocks, ordered by the water users by flow rate and duration. Water masters and ditch riders make the necessary system adjustments to meet the water orders.

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, UVWUA would have the ability to better manage irrigation water with efficiencies gained from eliminating seepage by piping the system. Efficiencies gained may result in more water availability during the irrigation season (up to 1,059 acre-feet per year for downstream UVWUA users (UVWUA 2015); however, the Proposed Action does not include new water storage or the irrigation of new lands. The Proposed Action would provide more reliable and flexible flows, because water orders would be metered, and irrigators would have the ability to shut off water when their irrigation is complete, rather than being required to take water in 24-hour blocks. The Proposed Action would also allow for the development of a pressurized delivery system for improved on-farm water management and potential conversion to more high-efficiency irritation systems for users on the EO and GK laterals. The Habitat Replacement Site is irrigated with existing water rights. No adverse effects on water rights in the Gunnison or Colorado River Basins would occur due to implementation of the Proposed Action.

3.2 Water Quality

The Proposed Action is in the Uncompahgre and Gunnison River watersheds. The Uncompahgre River is a tributary of the Gunnison River, and the Gunnison River is a major tributary of the Colorado River in west-central Colorado. Irrigation practices in the region and in the Proposed Action Area contribute to high downstream salinity levels and create an adverse effect on the water quality of the Colorado River basin (see Section 1.1). Fish habitat in the Gunnison and Colorado Rivers is also threatened by selenium levels. Selenium is an element that occurs in the region's soils in soluble forms such as selenate, which is leached into rivers by runoff and irrigation practices. Though trace amounts of selenium are necessary for cellular functioning of many organisms, it is toxic in slightly elevated amounts. Selenium loading has been quantified as approximately 241 to 482 pounds per year for the Proposed Action (UVWUA 2015) and is potentially contributing to an adverse effect on the water quality of the Colorado River basin.

Figure 5 (Appendix A) shows the hydrologic units in the vicinity of the Proposed Action. The North Project Area is located within the Peach Valley (Peach Valley Arroyo) hydrologic unit (hydrologic unit code [HUC] 140200050104) and the Sunflower Drain (HUC 140200050113) in the Gunnison River watershed. The South Project Area is within the Loutzenhizer Arroyo (HUC

140200060605) and the Uncompahgre River Outlet (HUC 140200060606) in the Uncompahgre River watershed (a major Gunnison River tributary). The Habitat Replacement Site is in the Uncompahgre River Outlet hydrologic unit. Official designated uses for these units is a combination of recreation, water supply, and agriculture.

Currently, the tributary drainages involved in the Proposed Action are under monitoring and evaluation for sulfate and/or iron impairments (CDPHE 2018). The Uncompahgre River in the vicinity of the Habitat Replacement Site is a listed impaired water due to its failure to meet sediment, arsenic, and dissolved manganese standards. Both the mainstem of the Gunnison River downstream from Highway 65 and the Uncompahgre River are listed impaired waters due to failure to meet sediment, *E. coli*, iron, dissolved manganese, and sulfate standards. Neither the Uncompahgre nor the Gunnison River units in the vicinity of the Proposed Action meet selenium standards, but they do not currently have Total Maximum Daily Load (TMDL) requirements under the Water Quality Control Commission (CDPHE 2018). Instead, the Gunnison Basin Selenium Management Program, a private/public partnership of concerned parties and stakeholders, is working to implement solutions to reduce selenium concentrations in the basin (SMPW 2011).

No Action: Under the No Action Alternative, the estimated 6,030 tons of salt annually contributed to the Colorado River basin from this system would continue. Current selenium loading levels would continue.

Proposed Action: In the long term, the Proposed Action would eliminate seepage from the unlined canal laterals, reducing salt loading to the Colorado River basin at an estimated rate of 6,030 tons per year, at a cost-effectiveness value of approximately $37.07 per ton (UVWUA 2015). The Proposed Action is also expected to reduce selenium loading into the Gunnison River basin (a goal of the Gunnison Basin Selenium Management Program [SMPW 2011]) by 241 to 482 pounds per year (UVWUA 2015). Improved water quality would likely benefit downstream aquatic species by reducing salt and selenium loading in the Gunnison River, a listed impaired stream. Maintenance or improvement of water quality in the Gunnison River would be of importance to users.

In the short term, construction activities in waterbodies have the potential to mobilize sediments. Burial of irrigation pipe in existing canal lateral alignments would occur during the irrigation off-season (while no water is flowing in the laterals). Water quality construction BMPs, revegetation of disturbed areas, and restoration of drainage patterns that cross the lateral alignments would be environmental commitments for the Proposed Action. An exemption from Section 404 the Clean Water Act applies to the pipeline component of the Proposed Action and has been verified in writing by the U.S. Army Corps of Engineers (Appendix C); therefore, no Section 401 Water Quality Certification is required for the pipeline component of the Proposed Action. Prior to construction activities at the Habitat Replacement Site, UVWUA will coordinate with the U.S. Army Corps of Engineers to obtain a Section 404 Permit, if necessary.

3.3 Air Quality

The National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act specify limits for criteria air pollutants. Criteria pollutants include carbon monoxide, particulate matter (PM 10 and PM 2.5), ozone, sulfur dioxide, lead, and nitrogen. If the levels of a criteria pollutant in an area are higher than the NAAQS, the airshed is designated as a nonattainment area. Areas that meet the NAAQS for

criteria pollutants are designated as attainment areas. Delta and Montrose counties are in attainment for all criteria pollutants (EPA 2018).

No Action: There would be no effect on air quality in the Proposed Action Area from the No Action Alternative. The ditch 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 have a temporary, short-term effect on the air quality in the immediate Proposed Action Area. Dust would be generated by excavation activities and the movement of construction equipment on unpaved roads. BMPs would be implemented to minimize dust and would include measures such as watering the construction site and access roads, as appropriate. Impacts on air quality would be temporary and would cease once construction is complete. 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 ditch alignments. Impacts to air quality from routine maintenance include dust from occasional travel in light vehicles along the Project corridor.

3.4 Access, Transportation, & Public Safety

The major transportation routes in the vicinity of the Proposed Action are State Highway 92, between Austin and Delta near the North Project Area, and U.S. Route 50 near the South Project Area and the Habitat Replacement Site (Figure 1 [Appendix A]). The North Project Area would be accessed from local county roads such as H75 Road, Peach Valley Road, E Road, F Road, H Road, 2030 Road, D50 Road, Last Chance Road, and B50 Road in Delta County (Figure 3a [Appendix A]). The South Project Area would be accessed from U.S. Route 50 (at an existing dedicated accessway), Banner Road, Carnation Road, and 5950 Road in Montrose County (Figure 3b [Appendix A]). The Habitat Replacement Site would be accessed from a private drive off Ash Mesa Road or a private drive off U.S. Route 50 (Figure 3c [Appendix A]).

Private roads and county roads generally provide access and mobility for local residents traveling in and out of the Proposed Action Area. Delta County roads H75/Smith Mountain Road and Ute Road provide access to recreationists and other users of BLM lands east of the North Project Area (see Section 3.5).

The Delta County Sheriff, the Delta County Ambulance District, and the Delta County Fire Protection District 1 cover the Proposed Action Area in Delta County. The Montrose County Sheriff and the Montrose Fire Protection District cover the South Project Area.

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

Proposed Action: The Proposed Action Area would be accessed using existing public roads and private roads connecting directly to the Proposed Action Area. There would be no need for construction of new access roads for the Proposed Action, as construction access would be on existing roads and within the construction right-of-way. There are no known bridges with weight restrictions that would be used by construction vehicles. Implementation of the Proposed Action may cause brief delays along public (county) roadways adjacent to the Proposed Action Area from construction vehicles

entering and exiting the local roadways. If open trench road crossings are necessary, they would result in temporary re-routes around construction zones for local residents lasting from 8 to 36 hours. UVWUA and the construction contractor would coordinate with Delta and Montrose County Public Works Departments for construction road crossings. UVWUA and the construction contractor would coordinate with the counties and sheriff departments when traffic or access would be delayed or significantly re-routed.

3.5 Recreational & Visual Resources

Public lands involved in the Proposed Action are lands administered by BLM in the North Project Area (Figure 3a [Appendix A]). These BLM lands are managed under the Gunnison Gorge National Conservation Area (NCA) Resource Management Plan (RMP; BLM 2004). Those BLM lands in the North Project Area north of where Peach Valley Road intersects the Proposed Action lie in the Gunnison River Special Recreation Management Area (SRMA) in Management Zone MU3-3 "Smith Mountain/Rogers Mesa Uplands." All other BLM lands in the North Project Area are characterized as "Other Public Lands," specifically within Management Zone MU6-1 "West Common Lands" (BLM 2004). All BLM lands in the immediate North Project Area are mixed with rural residential lands.

Recreation management on the 13,500-acre Gunnison River SRMA focuses on the Gunnison and North Fork Gunnison River corridors, which are more than a mile from the Proposed Action. The main activities in the 10,500-acre Zone MU3-3 within the SRMA are on-route four-wheel driving, horseback riding, hunting, and camping. Smith Mountain Road, the primary vehicular access to the Gunnison River and to the Black Ridge and Smith Mountain jeep trail systems, crosses through the North Project Area and parallels about 0.4 mile of the EO Lateral segment that would be abandoned (Figure 3a [Appendix A]).

The BLM West Common Lands are 16,000 acres of "limited off-highway vehicle (OHV)" areas and allow mechanized (motorized and non-motorized) travel on designated routes, and camping (on the east side of Peach Valley Road). Uses include scenic driving, four-wheel driving, motorcycle and mountain bike trail riding, horseback riding, and hunting. Ute Road is the main access to these lands in the North Project Area. Ute Road (off Peach Valley Road) leads to the Gunnison Gorge rim and the popular Ute Trail trailhead.

The RMP characterizes the MU3-3 as VRM Class III (BLM 2004). The physical setting is "predominantly middle country with sections of front country near access roads, motorized, largely unmodified natural-appearing environment" (BLM 2004). The EO Lateral and the east end of the EO Feeder lie on or near the west edge of these lands, topographically below the BLM lands to the east (Figure 3a [Appendix A]).

The RMP characterizes the West Common Lands as VRM Class III (BLM 2004). The physical setting is "predominantly middle country with small sections of rural next to private lands, motorize, largely unmodified and natural-appearing; resource modifications evident but harmonious with surroundings" (BLM 2004). An approximately 2.5-mile stretch of the EO lateral lies along the east edge and topographically below the majority of these lands, roughly parallel to Peach Valley Road and another 1 mile of the EO lateral crosses these lands in the south part of the North Project Area (Figure 3a [Appendix A]).

BLM Manual 8410-1 (Visual Resource Management) defines and categorizes visual resource management classes that provide objectives for visual resources on BLM lands as projects are

proposed and implemented in the landscape. These Visual Resource Management (VRM) classes are determined through an inventory process described in BLM Manual 8410-1. Class I areas are protected from visible change, Class II areas allow for visible changes that do not attract attention, Class III areas allow for visible changes that attract attention but are not dominant, and Class IV areas allow for visible changes that can dominate the landscape.

No Action: The No Action Alternative would have no effect on recreational or visual resources on BLM lands. Recreation in the Proposed Action Area would continue as in the past, and visual resources would remain unchanged.

Proposed Action: Taking into account a 100-foot buffer on either side of the canal laterals involved with the Proposed Action, a total of approximately 40 acres of BLM land would be involved in the Proposed Action, all in the North Project Area (Figure 3a [Appendix A]). Construction of the Proposed Action could disrupt recreational enjoyment on BLM land in the immediate North Project Area, due to construction activities (noise, presence of heavy equipment, temporary delays on county roads). However, these disruptions would be temporary, and take place incrementally in the North Project Area, mostly during winter over the course of construction. Public access to Ute Road and Smith Mountain Road, primary accessways to recreation opportunities in the Gunnison Gorge NCA, could be temporarily disrupted (slowed) when construction activities are conducted in those areas. Disruptions are not likely to last more than 36 hours while pipe crossings of those roads are completed. To ensure public safety, pipe trenches left open while unattended (e.g. overnight) that could pose a hazard to recreators would be covered. Upon completion of the Proposed Action, there would be no further impact to recreation or access to recreation in the North Project Area. There would be no impacts to recreation or visual resources on BLM lands from Proposed Action Activities in the South Project Area or the Habitat Replacement Site. Overall, 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 to moderate, and not out of character with the surrounding landforms, or with the rural and agricultural character of the vicinity. The visual change would be compatible with Class III area management guidance, in that the buried pipe alignments, once revegetated, would not lead to visible changes that dominate the landscape.

3.6 Livestock Grazing

The BLM lands within the Proposed Action Area fall within three BLM Grazing Allotments: Smith Mountain (5,500 acres), Middle Peach Valley (9,640 acres), and Selig Canal (3,140 acres). These allotments all lie in the vicinity of the North Project Area and support winter and early spring sheep grazing. The grazing allotments include salt desert and stony salt desert ecological types with their characteristic sparse vegetative growth and fragile soils. In the area of the Proposed Action, the grazing forage consists mostly of cool season greases and salt-tolerant shrubs. The grazing allotments contain occurrences of invasive annual grasses (cheatgrass, annual wheatgrass), invasive annual forbs (mustards), and noxious weeds such as Russian knapweed and whitetop.

No Action: The No Action Alternative would have no effect on the grazing allotments or grazing on BLM lands. Livestock grazing in the Proposed Action Area would continue as in the past.

Proposed Action: Under the Proposed Action, temporary disturbance to less than a total of approximately 40 acres of grazing rangelands within the BLM grazing allotments in the North Project Area would occur during construction. Surface disturbances would be reclaimed as explained in other sections of this EA. There are no BLM grazing allotments in or adjacent to the South Project Area or the Habitat Replacement Site.

Livestock grazing in the allotment could be temporarily affected by construction; however, the quality of the grazing range in the North Project Area is relatively poor and represents less than 1 percent of the overall grazing allotments. The allotment permittees would be notified of activities under the Proposed Action. During construction, pipeline trenches left open overnight would be kept to a minimum and covered to reduce potential for entrainment of big game or livestock and public safety problems. Covers would be secured in place and strong enough to prevent livestock or wildlife from falling through. Where trench covers would not be practical, wildlife escape ramps would be utilized.

No BLM lands currently capable of being grazed in the North Project Area would be rendered permanently incapable of being grazed as result of the Proposed Action. The Proposed Action may result in a small increase in lands capable of providing livestock grazing within the Proposed Action Area by filling and vegetating the lateral prisms.

3.7 Vegetative Resources & Weeds

Figure 4 (Appendix A) shows the general landcover types in the Proposed Action Area. Landcover types around the North Project Area include low semi-desert shrublands dominated by shadscale, mat saltbush, or greasewood, with areas of disturbed ground and irrigated hayfields or pastures. Much of the EO Lateral runs through stony steep ground in semi-desert shrublands, whereas the other laterals in the North Project Area are primarily in “adobe badlands” and irrigated farmland areas. The EO Feeder location crosses a combination of native semi-desert shrublands, the greasewood and bare soils of the Peach Valley arroyo, and previously disturbed ground in ruderal weeds or pasture grasses. In the South Project Area, the canal laterals pass through irrigated farmlands and areas of disturbed ground. All canal segments involved with the Proposed Action have a one-lane dirt access road alongside the canal. All staging areas are on previously disturbed ground in agricultural areas or irrigated fields.

Water flowing in the existing irrigation ditch laterals has created narrow corridors of riparian and wetland habitat along the canal itself and in drainage patterns downgradient of the laterals. These areas are vegetated with coyote willow, cattails, and an occasional mature cottonwood, but also with common ruderal weeds and noxious weeds. Vegetation along the canal corridors and access roads is routinely disturbed due to use and maintenance activities. The prevalent noxious weeds in the canal corridors are whitetop, Russian knapweed, Canada thistle, tamarisk (salt cedar) and Russian olive. Other non-native plants (ruderal weeds) in the canal corridors include cheatgrass, halogeton, annual wheatgrass, sweetclover, and various annual mustards. Flowing water in the ditch laterals is a vector for the continued spread of weeds. Vehicles, people, livestock, and wildlife traveling on the ditch access roads can also help weeds spread along ditch alignments.

The condition of the natural areas in the Project Area can be characterized as semi-native. The canal prisms themselves contain a mix of native and non-native riparian and wetland vegetation, bare ground, and ruderal and noxious weeds. Where native shrublands adjoin the canal

alignments, they are in a condition ranging from good (healthy native plant community with few invasive species) to poor (decadent native shrub overstory with weedy understory). Where the EO Feeder alignment crosses undisturbed ground, the native shrublands are in good condition, with few noxious weeds and minor occurrences of cheatgrass, halogeton, annual wheatgrass, and non-native mustards.

The riparian and wetland vegetation along the open ditch lateral corridors support or contribute to the support of aquatic wildlife, terrestrial wildlife, and migratory birds. Public Laws 98-569 and 104-20 require that the Secretary of the Interior "shall implement measures to replace incidental fish and wildlife values foregone" and develop a program that "shall provide for the mitigation of incidental fish and wildlife values that are lost."

The Habitat Replacement Site is an area on the Uncompahgre River formerly used as livestock pasture and to grow hay. It is currently dominated by non-native plants, including reed canarygrass, Canada thistle, Russian olive, and salt cedar.

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

Proposed Action: Construction activities would directly disturb approximately 121 acres of previously disturbed upland semi-desert shrublands in the Proposed Action Area (including staging areas), and would disturb approximately 6.5 acres of native, previously undisturbed semi-desert shrublands. These areas would be recontoured and reseeded with BLM/Reclamation-approved drought-tolerant seed mixes appropriate for the habitat. Dust from operating equipment and vehicles could also affect vegetation in the area.

The Proposed Action would result in the permanent loss of approximately 30 acres of riparian and wetland vegetation associated with the open unlined canal laterals and downgradient seepage from the laterals. A habitat evaluation was performed for the Proposed Action Area to quantify potential wetland and riparian habitat values that would be lost due to implementation of the Proposed Action (Zeman 2018b). The evaluation followed methodology outlined in Reclamation's *Basinwide Salinity Control Program: Procedures for Habitat Replacement* (April 2018 version). 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 criteria. The HQS criteria include vegetative diversity, degree of stratification, wildlife use, presence of noxious weeds, overall health/condition, degree of interspersion of vegetation with open water, connectivity with other habitat types, uniqueness, water supply, and degree of human alteration. The predicted total of THV units that would be affected due to Proposed Action is the sum of the THVs across the Proposed Action Area is 33.81 (Zeman 2018b).

To compensate for the loss of 33.81 total habitat value units that would be caused by implementation of the Proposed Action, UVWUA would implement a Habitat Replacement Plan (Zeman 2018a) in the Uncompahgre River corridor, approximately 7 miles west of the pipeline component of the Proposed Action (Figures 3 and 3c [Appendix A]). Noxious weeds would be reduced by treatment and removal efforts. Native species abundance would increase from seeding and planting activities. Implementation of the Habitat Replacement Plan would result in a healthier riparian corridor along the Uncompahgre River.

Construction of the Proposed Action, including the Habitat Replacement Site, would follow BMPs to minimize the construction footprint, protect water quality, and minimize dust and soil erosion. Revegetation would be implemented according to BLM right-of-way stipulations and Delta County standards (Delta County 2010).

Construction footprints in certain areas, such as the EO Feeder corridor, will extend into previously undisturbed ground, creating conditions for weeds to spread. 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 UVWUA would be implemented during revegetation of construction alignments. However, given the dry conditions and presence of undesirable species (e.g. cheatgrass, halogeton, annual wheatgrass, etc) surrounding the Project Area, restoring the area to a native vegetation community could be inhibited.

In the long-term, piping the canal laterals would remove an important vector of weed seed transport—open water. In the North Project Area where part of the EO Lateral would be decommissioned and backfilled, the need for a maintained canal access road would also be eliminated, lowering the potential for the continued spread of weeds. Downgradient seeps from the 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.

3.8 Wildlife Resources

In the Proposed Action Area, the canal provides ribbons of riparian and wetland habitat within a matrix of native upland semi-desert vegetation (Section 3.7). Vegetation and water resources supported by the canal laterals, in association with nearby irrigated land, provide nesting, breeding, foraging, cover, and movement corridors for an array of wildlife. Note: special status species are discussed in Section 3.9.

Colorado Parks & Wildlife (CPW) describes parts of the North Project Area and the Habitat Replacement Site as mule deer resident and year-round concentration areas, severe winter range, and winter concentration areas (Figure 7 [Appendix A]). The South Project Area and about a third of the North Project Area lie in a mule deer resident population area. About two-thirds of the North Project Area is characterized as a mule deer limited use area (Figure 7 [Appendix A]). The winter concentration areas correspond with irrigated meadows near the Gunnison and Uncompahgre rivers, and resident areas correspond with river corridors and productive irrigated valley agricultural lands with scattered areas of wooded cover. The sparsely vegetated semi-desert shrublands in the North Project Area provide limited habitat for mule deer in comparison to the mapped resident population and concentration areas. The Proposed Action Area also falls within overall range of black bear and mountain lion (CPW 2017).

A variety of small mammals, reptiles, and amphibians also inhabit the general area. Those that would be likely to use the canal or adjacent areas include ground-dwelling rodents, such as white-tailed prairie dog, several species of mice, voles, shrews, and cottontail rabbit. Also common in the area are striped skunk, raccoon, red fox, coyote, badger, bobcat, western terrestrial garter snake, smooth green snake, Woodhouse’s toad, and tiger salamander.

No Action: Under the No Action Alternative, terrestrial 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. Long-term, the Proposed Action would remove a source of big game drinking water from the area by decommissioning the canal laterals. However, other wildlife drinking water resources are available throughout the Proposed Action Area (Peach Valley Arroyo, small on-farm irrigation ditches, stock water resources).

Mule deer in concentration and resident population areas near the construction activity would have the ability to move to other suitable areas. During construction, pipeline trenches left open overnight would be kept to a minimum and covered to reduce potential for entrainment of big game or livestock and public safety problems. Covers would be secured in place and strong enough to prevent livestock or 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 ditch 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 3.7. 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 Reclamation-approved Habitat Replacement Site (Zeman 2018a) to be created and maintained by UVWUA.

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.

3.9 Special Status Species

Migratory Birds & Raptors

Migratory birds protected under the Migratory Bird Treaty Act (MBTA) find nesting and/or migratory habitat in the Proposed Action Area. Under the MBTA, it is illegal to take, possess, import, export, transport, sell, purchase, or barter any migratory bird, bird parts, nests, or eggs of such birds except by permit. According to a list generated using the U.S. Fish & Wildlife Service's (FWS') Environmental Conservation Online System Information for Planning and Conservation (IPaC) for the Project Area, migratory songbirds of conservation concern protected under the Migratory Bird Treaty Act that could potentially find habitat in the Proposed Action Area and the immediate vicinity include the following: golden eagle (year-round), Brewer's sparrow (breeding), and Virginia's warbler (breeding). Destruction of vegetation that

harbors active bird nests during nesting season can result in direct loss (i.e., “take”) of eggs or young, or cause adult birds to abandon eggs. The primary nesting season for migratory songbirds in the Proposed Action Area is April 1 through July 15.

Common raptors with a high potential to occur in the Proposed Action Area include red-tailed hawk (nesting, foraging, wintering, migrating), great-horned owl (nesting, foraging, wintering, migrating), long-eared owl (nesting, migrating), and American kestrel (year-round). These and other less common but potentially present raptors, including burrowing owl (breeding), ferruginous hawk (wintering), prairie falcon (year-round), and Swainson’s hawk (breeding), are protected by the MBTA.

In addition, bald eagles and golden eagles are protected by the Bald and Golden Eagle Protection Act of 1940. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." “Disturb” means to agitate or bother a bald or golden eagle to a degree that it causes injury or interferes with normal breeding, feeding, or sheltering behavior.

Bald eagles shelter in communal roost sites, consisting of trees or other tall structures where they gather regularly during the course of a season and shelter overnight or during inclement weather. Documented bald eagle roost sites are more than 1.75 miles from any part of the Proposed Action Area (Figure 6 [Appendix A]). CPW maps the entire Proposed Action Area within bald eagle winter range and winter foraging range, and parts of the Proposed Action within a bald eagle winter concentration area (Figure 6 [Appendix A]). Bald eagles and other raptors are common hunters during winter on the local mesas around the Proposed Action, especially on open and agricultural ground where prairie dogs and other burrowing rodents provide prey.

The core nesting season for raptors (hawks, falcons, and owls) in the area is April 1 through July 15; however, individuals may begin courtship and nest construction as early as February. Bald eagles nest during the period between October 15 and July 31, golden eagles nest between December 15 and July 15, and red-tailed hawks can initiate nesting as early as February 15 (CPW 2008). The most common raptors in the area (red-tailed hawks) typically choose tall cottonwood trees for nest sites, with the exception of golden eagles, which typically choose cliffs, and burrowing owls, which occupy prairie dog dens. Tree-nesting raptors construct substantial stick nests, and generally return to the same nest location annually.

The nearest active bald eagle nests are on the Gunnison River more than 6 miles from any part of the Proposed Action Area (Figure 6 [Appendix A]). Two raptor stick nests (inactive in spring 2017, most likely red-tailed hawk nests) lie less than 0.2 mile from the GK and EO laterals, respectively.

Suitable nest sites (cliffs) for golden eagles do not exist in or within a mile of the Proposed Action Area. No burrowing owls were observed during the biological survey. A few tall cottonwoods suitable for tree-nesting raptors exist along the canal laterals and the Uncompahgre river corridor. Like migratory songbirds, raptors disturbed during nesting may abandon their eggs or be less successful at feeding their young. A baseline level of disturbance in the area to migratory birds and raptors occurs from recreational, residential and farming activities, and from vehicles traveling along nearby public roads.

No Action: In the absence of the Proposed Action, migratory songbird and raptor nesting and foraging habitat would remain in its current condition, and no temporary displacement of migratory birds or raptors would occur. Salinity and selenium loading in 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: Direct impacts to migratory songbirds and raptors would include minor short-term disturbance and displacement from the Proposed Action Area from construction activities. Wintering and migrating songbirds and raptors are not expected to experience measurable short- or long-term affects due to construction disturbance or displacement because adult birds have the flexibility to move away from disturbances to other suitable areas. Wintering foraging and migrating habitat for songbirds and raptors around the valley and 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.

There would be no direct effect to breeding songbirds since pre-construction vegetation grubbing would occur outside the primary nesting season (potential nesting habitat including scattered shrubs and a few trees lining the ditch would be grubbed and removed outside the period of April 1 through July 15). 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 the nearby Reclamation-approved Habitat Replacement Site. Some direct loss of potential raptor nesting habitat (a few tall trees established on or near the laterals) would occur as a result of the Proposed Action.

Project activities taking place outside the recommended buffer distances and seasonal restrictions for Colorado raptors (CPW 2008) would have no measurable effects on raptors. The two inactive raptor nests near the GK and EO laterals in the North Project Area lie inside the CPW-recommended buffer zone for red-tailed hawks (1/3 mile), the most likely hawk to have historically occupied these nests. To avoid disturbance to potentially nesting raptors at these locations, pipeline construction activities would either avoid red-tailed hawk nesting season (February 15 through July 15), or pipeline construction within 1/3 mile of these nests could begin prior to February 15, so long as the construction activities were initiated prior to February 15, and operated on a daily basis until completion (it is assumed that red-tailed hawks that initiate nesting during ongoing construction activities are tolerant to such activities). Project work areas affected by the nesting red-tailed hawk timing restriction would be clearly marked on construction drawings.

Documented bald eagle winter roosts lie more than 0.5 miles from any part of the Proposed Action (Figure 6 [Appendix A]). This distance lies outside the recommended buffer distance for a bald eagle roost from human encroachment (CPW 2008) and nesting bald eagles are therefore not likely to be affected by the Proposed Action.

If a new active raptor nest is discovered within 1/3 mile of the Proposed Action during or prior to construction, or bald eagle roost site or nest site is discovered within ¼ mile of the Proposed Action prior or 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 and their critical habitats. A threatened and endangered species inventory (Rare Earth 2018) was completed for the Proposed Action Area, and will be used by Reclamation as a background document for an ESA Section 7 consultation with FWS.

Table 2 presents the federally-listed species that may occur within or near the Proposed Action Area according to the U.S. Fish & Wildlife Service's (FWS') Environmental Conservation Online System Information for Planning and Conservation (IPaC) and summarizes habitat requirements and status of each species in the Proposed Action Area. Unless otherwise specified, all information related to the species below was obtained from resources available on FWS's Environmental Conservation Online System (ecos.fws.gov).

Table 2. Federally-Listed Species Potentially Occurring in or Near the Proposed Action Area

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
BIRDS				
Yellow-billed cuckoo *Coccyzus americanus*	Threatened	Breeds in low elevation river corridors with extensive mature cottonwood galleries; there has been a cuckoo detection near the Tongue Creek / Gunnison River confluence within the past 5 years and several detections in the past decade in the North Fork of the Gunnison River Valley (13 miles east of the Proposed Action). Habitat in the immediate Proposed Action Area is not suitable for nesting. Proposed critical habitat is mapped at the Habitat Replacement Site.	**Yes**	Peripheral habitat in pipeline area; **proposed critical habitat in Habitat Replacement Site**
Mexican spotted owl (*Strix occidentalis lucida*)	Threatened	Generally nests in older mature conifer stands, and on walls of shady wooded canyons. Confirmed nest records in Colorado are only from Mesa Verde in Montezuma County and around Pikes Peak and the Wet Mountains east of the Great Divide.	No	No
FISHES				
Greenback cutthroat trout *Oncorhynchus clarkia stomias*	Threatened	High elevation cold water streams and cold water lakes with adequate stream spawning habitat present during spring. No spawning habitat or perennial water exists in the Proposed Action Area. Populations have been documented on surrounding national forests at high elevations upgradient from the Proposed Action (Dare et al. 2011).	No	No

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
Bonytail *Gila elegans* Colorado pikeminnow *Ptychocheilus lucius* Humpback chub *Gila cypha* Razorback sucker *Xyrauchen texanus*	Endangered	Although no habitat is present within the Proposed Action Area for these four species, downstream designated critical habitat on the Colorado & Gunnison Rivers is affected by consumptive use (basin depletions) of water for agricultural irrigation.	No	**No, but critical habitat is down-stream**
MAMMALS				
North American wolverine *Gulo gulo luscus*	Proposed Threatened	Wolverines do not specialize on vegetation or geological aspects of habitat, but instead select areas that are cold enough to reliably maintain deep persistent snow during winter and late into the warm season, namely boreal, alpine, and arctic regions. Therefore, in the southern portion of the species' range (i.e., western Colorado) where ambient temperatures are warmest, wolverine distribution is restricted to high elevations. Deep, persistent, and reliable spring snow cover (April 15 to May 14) is the best overall predictor of wolverine occurrence in the contiguous United States.	Peripheral only	No
PLANTS				
Colorado hookless cactus *Sclerocactus glaucus*	Threatened	Known range limited to alluvial river terraces and Mancos Shale formation of the Gunnison River valley from near Delta, Colorado, to southern Mesa County, Colorado; and alluvial river terraces of the Colorado River and in the Plateau and Roan Creek drainages in the vicinity of DeBeque, Colorado. Plant associations include semi-desert shrublands, big sagebrush shrublands, and sagebrush-juniper woodland transition areas. Several occurrences were inventoried in the Proposed Action Area during a biological survey.	**Yes**	**Yes**

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
Clay-loving wild buckwheat *Eriogonum pelinophilum*	Endangered	Documented occurrences limited to south-central Delta County (north of the Gunnison River) and the eastern part of the Uncompahgre Valley (east of the Uncompahgre River) in Delta and Montrose counties. Prefers a particular soil microhabitat (whitish calcareous clay soils derived from Mancos Shale), occurring with shadscale, mat saltbush, and black sagebrush. No occurrences are documented in the Proposed Action Area and none were detected during a biological survey for the Proposed Action.	**Yes**	Potential

No suitable habitat for greenback cutthroat trout is within the Proposed Action area or located downstream (see Table 2). The Proposed Action area lacks suitable habitat for the North American wolverine and Mexican spotted owl (see Table 2). Furthermore, there are no viable populations of wolverine in western Colorado. There is no potential for these species to be affected, and they are therefore dismissed from further evaluation in this EA.

Western Yellow-Billed Cuckoo

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 areas along the Uncompahgre River in the Uncompahgre Valley and around the Uncompahgre and Gunnison River confluence west of Delta (Figure 8 [Appendix A]). The yellow-billed cuckoo is a secretive migratory songbird that breeds in the United States and winters in South America. The yellow-billed cuckoo has a short nesting season—incubation to fledging can take place in as little as 17 days. Cuckoos arrive on breeding and nesting grounds in Colorado in late May or early June, and depart by early August through early September. Although it was probably never common in western Colorado, the yellow-billed cuckoo is now considered an extremely rare summer resident and nearly extirpated here (Kingery 1998). Only one confirmed nesting occurrence was recorded in western Colorado (the Yampa River near Hayden) during Colorado Breeding Bird Atlas surveys from 1987 through 1994 (Kingery 1998). Up until 2003, only one or two unofficial yellow-billed cuckoo observations, and no nesting reports, occurred annually in western Colorado, mostly from the Uncompahgre River and Grand valleys. Since 2003, cuckoos have been documented nearly annually in the North Fork of the Gunnison River Valley (Beason pers. comm.). The Colorado Breeding Bird Atlas II surveys did not detect records for cuckoo in Delta County outside of the North Fork Valley between the 2007 to 2012 survey periods, and there were no records for Montrose County (Wickersham 2016). Reasons for decline of the yellow-billed cuckoo throughout the western U.S. have been attributed to destruction of its preferred riparian habitat due to agricultural conversions, flood control projects, and urbanization. In some parts of its breeding range, pesticide use may have affected the yellow-billed cuckoo's prey base—injurious pest insects such as tent caterpillars, which tend to occur in cyclic outbreaks.

The preferred breeding habitat of the yellow-billed cuckoo is low elevation old-growth cottonwood forests or woodlands with dense, scrubby understories of willows or other riparian shrubs. FWS established Primary Constituent Elements in the ruling (now called Physical and Biological Features (PBFs)) for cuckoo critical habitat in the proposed rule, based on the current knowledge of the physical or biological features and habitat characteristics required to sustain the species' life-history processes including breeding, and foraging and dispersing. The PBFs include riparian woodlands (PBF 1), adequate prey base (PBF 2), and dynamic riverine processes (PBF 3). Riparian woodlands meeting PBF 1 are mixed willow-cottonwood vegetation that contain habitat for nesting and foraging in contiguous or nearly contiguous patches that are greater than 325 feet (100 m) in width and 200 acres or more in extent. These habitat patches contain one or more nesting groves, which are generally willow-dominated, have above average canopy closure (greater than 70 percent), and have a cooler, more humid environment than the surrounding riparian and upland habitats. Suitable habitats less than 200 acres tend to be occupied sporadically and are not considered essential to the conservation and recovery of the species. FWS considers cuckoo breeding season in western Colorado to be the period of June through August (Clayton pers. comm.).

The North and South Project Areas of the Proposed Action Area do not contain suitable breeding habitat for yellow-billed cuckoo, and do not fall within yellow-billed cuckoo proposed critical habitat (Figure 7 [Appendix A]). The Habitat Replacement Site falls within proposed critical habitat for yellow-billed cuckoo. Cuckoos may be expected to use the wooded areas near the Uncompahgre River on the Habitat Replacement Site as travel corridors and for foraging, but less possibly for nesting. The Habitat Replacement Site (along the Uncompahgre River) may meet some of the requirements of the PBFs described in the proposed rule but lacks the contiguous woodland size and understory / canopy composition described in the PBFs.

Colorado River Endangered Fishes

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.

Potential impacts to Colorado River endangered fishes would result from continued irrigation water depletion from the Gunnison River in the greater Colorado River basin. Water depletion has the potential to diminish backwater spawning areas and other habitat in downstream designated critical habitat. As a federal facility, the Uncompahgre Project’s historic depletions 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, and ensures that UVWUA 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).

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. Colorado hookless cactus is a squat, rounded spiny succulent, usually consisting of a single blue-green stem. The plants are inconspicuous except during their bloom (April and May), when pink flowers develop at the top of the stems. Following the blooming period during dry years, smaller plants can be difficult to locate because the stems may shrink below ground level. In the vicinity of the action area, Colorado hookless cactus is found on river terraces and Mancos Shale formation (adobe hills), especially on stony or gravelly soils. Plant associations include low semi-desert shrubland species such as shadscale, mat saltbush, black sagebrush, and galleta (CNHP 1997+), which occurs in the area (see Section 3.7). A biological survey documented several occurrences of Colorado hookless cactus on stony soils in the North Project Area (Rare Earth 2018). These occurrences lie within the right-of-way for the Proposed Action but would be avoided by the construction footprint.

Clay-loving Wild Buckwheat

Clay-loving wild buckwheat was listed as endangered in 1984 at 49 Federal Register (FR) 28562–28565. due to its extremely limited range and the high risk of habitat loss and fragmentation caused by residential and agricultural development and off-road vehicle travel. The FWS also designated critical habitat for clay-loving wild buckwheat at the same time. No designated critical habitat areas are present in or near the Proposed Action Area. Clay-loving wild buckwheat is a small, low-growing, densely-branched shrub in the buckwheat family, with dark green linear leaves and small white to cream-colored flowers that bloom from late May through early September. Generally, the plants are found in a sharply defined soil microhabitat (whitish calcareous clay soils derived from Mancos Shale, often mapped as Billings Series soils) on mid to lower slopes of adobe hills at elevations of 5,220 to 6,400 feet. Clay-loving buckwheat occurs with other xerophytic low shrubs such as shadscale, mat saltbush, and black sagebrush. Field observations have suggested that the species is most abundant where biological soil crust cover is not extensive (CNHP 1997+).

The Habitat Replacement Site does not provide suitable habitat. Documented occurrences of clay-loving wild buckwheat are limited to south-central Delta County (north of the Gunnison River) and the eastern part of the Uncompahgre Valley (east of the Uncompahgre River) in Delta and Montrose counties. The Proposed Action area has no documented occurrences of clay-loving wild buckwheat. Although the North Project Area has potentially suitable habitat, no clay-loving wild buckwheat was detected during a biological survey of the Proposed Action Area.

> 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 affect downstream critical habitat for endangered fishes. Other special status species would remain unaffected.

Proposed Action: A threatened and endangered species inventory (Rare Earth 2018) was completed for the Proposed Action Area and used by Reclamation as a background document for the Section 7 ESA consultation with FWS. The determinations of effect set forth in this EA on listed species and their critical habitats are based on the Section 7 ESA consultation, as follows:

- *Western Yellow-Billed Cuckoo*. The North and South Project Areas of the Proposed Action lie within seasonal peripheral range of the threatened western yellow-billed cuckoo (potentially suitable and/or occupied habitat is within less than a half mile of some parts of the pipeline components of the project), and the Habitat Replacement Site contains a marginally adequate nesting and foraging area for western yellow-billed cuckoo. Foraging or migrating individuals could occur incidentally in the North and South Project Areas; however, foraging or migrating habitat is not suitable in the Proposed Action Area compared to the nearby Gunnison or Uncompahgre river corridors. Furthermore, the timing of the majority of the Proposed Action does not coincide with cuckoo breeding season (June 1 through August 30). Construction of the EO Feeder could take place during the cuckoo breeding season, but the EO Feeder does not cross suitable nesting or foraging habitat for cuckoo. Foraging and nesting individuals could be present on or near the riparian corridor of the Habitat Replacement Site during breeding or shoulder migration seasons. Non-native tree removal and planting activities in the Habitat Replacement Site would avoid yellow-billed cuckoo breeding season. Based on these findings, the Proposed Action may affect, but is not likely to adversely affect western yellow-billed cuckoo.

- *Western Yellow-Billed Cuckoo Proposed Critical Habitat*. The North and South Project Areas of the Proposed Action Area do not lie within proposed critical habitat (Figure 8 [Appendix A]) and would have no effect. The Habitat Replacement Site is situated in proposed critical habitat (Figure 8). Activities planned in the Habitat Replacement Site include removal of non-native trees and shrubs and plantings of native trees and shrubs in the Uncompahgre River corridor, and control of herbaceous noxious weeds. The benefits would include increased cover and forage opportunities for cuckoo, as well as enhancing the PBFs of the habitat on the property and in adjoining areas. Non-native tree and shrub removal and native revegetation activities would avoid cuckoo nesting season, and would be accomplished in a spatial pattern that would be protective of cuckoo foraging habitat and habitat connectivity characteristics. Therefore, these activities will not adversely modify western yellow-billed cuckoo 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 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.

- *Colorado River Basin Endangered Fishes Critical Habitat*. Consumptive loss of water in the Gunnison and Colorado River basins due to agricultural irrigation from the canal laterals involved with the Proposed Action results in depletions

from the upper Gunnison River watershed, affecting downstream critical habitat for the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. The annual depletion rate is not expected to change as a result of the Proposed Action and historic depletions were previously consulted on. Therefore, in accordance with the Gunnison Basin PBO (FWS 2009), the Proposed Action will not destroy or adversely modify the designated critical habitat for the Colorado River endangered fishes. Additionally, potential reductions 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).

- *Colorado Hookless Cactus*. The Proposed Action Area lies within range and suitable habitat for the Colorado hookless cactus. No hookless cactus surveys were conducted at the Habitat Replacement Site due to lack of suitable habitat. A survey of the North and South Project Areas identified Colorado hookless cactus locations, so that construction activities could avoid direct physical harm to all plants. Indirect effects to hookless cactus would include an increase in airborne dust during construction and potential disruption of pollinators should project activities occur during the blooming season. High concentrations of dust have detrimental effects on gas exchange and water budgets in plants (e.g., Padgett et al. 2007), and can clog stigmas, which may affect the ability of pollen grains to germinate, penetrate the stylar tissue and fertilize ovules. Dust would be less of a concern during winter months, when the plants are dormant, and pollination is not occurring. Also, the spread of invasive plant species or noxious weeds into areas of suitable habitat could be hastened by construction activities or other forms of surface disturbance. Construction BMPs would minimize potential impacts of indirect effects such as the spread of weeds and dust. The following conservation measures would help protect Colorado hookless cactus: conduct surface-disturbing activities during the hookless cactus dormant season (June through March) and/or use dust abatement measures when warm, dry, dusty conditions are present; use native fill material to diminish new weed introductions to potential habitat; clearly mark cactus areas with barricades and/or stake the construction corridor and travel corridors to keep vehicles and equipment from accidentally traveling near hookless cactus occurrences; and hold a pre-construction meeting with the contractor to apprise them of areas to avoid; monitoring of cacti would occur during construction or shortly afterwards; and, follow-up monitoring of known locations would occur a year following construction to evaluate vegetation conditions. Given that the locations of hookless cactus are documented in the Proposed Action Area, and given construction BMPs and conservation measures for hookless cactus, the Proposed Action may affect, but is not likely to adversely affect, Colorado hookless cactus.

- *Clay-loving Wild Buckwheat*. The Proposed Action would not affect clay-loving wild buckwheat since surveys indicate they do not occur in the area.

BLM Sensitive Species

The Proposed Action is partially located on BLM lands of the Gunnison Gorge NCA, managed by the Uncompahgre Field Office (UFO). The total potentially affected acres of BLM land is approximately 40 acres. According to BLM Manual Part 6840, BLM Sensitive species (in

addition to those proposed for listing under the federal ESA) are "species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA." BLM Sensitive species are designated by the BLM's state director by field office or management unit (BLM 2015). The BLM Sensitive Species presented in Table 3 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 BLM Sensitive Species on the state director's list, and through informal technical consultation with BLM-UFO Biologist Kenneth Holsinger.

Table 3. BLM Sensitive Species Potentially Occurring Near the Proposed Action

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
BIRDS		
American peregrine falcon *Falco peregrines*	Uses open country near cliff habitat, often near water. The nearest active CPW-documented peregrine falcon nest site lies more than 8 miles west of the Proposed Action Area on the Gunnison River in the Dominquez-Escalante National Conservation Area (CPW 2017). Other potential habitat exists in the Gunnison Gorge, about 7 miles east of the Potential Action Area (CPW 2017). May forage for passerine birds in the Proposed Action Area; however, more desirable foraging habitat exists closer to the nest sites.	Foraging only
Bald eagle *Haliaeetus leucocephalus*	Nests along forested rivers and lakes (an uncommon nester in Colorado); winters in upland areas (common winter resident), often with rivers or lakes nearby. The nearest active nests are on the Gunnison River more than 6 miles from any part of the Proposed Action Area (Figure 6 Appendix A]). Documented communal roosts lie more than a half mile from any part of the Proposed Action (Figure 6), the CPW-recommended buffer distance for human encroachment. CPW maps the Proposed Action Area and surroundings as winter range, winter forage, and winter concentration areas (Figure 6). Bald eagles forage across open pastures and sparse shrublands in the vicinity of the Proposed Action Area during winter for rodents and carrion. See Section 3.9 for analysis).	Winter foraging habitat only
Burrowing owl *Athene cunicularia*	Prefers level to gently-sloping grasslands and semi-desert grasslands. Prairie dog colonies are commonly used for shelter and nesting. Several recent breeding records exist in the Uncompahgre River valley (Holsinger pers. comm.). BLM considers any prairie dog burrows to be potential nest sites for burrowing owl across the UFO. Nesting occurs between April and July. No burrowing owls were observed in the Proposed Action Area during biological surveys.	Potential
Brewer's sparrow *Spizella breweri*	Breeds primarily in sagebrush shrublands, and less commonly in tall desert shrublands; requires relatively large shrubland patches for nesting. Migrants occur in wooded, brushy, and weedy riparian, agricultural, and urban areas, and occasionally in pinyon-juniper woodlands.	Yes

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Ferruginous hawk *Buteo regalis*	Prefers open, rolling and/or rugged terrain in grasslands, shrubsteppe communities, or cultivated fields; nests on cliffs and rock outcrops. No nesting records in Delta or Montrose counties. Wintering birds could be present around the Proposed Action Area, especially open agricultural fields where burrowing rodents are present.	Winter foraging habitat only
Golden eagle *Aquila chrysaetos*	Hunts widely for rabbits and rodents over a variety of habitats in the region, from low-elevation shrublands to alpine tundra. Nests are constructed on cliffs and steep escarpments in shrublands and grasslands. Mated pairs return to the same nest site or nearby alternate nest sites each year. Nesting building can initiate as early as January, with occupancy usually occurring in mid-April. Young are fledged between May and early August, depending on the year (Kingery 1998). There are no known nests or potentially suitable nest areas within a half mile of the Proposed Action (the CPW-recommended buffer distance for human encroachment near an active nest).	Foraging habitat only
FISHES		
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*	Cool, clear streams or lakes with well-vegetated stream banks for shading cover, along with deep pools, boulders, and logs; thrives at high elevations (Hirsch et al. 2013). Nearest population documented in the North Fork of the Gunnison River, more than 25 direct miles east of the Proposed Action. No spawning habitat or consistent cold perennial water in the Proposed Action Area.	No
Bluehead sucker *Catostomus discobolus*	Large rivers and mountain streams, rarely in lakes; variable from cold clear mountain streams to warm, turbid streams; moderate to fast-flowing water above rubble-rock substrate; young prefer quiet shallow areas near shoreline. Although no habitat is present within the Proposed Action Area for this species, downstream habitat on the Gunnison and Colorado Rivers is affected by consumptive use of water by irrigation.	No, but habitat is down-stream
Flannelmouth sucker *Catostomus latipinnis*	Warm moderate- to large-sized rivers, seldom in small creeks, absent from impoundments; pools and deeper runs often near tributary mouths; also riffles and backwaters; young usually in shallower water than adults. Although no habitat is present within the Proposed Action Area for this species, downstream habitat on the Gunnison and Colorado Rivers is affected by consumptive use of water by irrigation.	No, but habitat is downstream
Roundtail chub *Gila robusta*	Rocky runs, rapids, and pools of creeks and small to large rivers; also large reservoirs in the upper Colorado River system; generally prefers cobble-rubble, sand-cobble, or sand-gravel substrate. Although no habitat is present within the Proposed Action Area for this species, downstream habitat on the Gunnison and Colorado Rivers is affected by consumptive use of water by irrigation.	No, but habitat is downstream

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
MAMMALS		
Fringed myotis *Myotis thysanodes*	Feeds in semi-desert shrublands, coniferous woodlands, and oakbrush; associated with caves, mines, and buildings as day and night roosts. No nursery colonies have been reported in Colorado. Individuals may forage in the area during summer months, especially near water.	Foraging only
Spotted bat *Euderma maculatum*	In Colorado, spotted bats have been observed or captured in ponderosa pine woodlands, montane forests, pinyon-juniper woodlands, semi-desert shrublands, riparian vegetation, and over open sandbars. Individuals forage alone for moths, grasshoppers, beetles, katydids, and other insects. Lactating females have been captured in Colorado, but nursery sites have not been located. Rocky cliffs and buildings are used for roosts.	Foraging only
Townsend's big-eared bat *Corynorhinus townsendii*	Feeds in semi-desert shrublands, pinyon-juniper woodlands, and open montane forests; frequently associated with caves and abandoned mines for day roosts, nursery colonies, and hibernacula, but will also use crevices on rock cliffs and abandoned buildings for summer roosting. Individuals may forage in the area during summer months, especially near water.	Foraging only
Rocky Mountain bighorn sheep *Ovis canadensis*	Steep, mountainous, or hilly terrain dominated by rocks, grass, and low shrubs, near cliff retreats. CPW maps no overall range for Rocky Mountain bighorn within or near the Proposed Action Area (CPW 2017).	No
Kit fox *Vulpes macrotis*	Semi-desert shrublands, sagebrush shrublands, and shrubby margins of pinyon-juniper woodlands. Denning tends to occur in bottoms of steep-walled washes, and occasionally among rock outcrops and below rimrock. Historic range in Colorado is the Gunnison and Colorado River drainages below about 6,000 feet. Nearest recently documented population (prior to the year 2000) in the subwatersheds was in Peach Valley near the City of Delta. That population is considered extirpated (Holsinger pers. comm.).	No
White-tailed prairie dog *Cynomys leucurus*	Occurs in northwestern and west-central Colorado, and prefers level to gently sloping grasslands and open semi-desert shrublands from 5,000 to 10,000 feet in elevation, although most records are from below 8,500 feet (Armstrong et al. 2011). Live in loosely organized colonies and their burrows and mounds may be present in the margins of irrigated lands, and in dams and irrigation ditch banks, adjacent to and near semi-desert shrublands and grasslands. This species (including a few active burrow areas) was observed in the North Project Area during biological survey visits in 2017.	Yes

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
HERPTILES		
Midget faded rattlesnake *Crotalus viridis concolor*	Prefers rocky outcrops for refuge and hibernacula, often near riparian, upper limit of 7,500 to 9,500 feet in elevation. The species may use the Proposed Action Area incidentally. There are several documented occurrences in southcentral Delta County (Hammerson 1999).	Yes
Northern leopard frog *Rana pipiens*	Springs, slow-moving streams, marshes, bogs, ponds, canals, floodplains, reservoirs, lakes; in summer, commonly inhabits wet meadows and fields; may forage along water's edge or in nearby meadows or fields. Leopard frogs may breed in ditch alignments, especially those with year-round sluggish water.	Yes
PLANTS		
Colorado (Adobe) desert parsley *Lomatium concinnum*	Adobe hills and plains on rocky soils derived from the Mancos Shale Formation; shrub communities dominated by sagebrush, shadscale, greasewood, or scrub oak; elevation 5,500 to 7,000 feet. Several populations been documented on BLM and private land on the east side of the Uncompahgre Valley in Delta and Montrose counties (Holsinger, pers. comm.). Species was documented during a biological survey for the Proposed Action, but not on BLM land.	Yes
Uncompahgre bladderpod *Physaria vicina*	Mancos Shale-derived soils at the ecotone between pinyon-juniper woodland and salt desert scrub, or sandy soils derived from Jurassic sandstones with sagebrush. Endemic to east part of Montrose County and north part of Ouray County, with most documented populations occurring in the Uncompahgre Valley. Elevation 5,705 to 7,536 feet. Not documented near the Proposed Action.	No

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 winter foraging in badlands and low shrublands for ferruginous hawk, golden eagle, and bald eagle. These raptors are wide-ranging, opportunistic, and spatially flexible in their winter foraging patterns and are expected to avoid the Proposed Action Area during construction. Brewer's sparrow may find nesting habitat (large semi-desert shrubland patches) in the Proposed Action Area, although the timing of nesting (April through July) would not correspond with vegetation grubbing associated with construction. Migrating Brewer's sparrows may be present during fall and early spring months, and can be expected to avoid the Proposed Action Area during construction activities. BLM Sensitive mammals with the potential to use the Proposed Action Area include 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 lost as a result of the Proposed Action, and riparian

and wetland foraging habitat loss would be mitigated in the Habitat Replacement Site. BLM Sensitive snakes potentially occurring in the Proposed Action Area (midget faded rattlesnake) could be affected by Project construction. Hibernating northern leopard frogs could be impacted by construction of the Proposed Action, and implementation of the Proposed Action would result in the loss of northern leopard frog breeding habitat. Impacts to 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 creation of a Habitat Replacement Site near the Proposed Action Area (see Section 3.7).

No BLM Sensitive fishes are expected to occur in the Proposed Action Area. However, water depletions from the upper Colorado River Basin occurring as a result of irrigation operations have the potential to affect downstream BLM Sensitive fish habitat. No new depletions would occur as a result of the Proposed Action; therefore, there would be no change from existing conditions. 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).

3.10 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, Inc. conducted Class III cultural resource inventories of the Proposed Action Area. All proposed buried pipe alignments in a 100-foot-wide corridor, proposed construction disturbance areas, access roads, and proposed staging areas were examined, as well as the proposed Habitat Replacement Site. The purpose of a Class III cultural resource inventory is to 1) identify and record all visible cultural resources within the Proposed Action Area, including previously recorded cultural resources; 2) evaluate the significance of the cultural resources and make recommendations regarding their National Register of Historic Places (NRHP) eligibility; 3) assess the potential impact of the Proposed Action on significant cultural resources; and 4) identify possible measures to mitigate such impacts. The inventories resulted in the documentation of several segments of the laterals involved with the Proposed Action that support the laterals' eligibility for listing in the NRHP. No cultural resources were documented in the habitat replacement area.

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

Proposed Action: As a result of a Class III cultural resources inventories 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 segments of the laterals involved with the Proposed Action, which are resources that are eligible for listing in the NRHP. A Memorandum of Agreement (MOA) has been executed between Reclamation and the Colorado SHPO, with UVWUA participating as an invited party, to mitigate the adverse effects of the Proposed Action (Appendix E). The MOA stipulates that Level I documentation be completed prior to any earth disturbances for the Proposed Action and requires that 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 I 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).

3.11 Agricultural Resources & Soils

It is the policy of the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) to "maintain and keep current an inventory of the prime farmland and unique farmland of the Nation…the objective of the inventory is to identify the extent and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops" (7 CFR 657.2). NRCS identifies categories of farmlands of national and statewide importance in the region, based on soil types and irrigation status. According to USDA, Prime Farmland has the best combination of physical and chemical characteristics for producing food, feed, forage fiber and oilseed crops. Farmland of Statewide Importance are lands that nearly meet the requirements for Prime Farmland and have been identified by state agencies. Farmland of Unique Importance has a special combination of soil quality, location, growing season, and moisture supply required to produce high quality crops when properly managed.

The Proposed Action would cross or occur adjacent to irrigated agricultural lands, including agriculturally significant lands (farmlands of national or statewide importance; Figure 9 [Appendix A]). The canal laterals involved in the Proposed Action convey irrigation water to agriculturally significant lands; however, no change in the configuration of UVWUA-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.

The major mapped soil units found in the Proposed Action Area are the Montrose-Delta Complex, 0 to 2 percent slopes (North and South project areas); Typic-Torriorthents -Badland Complex, 25 to 75 percent slopes (North Project Area); Ellaybee-Persayo silty clay loams, 5 to 12 percent slopes (North and South project areas); Loutzenhizer silty clay loam, 0 to 2 percent slopes (South Project Area); and Fluvaquents, protected-Torrifluvents, protected complex, 0 to 2 percent slopes (Habitat Replacement Site). Each soil type in the North and South project areas has a moderate or high potential for erosion from water. All of the Proposed Action Area soil types are derived from Mancos Shale, which formed in a marine environment and now contribute salinity and selenium loading in the Colorado River basin.

No Action: The No Action Alternative would have no effect on Prime Farmlands or Farmlands of Statewide Importance. Farmlands in the Proposed Action Area would continue to produce as in the past. Salinity loading from irrigation water contact with Mancos Shale-derived soils in the current irrigation ditch system would continue as it has in the past.

Proposed Action: Under the Proposed Action Alternative, installation of the buried pipe would cause temporary disturbance to soils that are either not in irrigated agricultural production, or soils adjacent to irrigated agricultural lands. Some of the irrigated agricultural lands are designated as agriculturally significant by NRCS (Figure 9 [Appendix A]). However, no farmlands would be permanently removed from production as a result of the Proposed Action, and no interruption to agricultural production would occur.

To minimize soil erosion during implementation of the Proposed Action, any topsoil would be reserved prior to excavation, replaced on the ground surface following pipe installation, then reseeded with seed mixes compatible with the surrounding vegetation. Where construction disturbance takes place within areas of native vegetation, the seed mix for re-seeding would be a certified weed-free drought-tolerant native plant seed mix compatible with the native plant community present. Where construction disturbance takes place in or adjacent to farmed ground, re-seeding would be conducted with appropriate dryland cover species or farm cultivar grass species compatible with the adjacent farmland. A weed control program meeting county criteria would be implemented in all areas of surface disturbance (Delta County 2010; Montrose County 2011).

Overall, the Proposed Action would give UVWUA the ability to better manage the Uncompahgre Project water with efficiencies gained from piping the system. Efficiencies gained may result in a longer irrigation season, and potentially in increased agricultural productivity. Therefore, no direct adverse effects on agriculturally significant lands are expected to occur due to implementation of the Proposed Action. Water contact with Mancos Shale derived 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 where ditches are proposed for decommissioning or replacement with buried pipe.

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 4 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).

Table 4. Cumulative Impacts Analysis Spatial & Temporal Limits by Resource

Resource	Spatial Limits of Analysis	Temporal Limits of Analysis
Water Rights and Use	Lower Uncompahgre River drainage, from approximately Olathe to the Uncompahgre River confluence	50 years

Resource	Spatial Limits of Analysis	Temporal Limits of Analysis
Water Quality	Lower Gunnison River drainage, from approximately Austin to the Uncompahgre River confluence and the Uncompahgre River drainage from approximately Olathe to the Gunnison confluence	50 years
Air Quality	Proposed Action Area plus 1-mile buffer	Duration of Proposed Action Construction
Access, Transportation, and Public Safety	Proposed Action Area	Duration of Proposed Action Construction
Recreation	Public lands within the Proposed Action Area	Duration of Proposed Action Construction
Visual Resources	Public lands within the Proposed Action Area	50 years
Livestock Grazing	Public lands within the Proposed Action Area	Duration of Proposed Action Construction
Vegetative Resources and Weeds	Proposed Action Area plus 1-mile buffer	50 years
Wildlife Resources	Lower Gunnison River drainage, from approximately Austin to the Uncompahgre River confluence and the Uncompahgre River drainage from approximately Olathe to the Gunnison confluence	50 years
Threatened and Endangered Species	Lower Gunnison River drainage, from approximately Austin to the Uncompahgre River confluence and the Uncompahgre River drainage from approximately Olathe to the Gunnison confluence	50 years
BLM Sensitive Species	Lower Gunnison River drainage, from approximately Austin to the Uncompahgre River confluence and the Uncompahgre River drainage from approximately Olathe to the Gunnison confluence	50 years
Cultural Resources	Proposed Action Area	50 years
Agricultural Resources and Soils	Proposed Action Area	50 years

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. Reasonably foreseeable future actions potentially affecting resources within the spatial and temporal limits of this analysis (Table 4) the Proposed Action are

- Recreation on public lands, as authorized under BLM's current Resource Management Plan for the Gunnison Gorge NCA (BLM 2004) – with potential impacts to air quality, soils, vegetation, wildlife, and special status species.

- Livestock grazing on public lands (as authorized under BLM's current RMP [BLM 2004]) – with potential impacts to soils, vegetation, and special status species. Grazing permit stipulations, grazing timing, and stocking rates minimize impacts.

Potential impacts from the Proposed Action on air quality; access, transportation, and public safety; wildlife; recreation; and livestock grazing are temporary and minor, lasting only for the duration of construction or until revegetation is complete. Therefore, the Proposed Action does not contribute an incremental impact to the effects, if any, of the ongoing or reasonably foreseeable future actions on these resources.

The Proposed Action would have no adverse effect on water rights and water use, or soils and agricultural resources. Therefore, the Proposed Action does not contribute an incremental impact to the effects, if any, of the ongoing or reasonably foreseeable future actions on these resources.

The Proposed Action would have a potentially adverse impact on certain special status species wetland and riparian vegetation (generated by the canal laterals), and wildlife using wetland and riparian habitat generated by the canal laterals. Each of these impacts would be minimized with BMPs, conservation measures, or other mitigative measures, including a Habitat Replacement Site. Therefore, none of these impacts rise to a level that would incrementally contribute to the effects, if any, of the reasonably foreseeable future actions on these resources.

3.13 Summary of Impacts

Table 5 summarizes the predicted impacts/environmental consequences of the No Action and Proposed Action Alternatives analyzed in this EA.

Table 5. 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 estimated salt loading reduction of 6,030 tons per year to the Colorado River Basin will result from implementation of the Proposed Action. The Proposed Action is also expected to reduce selenium loading into the Gunnison River by up to 482 pounds per year. 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.
Access, Transportation, and Public Safety	No Effect	Minor temporary disruptions to local public roadways from construction traffic entering and existing roadways. No long-term effects.
Recreation Resources	No Effect	Part of the Proposed Action lies on BLM lands in the Gunnison Gorge NCA. Temporary short-term disruption of recreational uses such as motorized travel on BLM lands in and near the Proposed Action Area may occur during construction. Safety measures such as trench covers would be implemented.
Visual Resources	No Effect	The public lands in the Proposed Action Area are classified by BLM as Visual Resource Management Class III. Short-term temporary effect during construction (i.e., presence of equipment, spoil piles), with revegetation commencing following completion of the Proposed Action. Once vegetation is successfully re-established, the appearance and character of the Proposed Action Area would be similar to the appearance and character of the surrounding area prior to construction. Such visual change is compatible with BLM's Class III management guidance.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Livestock Grazing	No Effect	Temporary effect. No lands capable of providing grazing will be permanently lost. Project personnel will coordinate with the grazing permit holder(s) to avoid conflicts with grazing operations.
Vegetative Resources and Weeds	No Effect	Impacts to vegetation where construction would occur in upland areas. Estimated long-term loss of 33.81 THV units of riparian/wetland habitat due to elimination of seepage from the involved canal lateral alignments. A Habitat Replacement Plan would be implemented to mitigate for the habitat value lost because of the Proposed Action. Weed control measures would be implemented as a part of the Proposed Action, and the piping of the canal laterals would remove open water from the Proposed Action Area—open water is an important vector for the spread of weeds.
Wildlife Resources	No Effect	Short-term temporary adverse effect to local wildlife during construction. A Habitat Replacement Plan would be implemented to mitigate for the long-term loss of riparian and wetland habitat due to the Proposed Action.
Migratory Birds, Raptors	No Effect	No impacts to nesting migratory birds since vegetation grubbing would take place outside the primary nesting season. No impacts to raptors outside the CPW-recommended buffer distances. Two inactive raptor nests within 0.2 miles of the Proposed Action Area are inside the COW-recommended buffer distance of 0.3-mile for red-tailed hawks (the most likely raptor to have historically used the nests). Work near these areas would either be completed outside the red-tailed hawk nesting season (February 15 – July 15) or commenced prior to February 15 and conducted on a daily basis until completion in order to avoid disturbance. Long-term impacts due to loss of nesting habitat for both migratory birds and raptors along the current canal would be mitigated with the Habitat Replacement Site.

Resource Issue	Impacts	
	No Action Alternative	**Proposed Action Alternative**
Threatened and Endangered Species	Salt and selenium loading from the Proposed Action Area would continue to affect aquatic dependent species	The Proposed Action Area lies within range of the threatened western yellow-billed cuckoo, and the Habitat Replacement Site lies within yellow-billed cuckoo proposed critical habitat. Construction activities would not take place near cuckoo breeding habitat during breeding season, therefore there would be no effect on cuckoo. Habitat Replacement activities in cuckoo proposed critical habitat would improve the physical and biological factors of the habitat for cuckoo. The Proposed Action lies within range of the threatened Colorado hookless cactus; clearance surveys have been conducted to avoid direct impacts to Colorado hookless cactus plants. BMPs and other measures would protect cactus from measurable indirect effects from the Proposed Action. 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. 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 NRHP eligible cultural resources. The adverse effect would be mitigated with a MOA between Reclamation and the Colorado SHPO.
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 take place in productive irrigated farm areas.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Cumulative Impacts	No Effect	None of the anticipated impacts of the Proposed Action rise to a level that would incrementally contribute to the effects, if any, of other past, present, and reasonably foreseeable future actions on these resources.

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 cooperative agreement between Reclamation and UVWUA requires that UVWUA be responsible for "…implementing and/or complying with the environmental commitments contained in the NEPA/ESA compliance documents to be developed by Reclamation for the project".

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, UVWUA shall use this checklist to document compliance with each environmental commitment. UVWUA 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, and additional review by BLM if on public lands, to determine if the existing surveys and information are adequate to evaluate additional impacts to special status plants and wildlife, including threatened, endangered, BLM-sensitive, or migratory bird species.

Table 6. Environmental Commitment Checklist

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
Pre-Construction		
Reclamation shall submit an SF299 Application to BLM to amend the existing right-of-way COC-67472 to include the Proposed Action and shall receive the amendment prior to any work being conducted on BLM land.	Vegetation, habitat, special status species	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
An SPCC 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 Memorandum of Agreement (MOA) is in place to mitigate the Proposed Action's adverse effects to cultural resources. The MOA commits Reclamation to complete historic resource documentation of the canal segments prior to construction activities in accordance with the guidance for "Level I documentation," and to post this documentation on the Reclamation Western Colorado Area Office's cultural resources webpage.	Cultural Resources	
Prior to construction activities at the Habitat Replacement Site, UVWUA shall coordinate with the U.S. Army Corps of Engineers to obtain a Section 404 Permit, if necessary.	Water Quality, Vegetation	
Construction limits shall be clearly flagged onsite to avoid unnecessary plant loss or ground disturbance.	Vegetation, Weeds, Habitat, Wildlife	
Biologically sensitive areas shall be included on all engineer drawings with appropriate instructions. Colorado hookless cactus areas shall include instructions to contact Reclamation biologist prior to beginning construction. Raptor nest sites shall include timing limitations that include no construction February 15 through July 15 or ensure construction commences prior to February 15 and operates continually until outside of the sensitive area.	Special Status Species	
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	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
Coordinate with Reclamation biologist or contracted biologist to install barricades around Colorado hookless cactus areas to prevent vehicles and equipment from traveling near hookless cactus occurrences.	Special Status Species	
Hold a pre-construction orientation meeting with the contractor to familiarize the contractor with biologically sensitive areas and required conservation measures.	Special Status Species	
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 a proposed staging area to be burned. No burning activities will occur on lands managed by the BLM.	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)	Special status species	
Topsoil shall be stockpiled and then redistributed after completion of construction activities.	Soil, Vegetation, Weeds, Habitat	
Notification to the public lands grazing permit holder(s) shall be made if construction is to occur during a grazing period.	Livestock Grazing	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
During Construction		
Culverted embankment fill creek crossings shall be constructed during periods when the watercourse is not flowing or flowing at low levels. If a small amount of flow is present, appropriate water control measures shall be employed, such as temporary impoundments or drain ditches, which allow for construction to proceed while minimizing potential for mobilization of silt or erosion. Culverts shall be appropriately sized to allow for normal stream flow, and bedded and stabilized to prevent erosion. Embankments shall be stabilized and appropriately vegetated.	Water Quality, Soil	
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	
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	
Portable secondary containment shall be provided for any fuel or lubricant containers staged on BLM land within the Proposed Action Area. Any staging of fuel or lubricants, or fueling or maintenance of vehicles or equipment, will not be conducted within 100 feet of any live water or drainage.	Water Quality, Soil	
Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.	Water Quality, Soil	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
Construction equipment shall be parked, stored, and serviced only at an approved staging area.	Water Quality, Soil	
A copy of any report required or requested by any federal agency or state government as a result of a reportable release or spill of any toxic substances shall be furnished to BLM concurrent with the filing of the reports to the involved Federal agency or State government.	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 the public and to wildlife. Covers shall be secured in place and strong enough to prevent livestock or wildlife from falling through. Where trench covers would not be practical, wildlife escape ramps shall be used.	Wildlife, Grazing, Recreation	
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	
In the event that uninventoried threatened or endangered species are encountered during construction, UVWUA 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	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
Non-native tree and shrub removal at the Habitat Replacement Site shall avoid the primary breeding season of migratory birds (April 1 – July 15) and the breeding season of western yellow-billed cuckoo (June 1 – August 30).	Special Status Species	
Conduct surface-disturbing activities within 20 meters of Colorado hookless cactus occurrences during the plant's dormant season (June through March) or use dust control measures when warm, dry, dusty conditions exist.	Special Status Species	
Notify Reclamation biologist or contract biologist prior to construction near Colorado hookless cactus locations identified on engineer drawings. Reclamation biologist contact: Amanda Ewing (970) 248-0631 / aewing@usbr.gov; contract biologist contact: Dawn Reeder (970) 527-8445 / dawn@rareearthscience.com	Special Status Species	
Two inactive (in spring 2017) raptor nests (most likely red-tailed hawk) near the North Project Area lie inside the CPW-recommended buffer zone for the species (1/3 mile). The nests are less than 0.2 miles from the GK and EO laterals, respectively. To avoid disturbance to potentially nesting raptors, pipeline construction activities in those areas would either avoid red-tailed hawk nesting season (February 15 through July 15), or pipeline construction within 1/3 mile of the nests could begin prior to February 15, so long as the construction activities were initiated prior to February 15, and operated on a daily basis until completion (it is assumed that red-tailed hawks that initiate nesting during ongoing construction activities are tolerant to such activities). Project work areas affected by the nesting red-tailed hawk timing restriction shall be clearly marked on construction drawings.	Special Status Species	

Environmental Commitment	Resource(s) that Benefit	Date of Compliance
If a new active raptor nest is discovered within 1/3 mile of the Proposed Action during construction, or a bald eagle or other raptor nest or bald eagle roost site is discovered within ¼ mile of the Proposed Action during construction, construction would cease until Reclamation could complete consultations with FWS and CPW.	Special Status Species	
Native fill material shall be utilized to diminish new weed introductions to potential Colorado hookless cactus habitat.	Vegetation, Weeds, Habitat, Special Status Species	
Access to the public land grazing allotment (in the North Project Area) shall not be affected by the project.	Grazing	
Post-Construction		
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 that portion of the canal to be abandoned shall be shaped to their natural flow patterns.	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
Re-seeding shall occur following project construction at appropriate times and with appropriate methods, using drought tolerant, weed-free seed mixes per Reclamation specifications and BLM stipulations. Specifically, a BLM-prescribed seed mix shall be used to reseed all disturbances on BLM lands. On private lands, UVWUA shall coordinate with landowners to develop a seed mix compatible with the surrounding native vegetation and approved by Reclamation.	Soil, Vegetation, Weeds, Habitat	
Weed control shall be implemented by UVWUA or UVWUA's contractor in accordance with BLM right-of-way stipulations and current County weed control standards (Delta County 2010; Montrose County 2011).	Soil, Vegetation, Weeds, Habitat	
Herbaceous noxious weeds shall be controlled as necessary after construction for the life of the project through the use of herbicides mixed with surfactants. UVWUA 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.	Soil, Vegetation, Weeds, Habitat	
Reclamation shall conduct follow-up monitoring of known Colorado hookless cactus locations the year following construction to evaluate vegetation conditions.	Special Status Species	

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 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
- Colorado Office of Archaeology & Historic Preservation, Denver, CO
- Colorado Parks & Wildlife, Gunnison, CO
- U.S. Fish & Wildlife Service, Ecological Services, Grand Junction, CO
- U.S. Army Corps of Engineers, Colorado West Regulatory Branch, Grand Junction, CO
- Southern Ute Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)

5.2 EA Comments

Reclamation provided the public an opportunity to comment on the Draft EA and FONSI from September 24, 2018 through October 24, 2018. No comments were received.

5.3 Distribution

Notice of the public review period and availability of the Draft EA (posted on Reclamation's website) was announced through a press release. Notice was also distributed (via U.S. mail or electronic mail) to private landowners adjacent to the Proposed Action Area, 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.

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APPENDIX A

Figures

1. Regional & Local Locator Maps
2. Regional Salinity Control Projects
3. Topography & Land Status Overview Map
   3a. Topographic Map – North Project Area
   3b. Topographic Map – South Project Area
   3c. Topographic Map – Habitat Replacement Site
4. Landcover Map
5. Hydrologic Units Map of the Project Vicinity
6. Bald Eagle Range Map
7. Mule Deer Range Map
8. T&E Species Critical Habitat
9. Soils of Agricultural Significance

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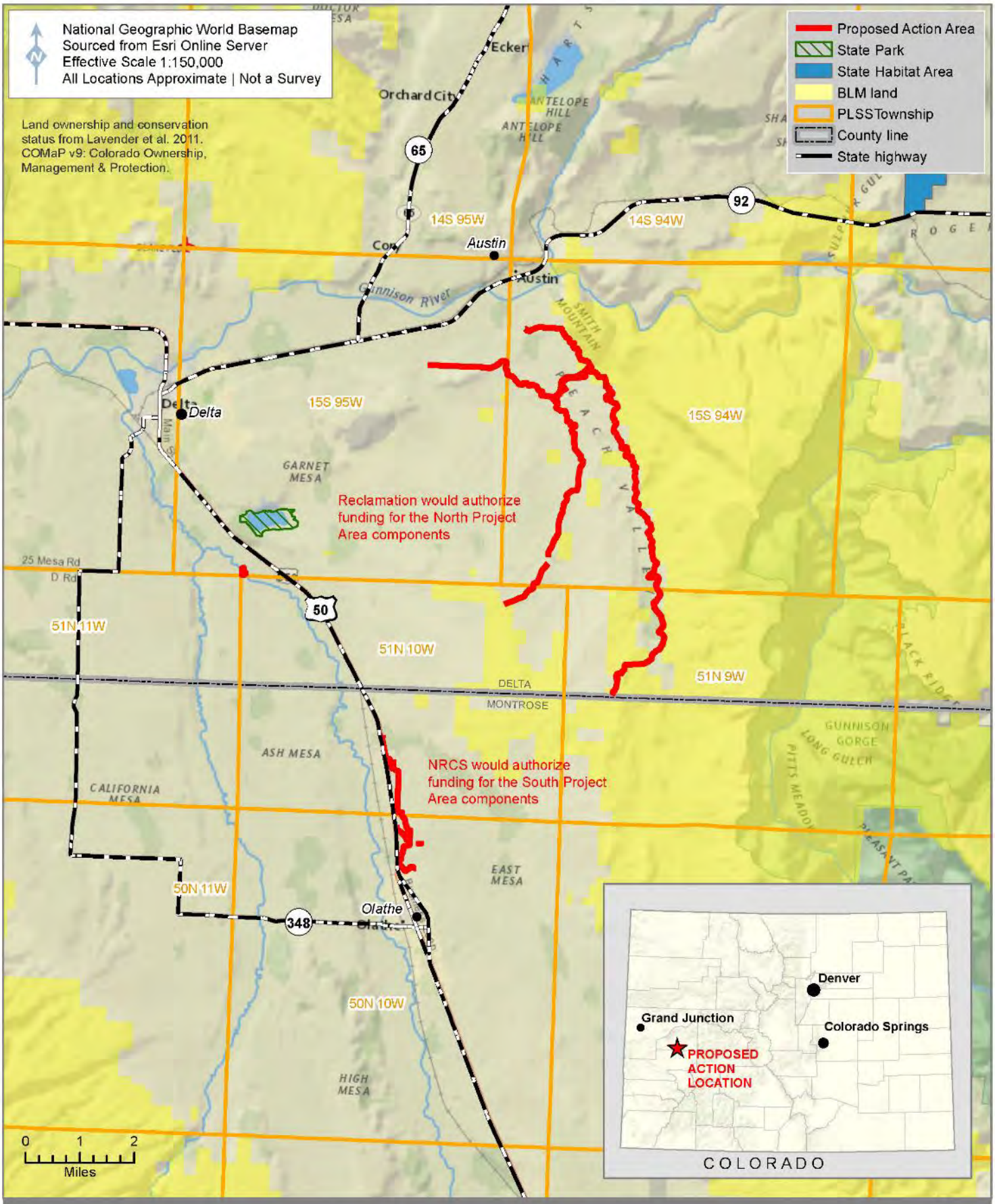
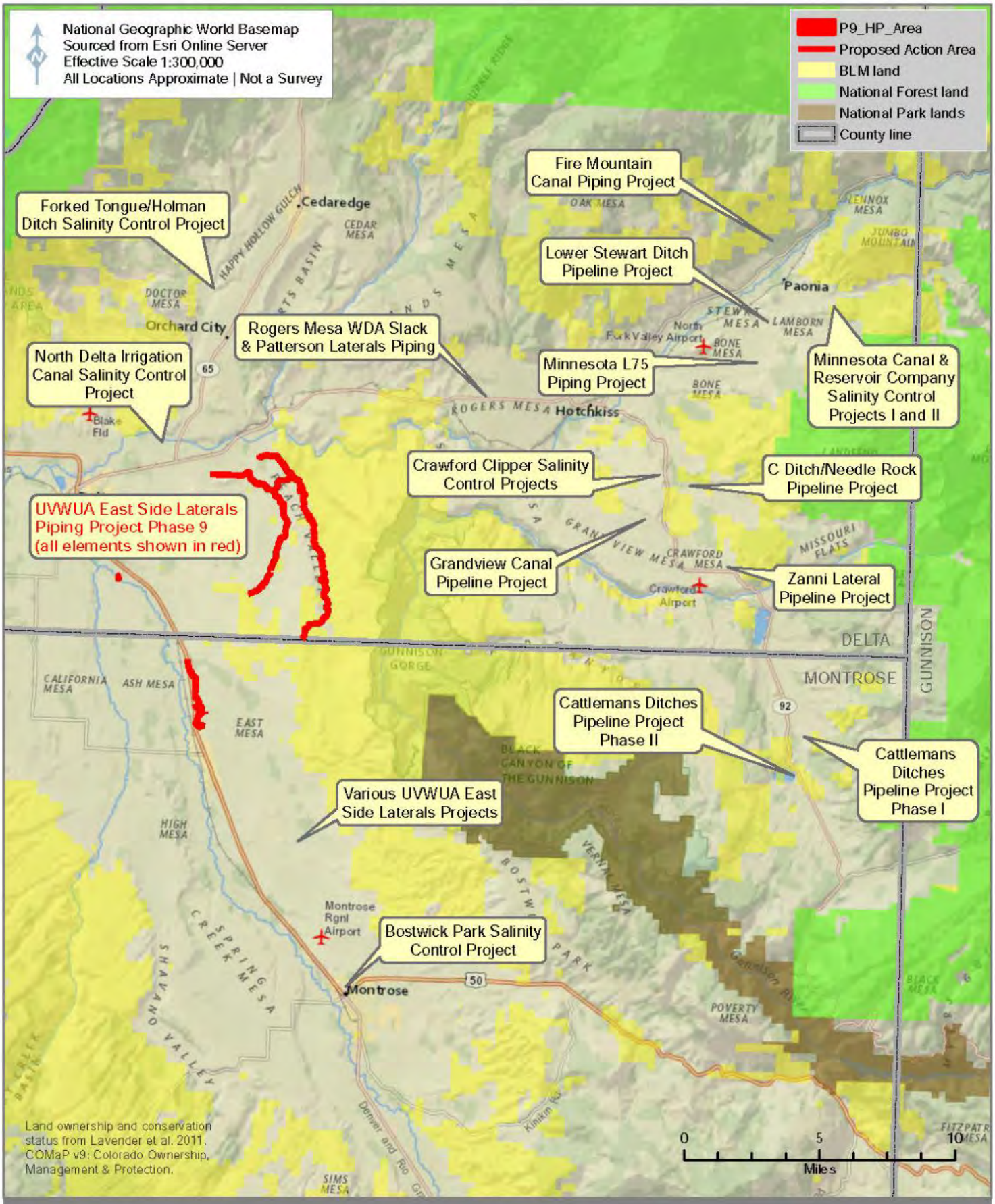


Environmental Assessment
Delta & Montrose Counties, Colorado
www.rareearthscience.com
Map by D. Reeder | August 2018

Regional & Local Locator Maps

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
1



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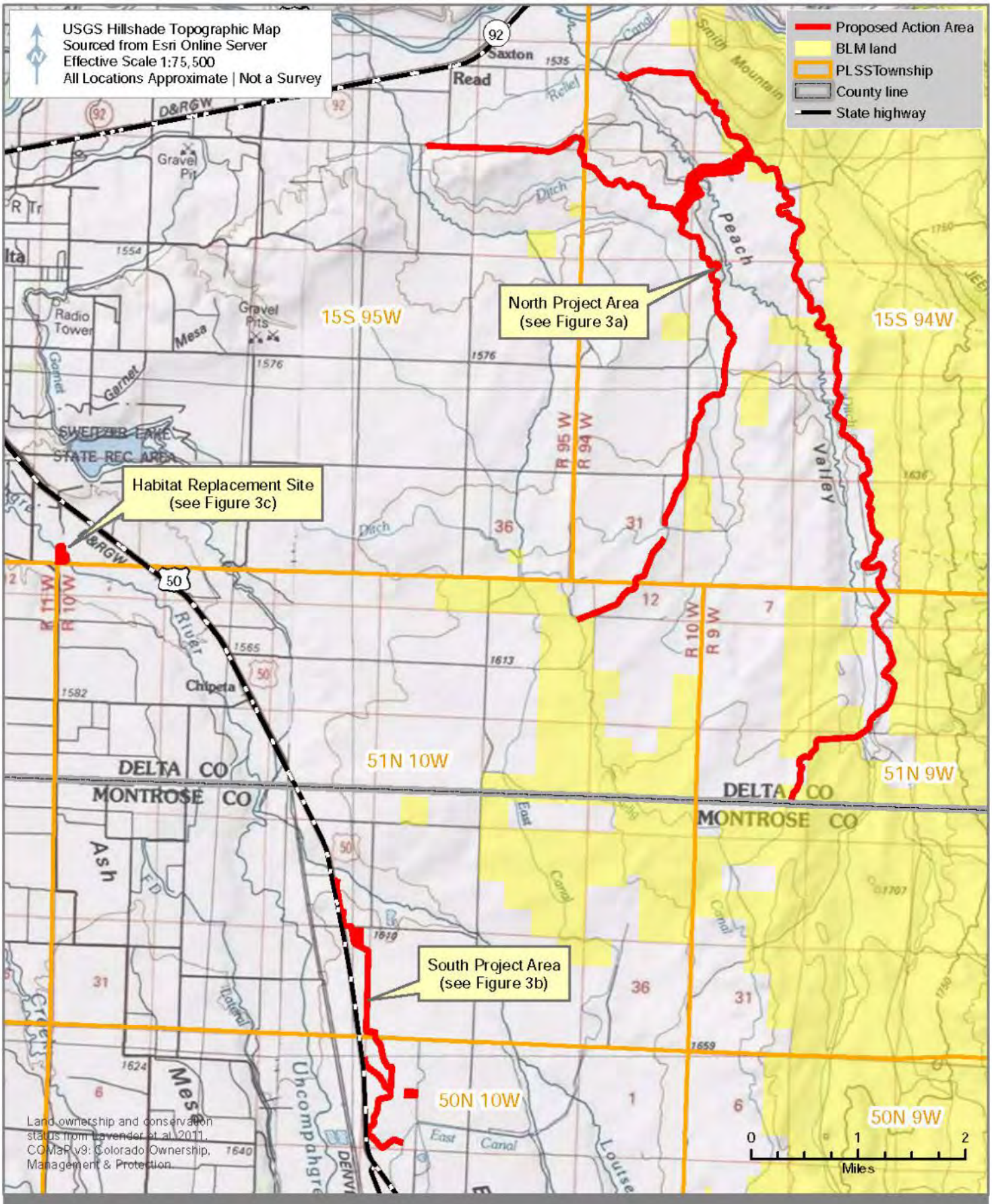
Map by H. Watts | May 2017

Regional Salinity Control Projects

UVWUA SALINITY CONTROL PROJECT 9

FIGURE 2



Environmental Assessment
Delta & Montrose Counties, Colorado
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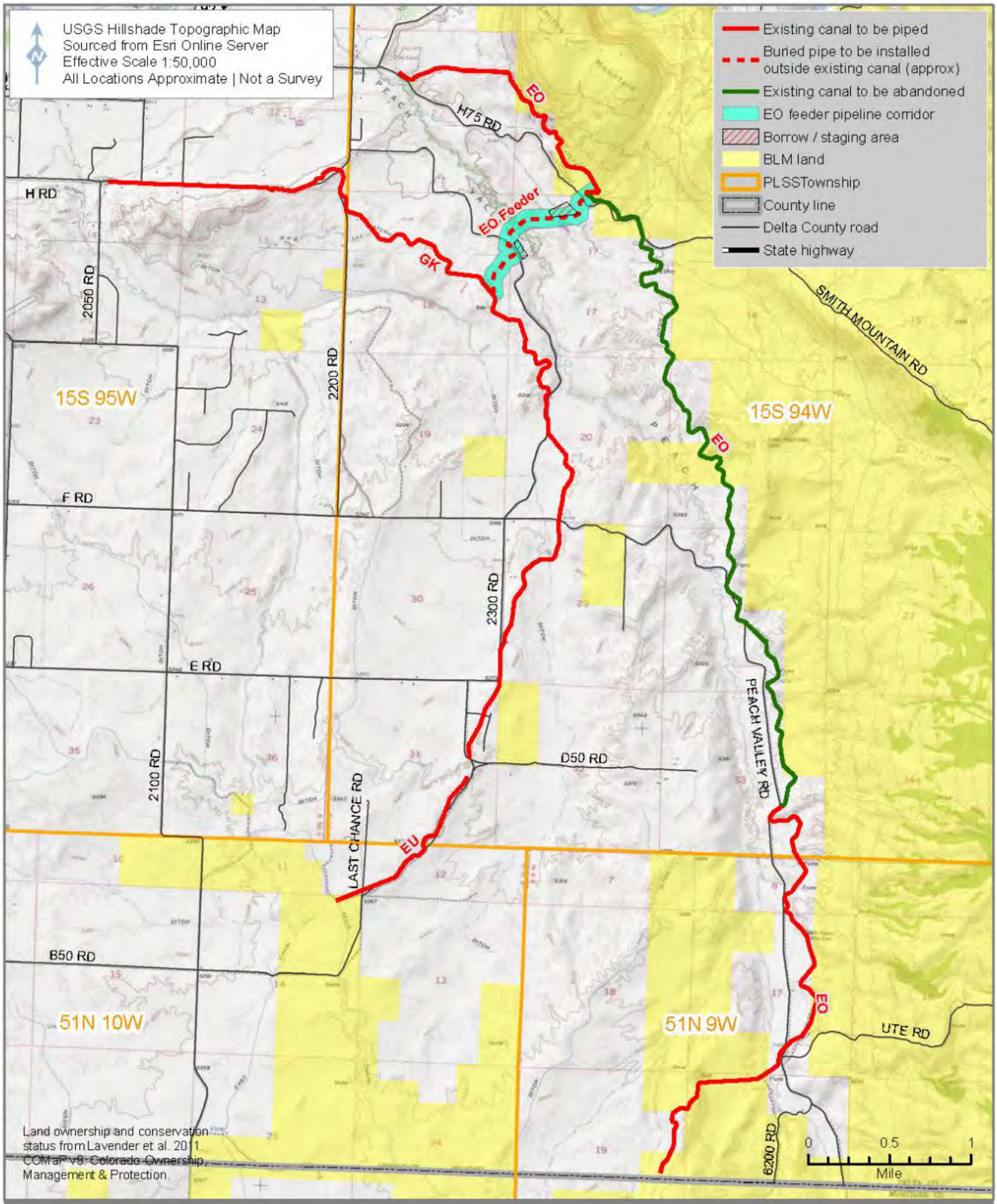
Map by D. Reeder | August 2018

Topography & Land Status Overview Map

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
3



Environmental Assessment
Delta & Montrose Counties, Colorado
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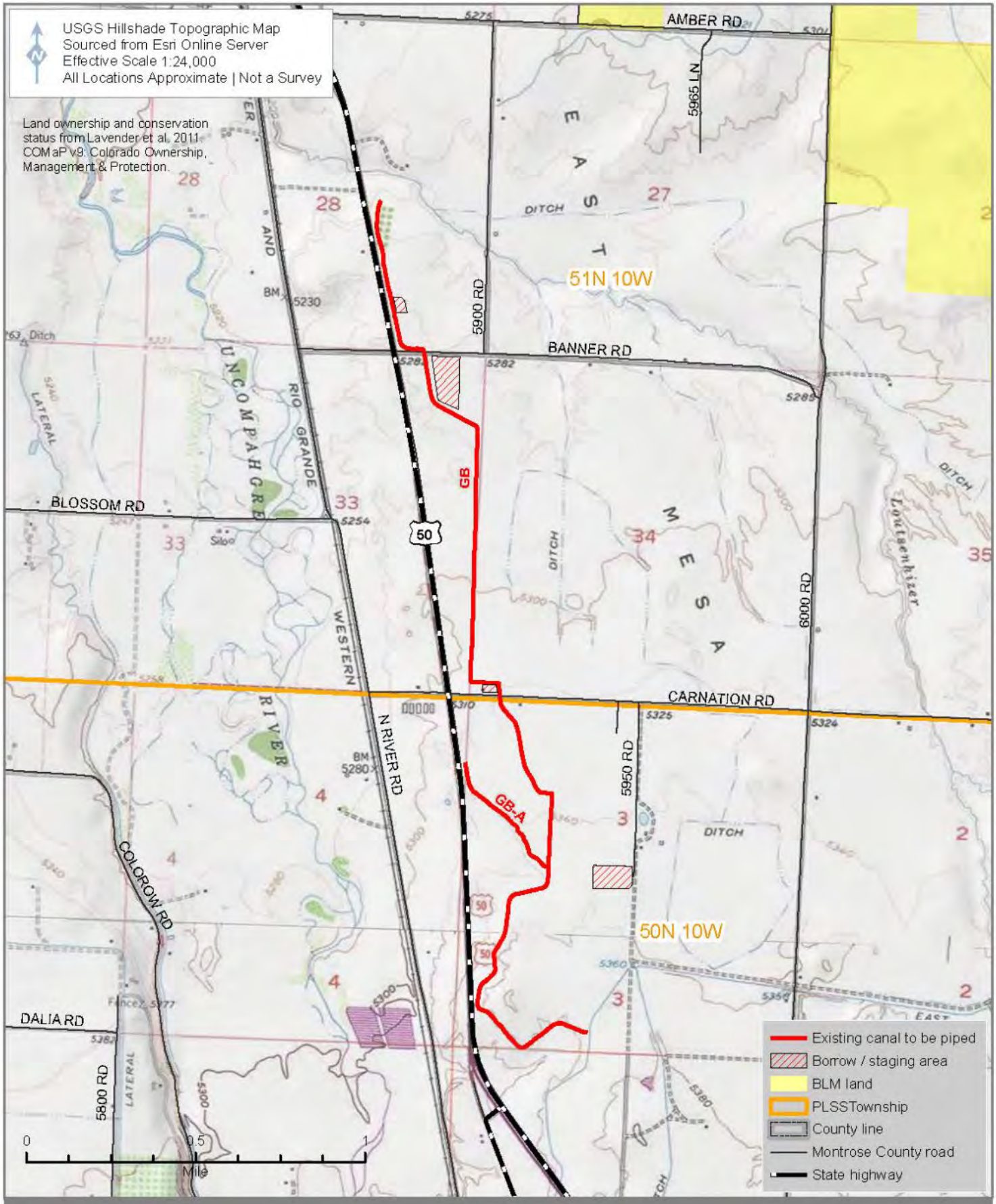
Topographic Map
North Project Area

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
3a

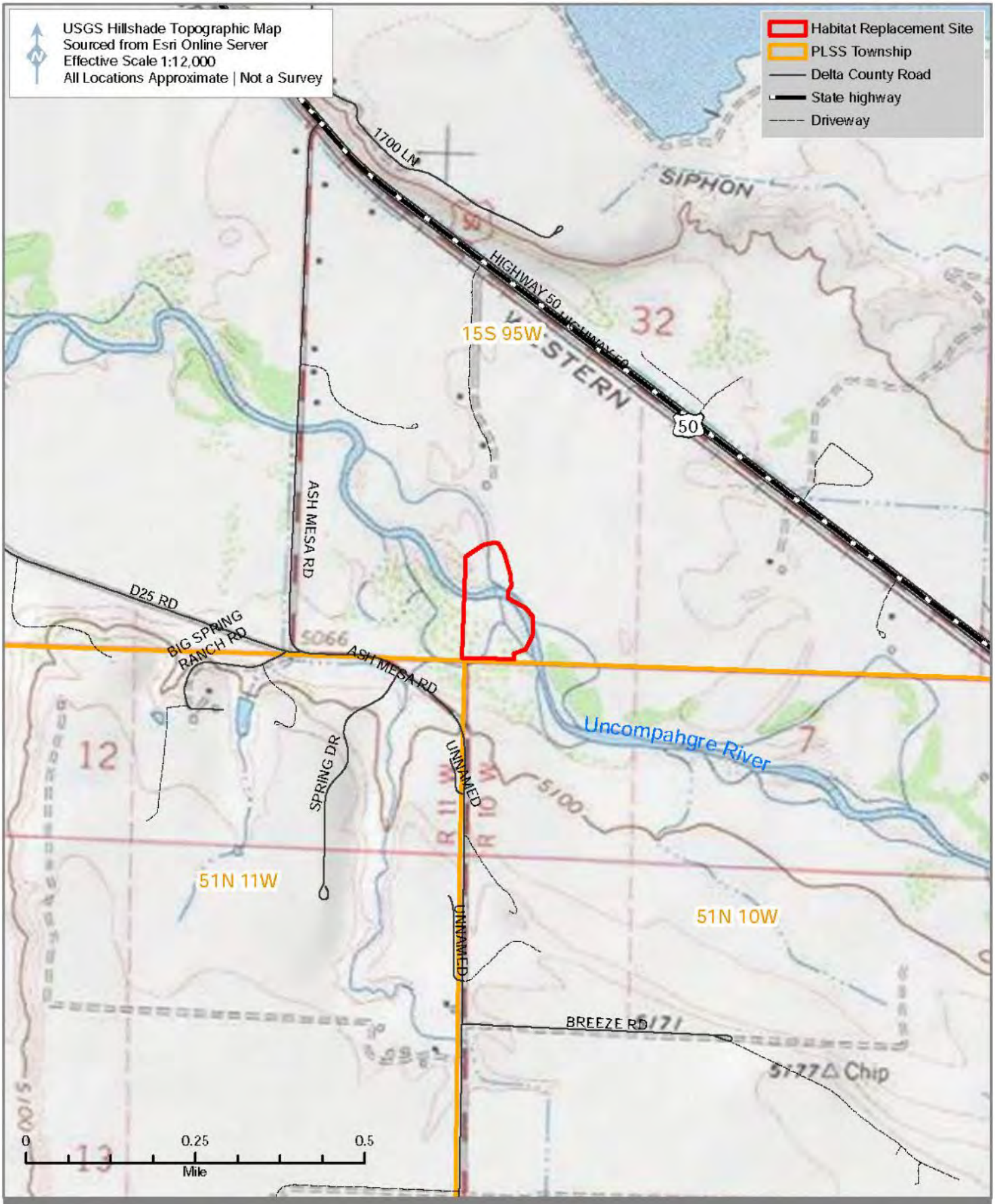


Environmental Assessment
Delta & Montrose Counties, Colorado
www.rareearthscience.com
Map by H. Watts | May 2017

Topographic Map
South Project Area

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
3b

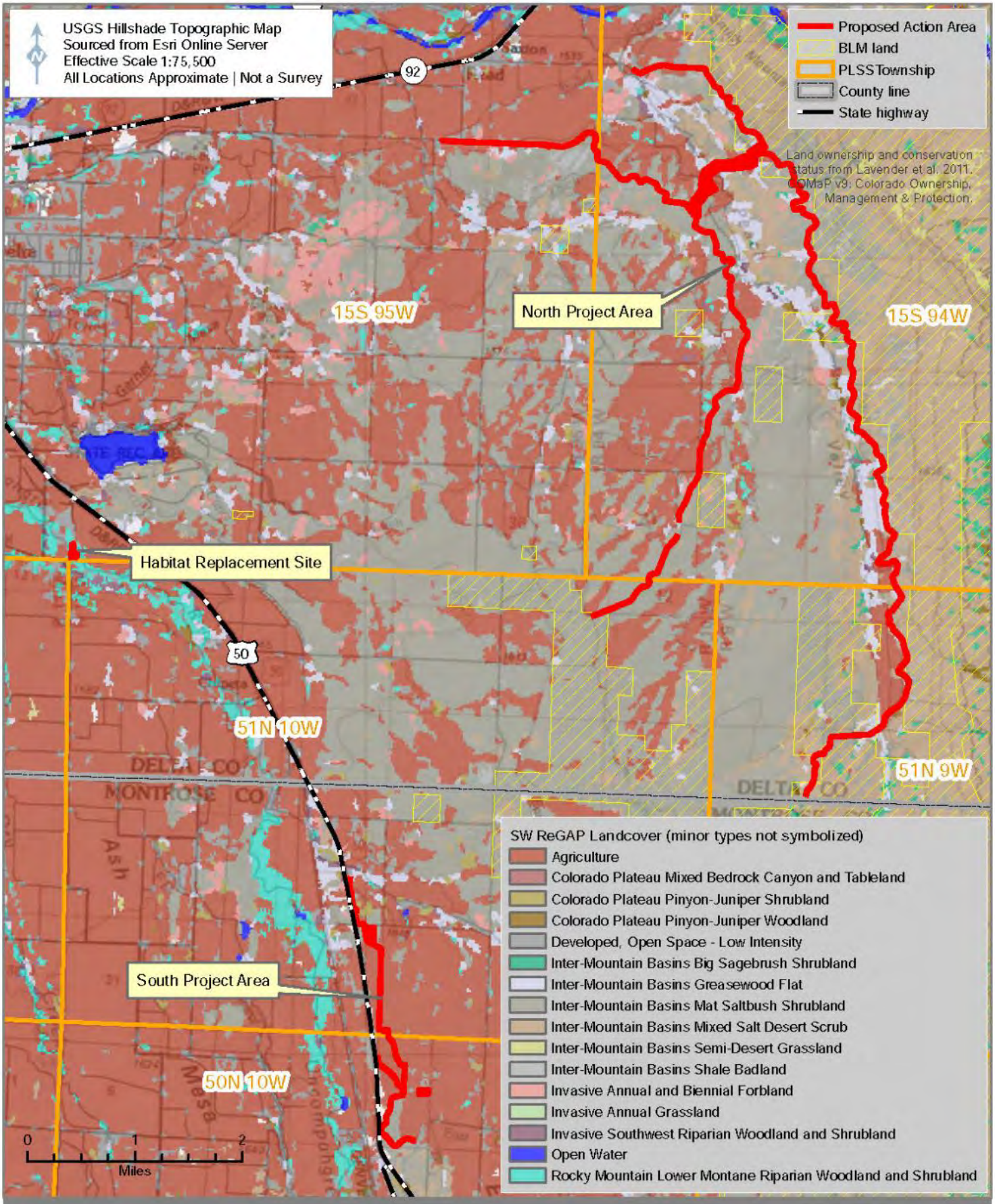


Environmental Assessment
Delta & Montrose Counties, Colorado
www.rareearthscience.com
D. Reeder | August 2018

Topographic Map
Habitat Replacement Site

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
3c



Environmental Assessment
Delta & Montrose Counties, Colorado
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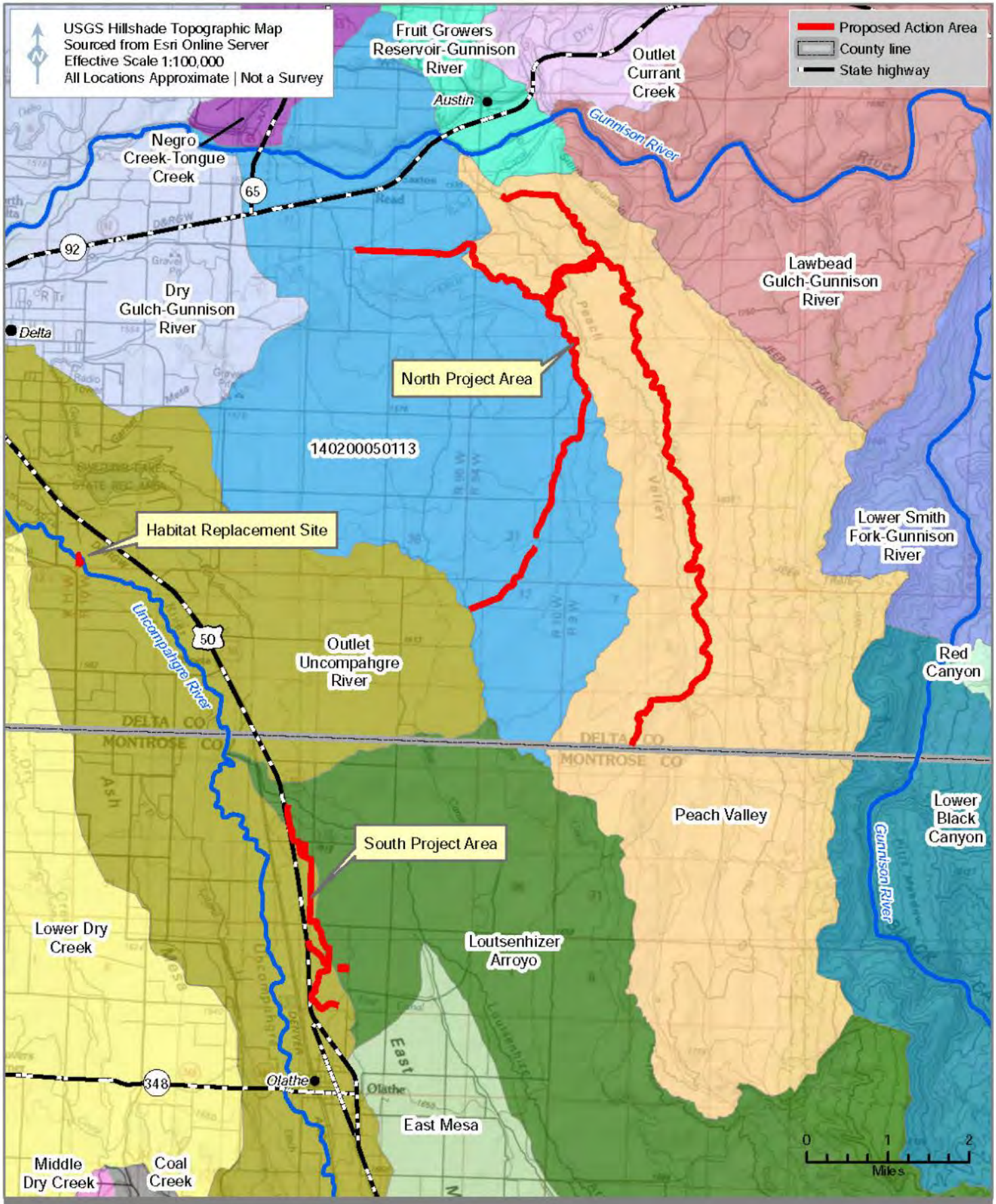
Map by D. Reeder | August 2018

Landcover Map

UVWUA SALINITY CONTROL PROJECT 9

FIGURE 4



Environmental Assessment
Delta & Montrose Counties, Colorado
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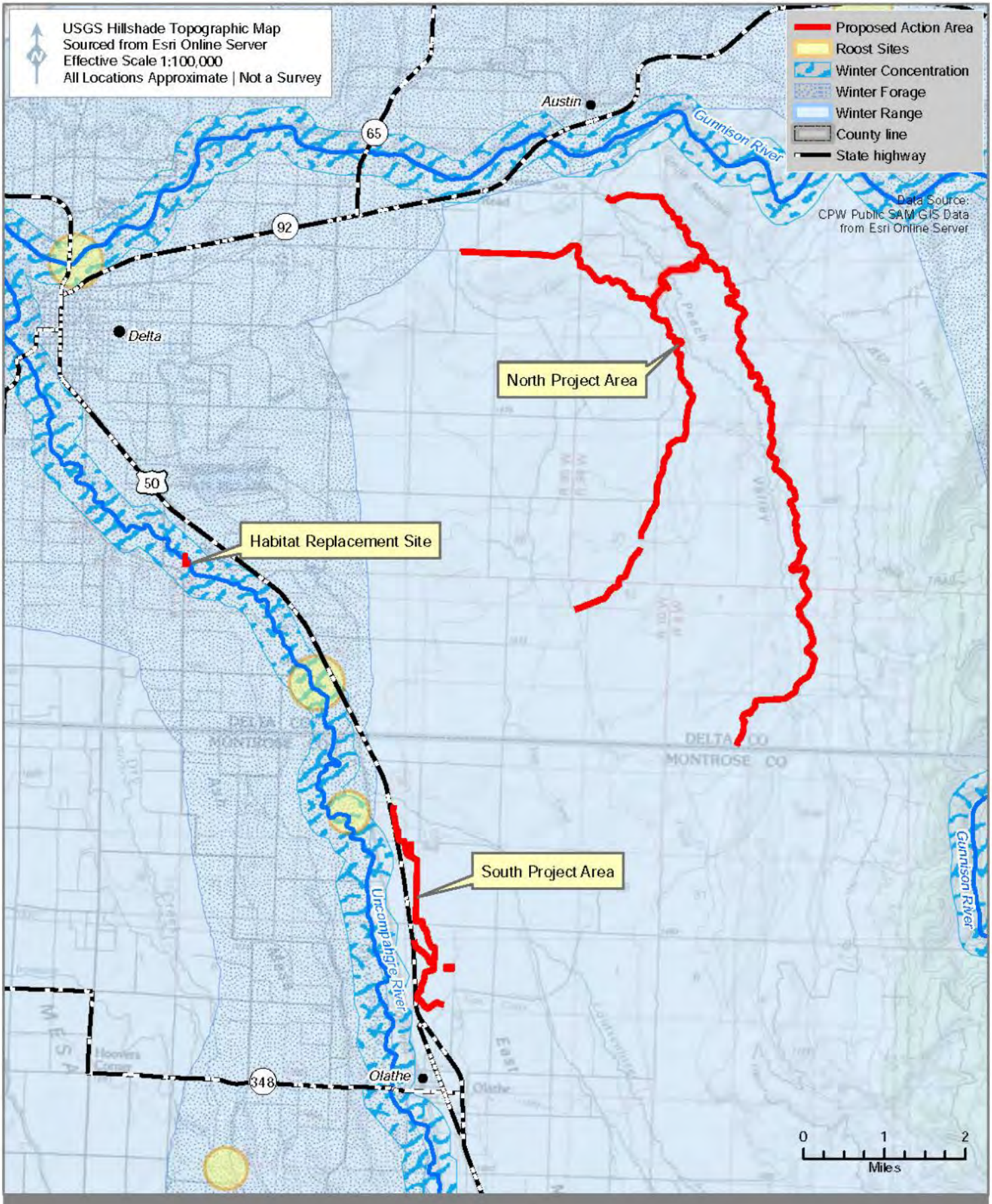
Map by D. Reeder | August 2018

Hydrologic Units Map of the Project Vicinity

UVWUA SALINITY CONTROL PROJECT 9

FIGURE 5



Environmental Assessment
Delta & Montrose Counties, Colorado
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Map by D. Reeder | August 2018

Bald Eagle Range Map

UVWUA SALINITY CONTROL PROJECT 9

FIGURE 6

Environmental Assessment
Delta & Montrose Counties, Colorado
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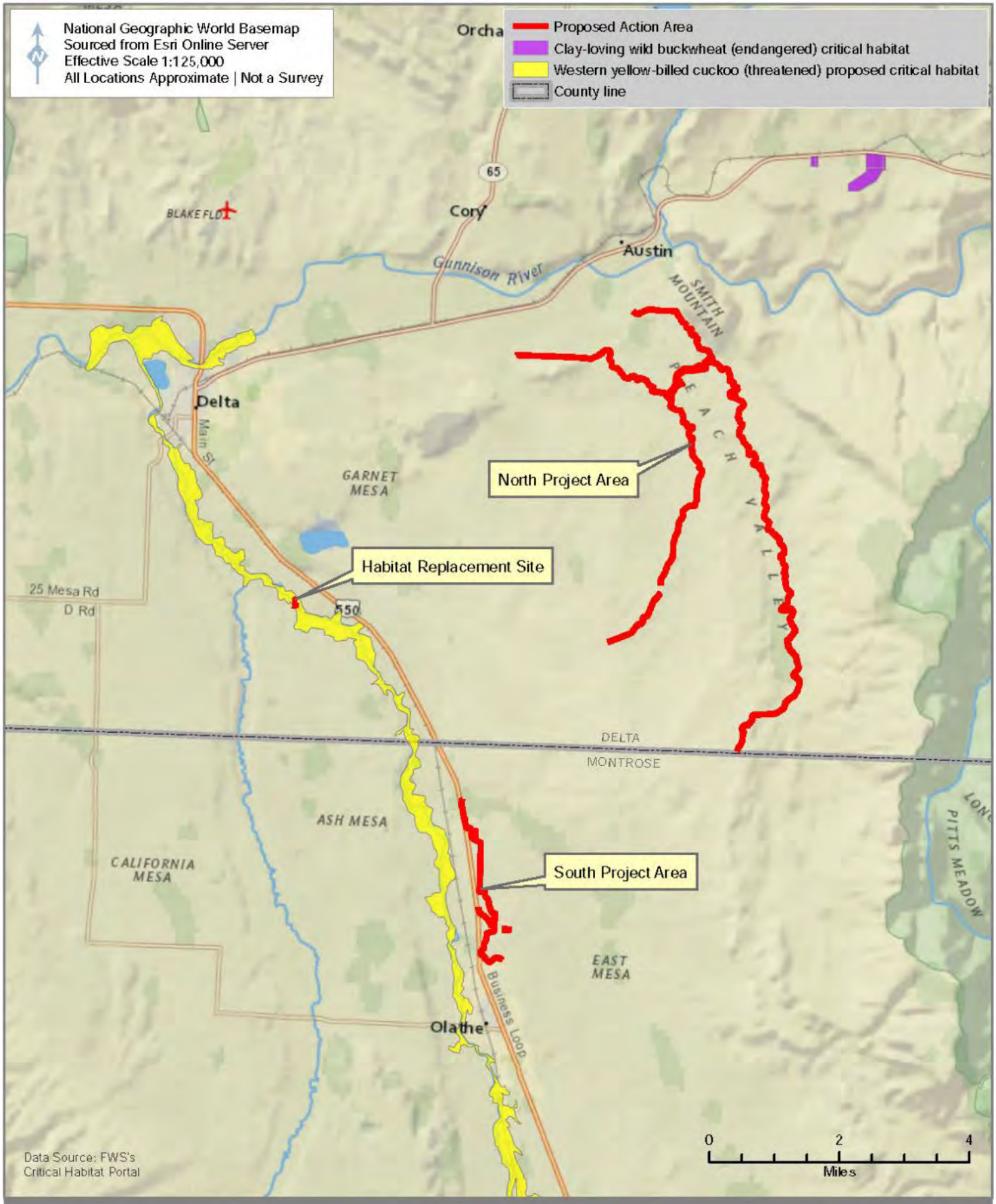
Mule Deer Range Map

UVWUA SALINITY CONTROL PROJECT 9

FIGURE 7



Environmental Assessment
Delta & Montrose Counties, Colorado
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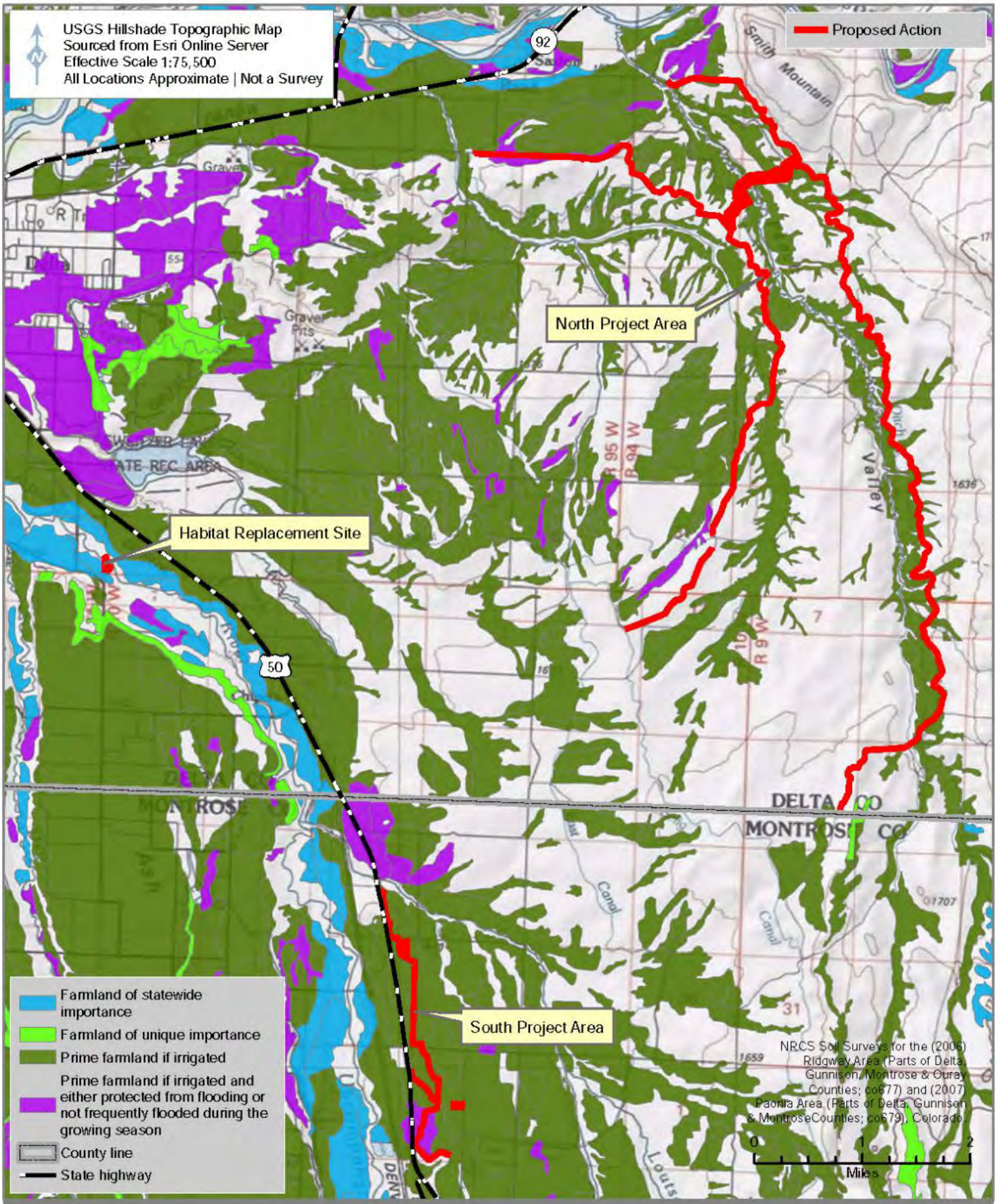
Map by D. Reeder | August 2018

T&E Species Critical Habitat

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
8



Environmental Assessment
Delta & Montrose Counties, Colorado
www.rareearthscience.com
Map by D. Reeder | August 2018

Soils of Agricultural Significance

UVWUA SALINITY CONTROL PROJECT 9

FIGURE
9

APPENDIX B

Distribution List

All landowners adjacent to the Proposed Action
Citizens for a Healthy Community
City of Delta
City of Montrose
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
Montrose Chamber of Commerce
Montrose County Planning & Development Department
Montrose County Public Works Department
Smith Mountain, Middle Peach Valley, and Selig Canal BLM Grazing Allotment Permit Holders
Montrose Daily Press
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 Exemptions Documentation

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

November 2, 2018

Regulatory Division (SPK-2018-00915)

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

Dear Ms. Ward:

I am writing concerning your proposed Uncompahgre Valley Water Users Association East Side Laterals Piping Project, Phase 9. This project would replace a total of approximately 20.4 miles of open, unlined irrigation laterals with 16.5 miles of buried irrigation pipe, install 1.1 mile of buried pipe outside of existing lateral alignments, and backfill and abandon 5.1 miles of existing ditch. Five new canal-to-lateral turnouts and 74 new farm turnouts would be installed on the laterals as part of this action. The project site is located between the Gunnison and Uncompahgre rivers, on an unlined, open irrigation canal system (i.e., part of the federally owned Uncompahgre Project), that extends through Sections 11, 12, 13 and 14, Township 15 South, Range 95 West; Sections 7, 8, 16, 17, 18, 20, 21, 28, 29, 31, 32, and 33, Township 15 South, Range 94 West, 6th Principal Meridian; Section 3, Township 50 North, Range 10 West; Sections 11, 12, 14, 28, 30, and 34, Township 51 North, Range 10 West; and, Sections 8, 17, 19, and 20, Township 51 North, Range 9 West, New Mexico Meridian, centered approximately near Latitude 38.704689°, Longitude -107.943007°, starting east of the City of Delta, in southern Delta County, and ending north of the Town of Olathe, in northeast Montrose 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. Our disclaimer of jurisdiction is only for this activity as it pertains to Section 404 of the Federal 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.

Please refer to identification number SPK-2018-00915 in any correspondence concerning this project. If you have any questions, please contact me at the Colorado West Section, 400 Rood Avenue, Room 224, Grand Junction, Colorado 81501, by email at w.travis.morse@usace.army.mil, or telephone at (970) 243-1199 X 1014.

-2-

For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx. 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*.

Sincerely,

Travis Morse
Senior Project Manager
Colorado West Section
Regulatory Division

cc:
Ms. Dawn Reeder, Rare Earth Science, dawn@rareearthscience.com
Ms. Jeanie McCulloch, Delta County, planning@deltacounty.com
Ms. Jana Moe, Bureau of Land Management, jpmoe@blm.gov
Mr. Randy Randall, Natural Resource Conservation Service, randy.randall@co.usda.gov
Mr. Jim Berkley, Environmental Protection Agency, berkley.jim@epa.gov

APPENDIX D

Endangered Species Act Compliance Documents

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United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Western Colorado Area Office
445 West Gunnison Avenue, Suite 221
Grand Junction, CO 8150

IN REPLY REFER TO:

WCG-Ewing
2.2.1.06

OCT 3 2018

U.S. FISH AND WILDLIFE SERVICE
☐ NO CONCERNS
☒ CONCUR NOT LIKELY TO ADVERSELY AFFECT
☐ NO COMMENT
Ann Tim 10/23/18
WESTERN COLORADO SUPERVISOR (DATE)

MEMORANDUM

Tails: 06E24100-2018-I-0638

To: Ann Timberman, Western Colorado Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Grand Junction, Colorado

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

Subject: Request for Consultation under Section 7 of the Endangered Species Act for Uncompahgre Valley Water Users Association's Eastside Laterals Phase 9 Piping Project, Uncompahgre Project, Colorado

The Bureau of Reclamation is requesting consultation pursuant to Section 7 of the Endangered Species Act for an irrigation ditch piping project. Under the Colorado River Salinity Control Program, Reclamation has entered into an agreement with Uncompahgre Valley Water Users Association (UVWUA) to provide funding assistance to pipe portions of the eastside laterals in order to reduce salt loading into the Colorado River.

The attached Threatened & Endangered Survey Report (T&E report) provides information regarding federally-listed species and critical habitat to support Reclamation's determinations of effect. Reclamation and Rare Earth Science have previously discussed this project with Dara Taylor, Aimee Crittendon, and Creed Clayton of your office.

The proposed UVWUA Eastside Laterals Phase 9 Piping Project (hereafter "project" or "proposed action") is in Delta County, Colorado, near the City of Delta (see figure 1 in attached T&E report). The proposed action will replace the existing system of unlined open canal with a buried pipe delivery system, which will eliminate ditch seepage and reduce salinity in the Colorado River basin by an estimated 6,030 tons of salt per year. An additional beneficial effect of the proposed action is the potential reduction of selenium in the Colorado River basin. The project will replace approximately 20.4 miles of open, unlined East Side laterals with approximately 16.5 miles of buried irrigation pipe (including an approximately 1.1-mile-long pipe outside of existing lateral alignments). Approximately 5.1 miles of existing ditch lateral would be backfilled and abandoned. In addition, an 8.4-acre habitat replacement site is a part of the project, which is an expansion of another habitat replacement project currently undergoing consultation (TAILS: 2018-I-0161). Acreage at the habitat replacement site will be improved by activities such as planting native trees and shrubs, and removal and control of noxious weed

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Ecological Services
Grand Junction, CO

species. The Habitat Replacement Site is located on private land along the Uncompahgre River approximately 5 miles southwest of the City of Delta. Additional information about the project is available in the T&E report.

Based on the information contained in the attached T&E report and summarized below, Reclamation requests the Service's concurrence with the following effects determinations for the project:

1) The project may affect, but is not likely to adversely affect, the western yellow-billed cuckoo, and will not adversely modify proposed critical habitat. The pipeline portion of the project is located outside of proposed critical habitat and does not contain suitable habitat. Some sections of the pipeline alignment are within less than half a mile of potentially suitable habitat; however, work in these areas will occur during the irrigation off-season (approximately November through March), which is when cuckoo are absent from the area. Moreover, pipeline construction activities will not exceed the background disturbance levels associated with the railroad, highway, and agricultural practices occurring nearby. The habitat replacement site falls within proposed critical habitat that contains marginally adequate nesting and foraging potential. Foraging and nesting individuals could be present during breeding or shoulder migration seasons; however, non-native tree removal and planting activities in the Habitat Replacement Site will avoid yellow-billed cuckoo breeding season (June 1 through August 31). The goal of the Habitat Replacement Site is the removal of non-native trees and shrubs and establishment of native trees and shrubs in the Uncompahgre River corridor for the benefit of increasing the quality of cover, foraging, and/or nesting opportunities for cuckoo. Despite temporary negative effects to riparian woodlands from noxious riparian tree and shrub removal from this project and the adjoining project, impacts to habitat will not appreciably diminish the value of the critical habitat for conservation of the species because: native revegetation activities would enhance cuckoo habitat and habitat connectivity characteristics, the proximity to other sizeable stands of suitable habitat will remain unchanged, and the size of the treatment area will be insignificant.

2) The proposed action may affect, but is not likely to adversely affect, the Colorado hookless cactus. Surveys were conducted in suitable habitat. After avoidance measures were implemented there were nine remaining areas where Colorado hookless cactus occur within 20 meters of the project. The following conservation measures will be implemented to minimize impacts:

   - Surface-disturbing activities will take place during the dormant season (June through March) and/or dust abatement will be used when warm, dry, dusty conditions are present.
   - Cactus areas will be protected by barricades and/or staking the construction and travel corridors.
   - Native fill material will be used to prevent the introduction of invasive species.
   - A pre-construction meeting will be conducted with the contractor to inform them of the areas to avoid.

There are six plant occurrence areas where two additional conservation measures will be implemented. The implementation of the additional conservation measures is based on whether the 10-meter buffer intersected the 60-foot-wide project area, and site-specific knowledge (e.g. plant occurrences are downgradient of project work). In these areas the following measures will be implemented:

- A site visit will be conducted prior to construction occurring in the area to document health of plants.
- A biological monitor will be on-site during construction activities.

3) The proposed action may affect, and is likely to adversely affect, the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail and the species' designated critical habitat. The Proposed Action Area does not lie within the ranges of the endangered Colorado fishes. The Service has previously issued biological opinions that all depletions within the Upper Colorado River Basin may adversely affect the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. As a federal facility, the Uncompahgre Project's historic depletions are covered under the Gunnison Basin Programmatic Biological Opinion which avoids the likelihood of jeopardy and/or adverse modification of critical habitat for the endangered fishes, and ensures that UVWUA can continue to operate consistently with Section 7 of the ESA. There are no new depletions associated with the Proposed Action.

Reclamation has also determined that the proposed action will have no effect on clay loving wild-buckwheat or its critical habitat, North American wolverine, Mexican spotted owl or its critical habitat, or green-backed cutthroat trout. Should the Proposed Action change in a manner that was not previously considered, or if additional information on the distribution of listed species in the project area becomes available, Reclamation will contact FWS to ensure the determinations remain valid.

If you have any questions or need additional information, please contact Amanda Ewing at 970-248-0631 or by email at aewing@usbr.gov.

Attachments

cc: Jana Moe
Realty Specialist
Bureau of Land Management
Uncompahgre Field Office
2465 Townsend Ave.
Montrose, CO 81401-5436
(w/att)

Ewing, Amanda <aewing@usbr.gov>

RE: Uncompahgre Valley Water Users Association's Eastside Laterals Phase 9 Piping Project

1 message

Creed Clayton <creed_clayton@fws.gov> Fri, Oct 19, 2018 at 11:44 AM
To: Amanda Ewing <aewing@usbr.gov>
Cc: Dara Taylor <dara_taylor@fws.gov>, Dawn Reeder <dawn@rareearthscience.com>, Jennifer Ward <jward@usbr.gov>, Lesley McWhirter <lmcwhirter@usbr.gov>

Amanda, yes the edited conservation measures look good. Email documentation would be acceptable for us for both measures (not just the second one).

Thanks, Creed

From: Ewing, Amanda <aewing@usbr.gov>
Sent: Friday, October 19, 2018 11:29 AM
To: Creed Clayton <creed_clayton@fws.gov>
Cc: Dara Taylor <dara_taylor@fws.gov>; Dawn Reeder <dawn@rareearthscience.com>; Ward, Jennifer <jward@usbr.gov>; Lesley McWhirter <lmcwhirter@usbr.gov>
Subject: Re: Uncompahgre Valley Water Users Association's Eastside Laterals Phase 9 Piping Project

Creed,

Yes, we can include the same environmental commitments for UVWUA's project that we did for NDIC. Therefore, in addition to the conservation measures included in the BA, we can add the conservation measure about post-construction follow-up monitoring. Can I request a modification to the wording of one of the environmental commitments so it reads the same as NDIC? Consistency will help ensure that I am able to fulfill the obligation as agreed to without becoming confused between differing expectations between the similar projects.

If acceptable, can the following edited conservation measure and added conservation measure apply to the UVWUA phase IX project consultation:

- **Edited conservation measure to read**: Reclamation biologist or contracted biologist will be onsite during construction **or inspect the health of cacti shortly after construction work is complete.**
- **Added conservation measure**:Reclamation will monitor for weeds the year following construction and provide documentation to FWS (email is an acceptable form of documentation).

Please let me know if this is acceptable and that this email suffices as documentation for modifying the BA.

Thank you,

Amanda

On Fri, Oct 19, 2018 at 10:42 AM Creed Clayton <creed_clayton@fws.gov> wrote:

Amanda,

I'm trying to wrap up our s7 response for this project. I need to hear back from Ken Holzinger first--I've sent him an email asking for confirmation that BLM is intending to use BOR's s7 for this and that they will not be seeking s7 consultation separately.

I also am wondering if a conservation measure can be added to this project that we discussed for the NDIC piping project. Looks like staking and barricades are already proposed to prevent equipment from accidentally damaging cacti. However, as with the NDIC project for cacti close to ground disturbance, can post-project monitoring be added to assess weed spread and any inadvertent damage to hookless cactus individuals? Such post-project monitoring can really help us better understand if we made the correct assumptions and determinations for this project, and guide us during consultation on future projects. We currently lack sufficient specific information on the impacts of ground disturbance from heavy machinery (back hoes, bulldozers) working in close proximity to listed cacti. This lack of information necessitates that we make assumptions about effects to cactus; we do not currently have adequate confidence or consensus on this. Learning from on the ground projects will help us refine our future assumptions and reduce our uncertainty in this regard. A better understanding of how nearby disturbance affects listed plant species will allow all of us to better conserve listed species while allowing for good projects, such as this one, to go forward without too much red tape or unnecessary restrictions.

Thanks, Creed

J. Creed Clayton, PhD

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

445 West Gunnison Avenue 970-628-7187

Grand Junction, CO 81501 creed_clayton@fws.gov

--

Amanda Ewing

Biologist

Western Colorado Area Office

Upper Colorado Region, Bureau of Reclamation

Office: 970-248-0631

aewing@usbr.gov

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APPENDIX E

Cultural Resource Compliance Documents

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MEMORANDUM OF AGREEMENT
AMONG
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,
UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING PHASE IX OF THE EASTSIDE LATERALS PIPING PROJECT,
SALINITY CONTROL PROGRAM,
DELTA AND MONTROSE COUNTIES, COLORADO

WHEREAS, the Bureau of Reclamation (Reclamation) and the Uncompahgre Valley Water Users Association (UVWUA) plan to pipe 6.4 miles of the GK Lateral and the entirety of the EU, EO, and GB Laterals (Project); and

WHEREAS, Reclamation plans to fund UVWUA to pipe the GK, EU, EO, and GB Laterals, as allowed for by the Basin States Program under the 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 Natural Resources Conservation Service (NRCS) proposes to provide partial funding for the Project through their Regional Conservation Partnership Program (RCPP), and therefore has a federal action associated with the Project; and

WHEREAS, the NRCS has designated Reclamation as the lead federal agency for compliance with Section 106 of the NHPA for the Project, has participated in the consultation process, and has chosen not to participate in the MOA as a Signatory; and

WHEREAS, the Bureau of Land Management (BLM) has participated in the consultation, and has chosen not 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 24.5 miles existing laterals and 3.2 miles of proposed feeder pipelines, as well as 21.14 acres of proposed staging areas, totaling 319.4 acres on private land and 40.2 acres on lands managed by the BLM, 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 recorded segments of the EU Lateral (5DT2086.1) and the GB Lateral (5MN10852.1) are eligible for listing on the National Register of Historic Places (NRHP) under Criterion A, and that the recorded segments of the GK Lateral (5DT2021.2) and the EO Lateral (5DT2087.1) are eligible for listing on the NRHP under Criteria A and C, and that the Project will result in an adverse effect to historic properties; and

WHEREAS, the UVWUA as the sponsor of the Project, has participated in the consultation, and has been invited to sign the Memorandum of Agreement (MOA); and

WHEREAS, Reclamation has consulted with the Southern Ute Indian Tribe, Ute Indian Tribe – Uintah and Ouray Reservation, and the Ute Mountain Ute Tribe on the proposed undertaking, and the tribes have chosen not to participate in the consultation; and

WHEREAS, Reclamation has consulted with the Delta County Commissioners and the Montrose County Commissioners on the proposed undertaking, and they have chosen not to participate in the consultation as a concurring party; 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 GK, EU, EO, and GB Laterals, Reclamation will ensure that the segments of the properties (5DT2021.2, 5DT2086.1, 5DT2087.1, 5MN10852.1) shall be recorded in accordance with the guidance for Level I 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, 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 will not be necessary for this property, as it is not significant for its design characteristics.

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 I Documentation to the SHPO within one (1) year 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 I Documentation will be placed on the Reclamation Western Colorado Area Office's cultural resource webpage. The SHPO shall receive notification once the document is placed on the webpage.

IV. DURATION

This MOA will be null and void 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. Unless terminated pursuant to Stipulation VII, below, this MOA will be in effect through Reclamation's implementation of the stipulations of this MOA, and will terminate and have no further force or effect when Reclamation, in consultation with the SHPO, determines that the terms of the MOA have been fulfilled in a satisfactory manner.

V. POST-REVIEW DISCOVERIES

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

VI. MONITORING AND REPORTING

No later than June 30th of each year following the execution of this MOA until its stipulations are carried out, it expires, or is terminated, UVWUA 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 GVIC'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 responsibility 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 UVWUA, 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.

SIGNATORIES:

Colorado State Historic Preservation Office

By: _____ Date: 12/18/17
for Steve Turner, AIA, State Historic Preservation Officer

Bureau of Reclamation, Western Colorado Area Office

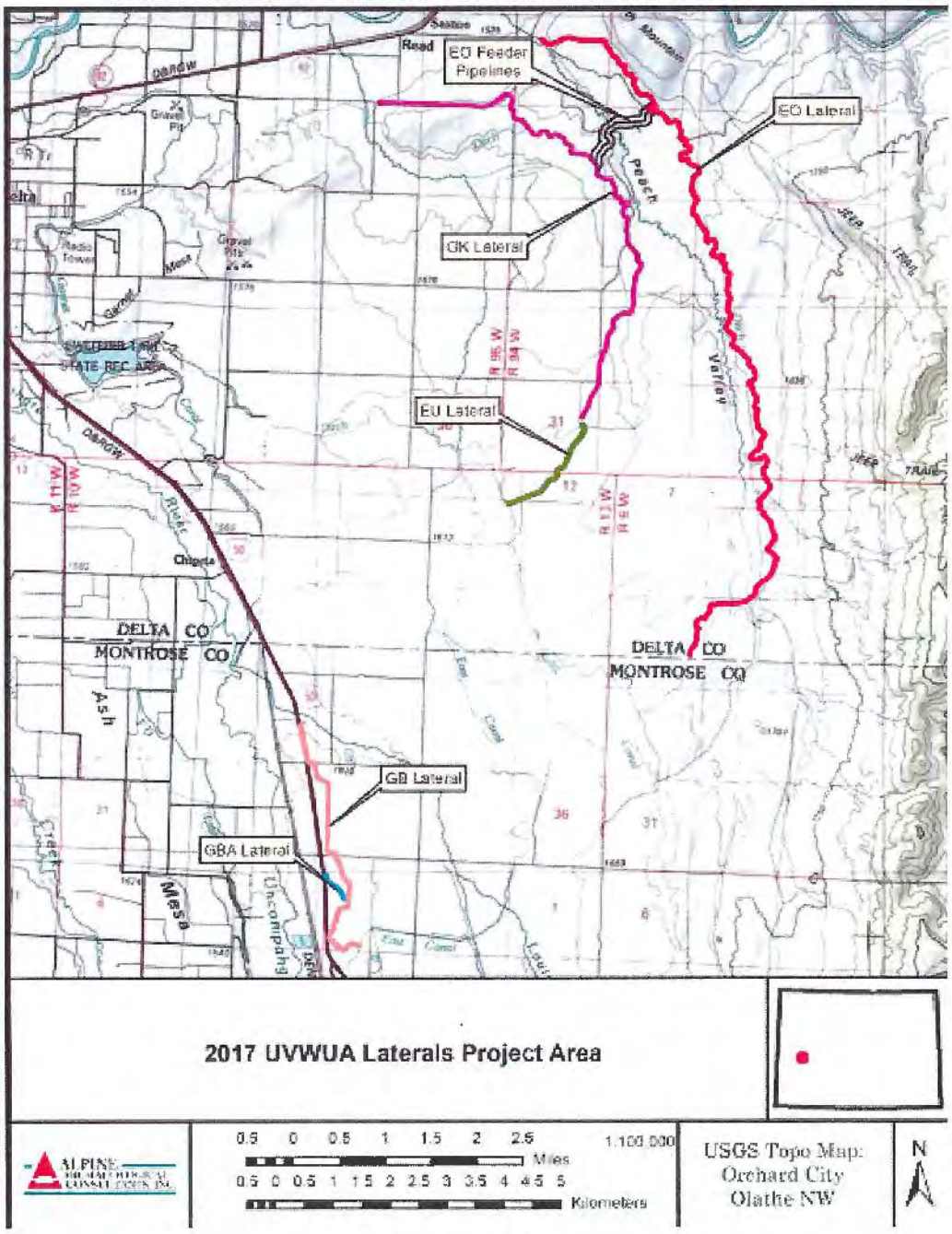
By: _____ Date: 12-12-17
Ed Warner, Area Manager

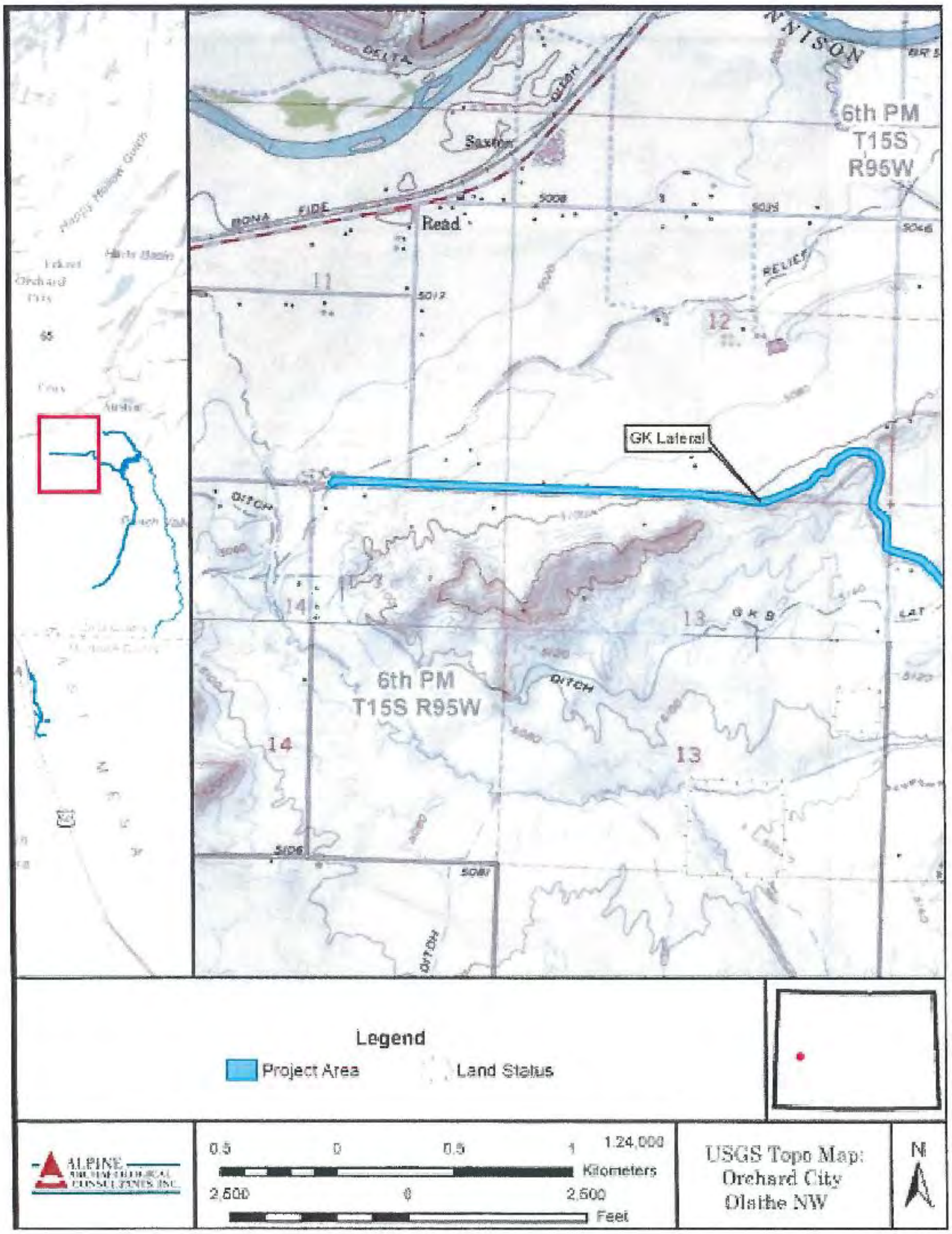
INVITED SIGNATORIES:

Uncompahgre Valley Water Users Association

By: _____ Date: December 4, 2017
Steve Anderson, Manager

ATTACHMENT A – AREA OF POTENTIAL EFFECT

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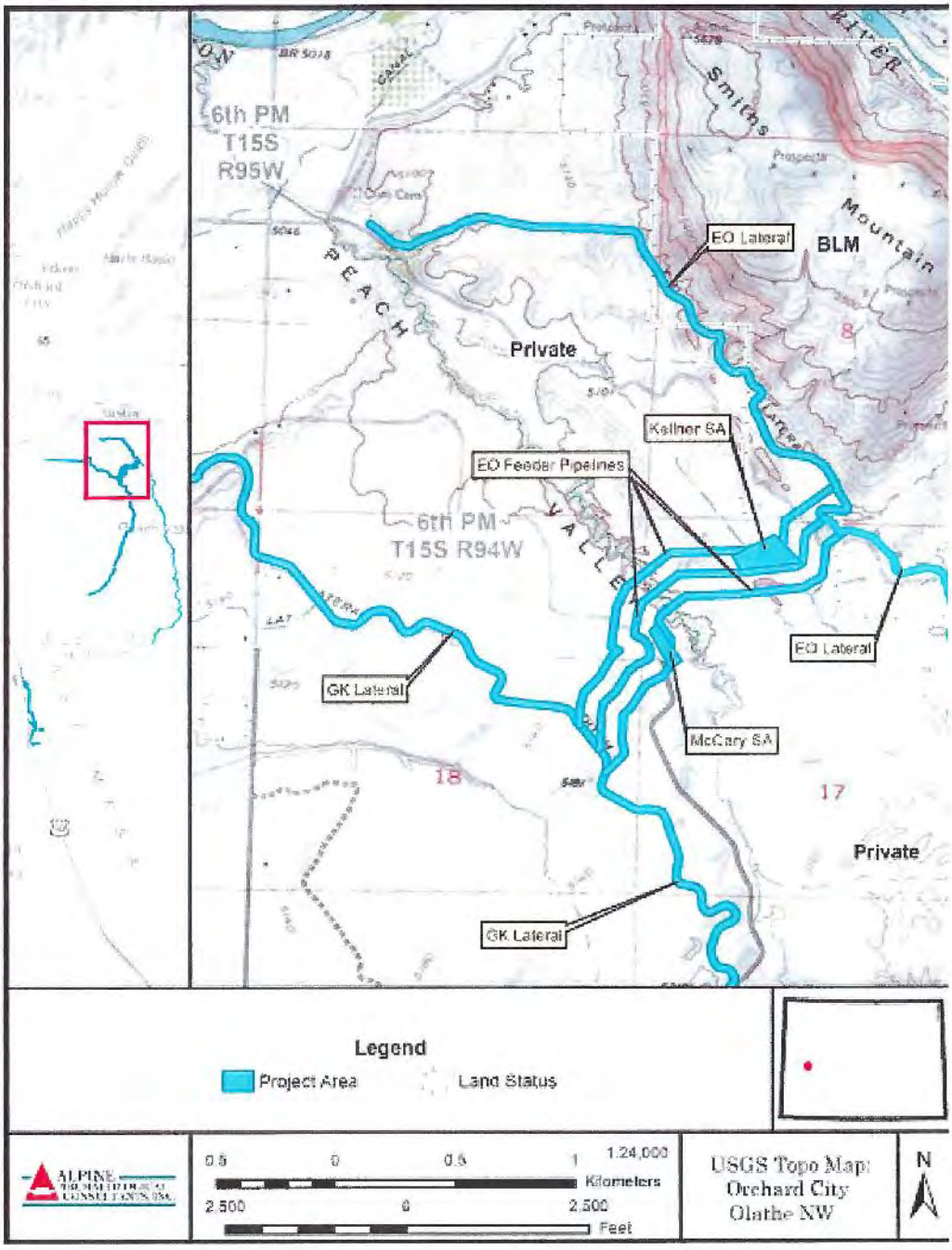
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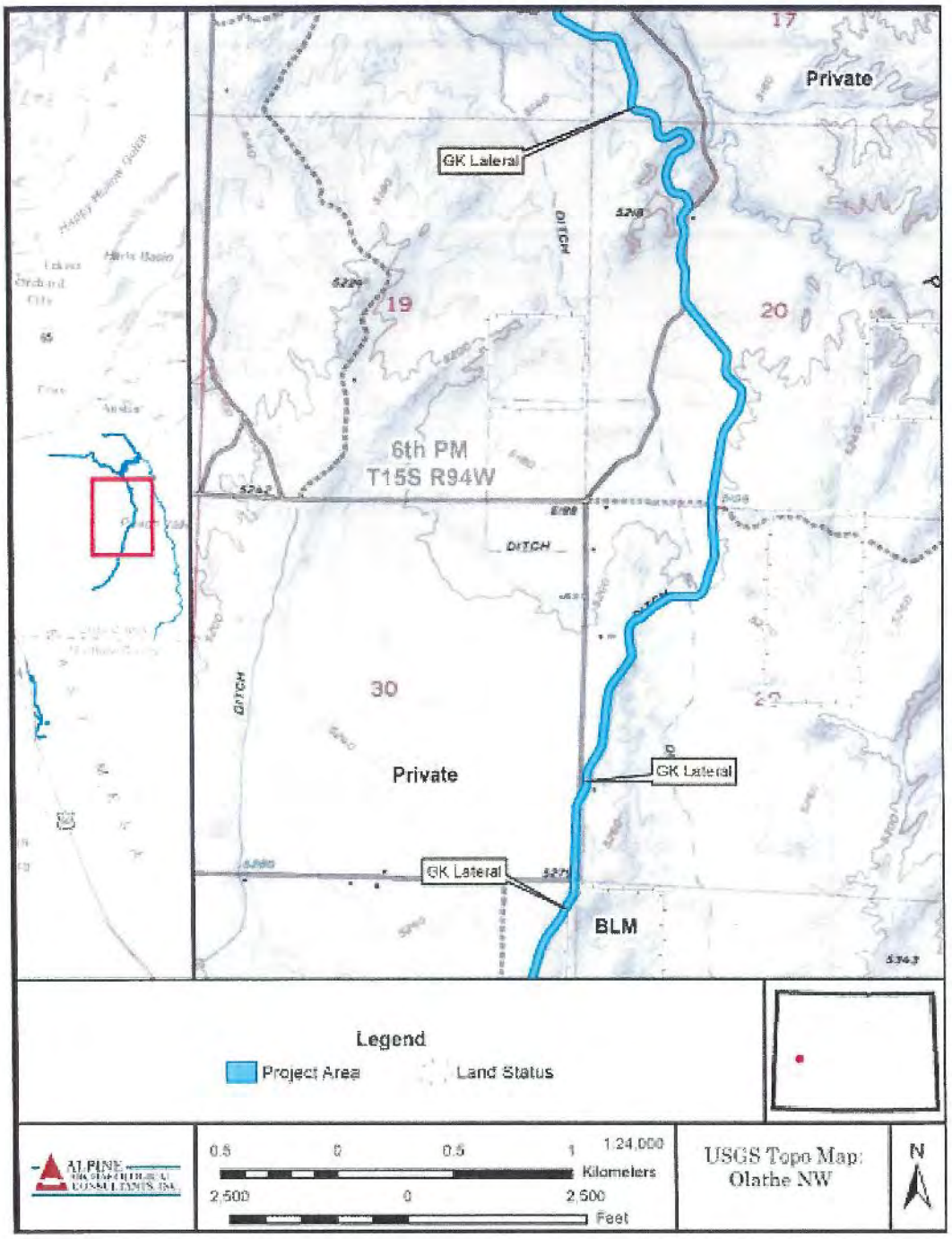
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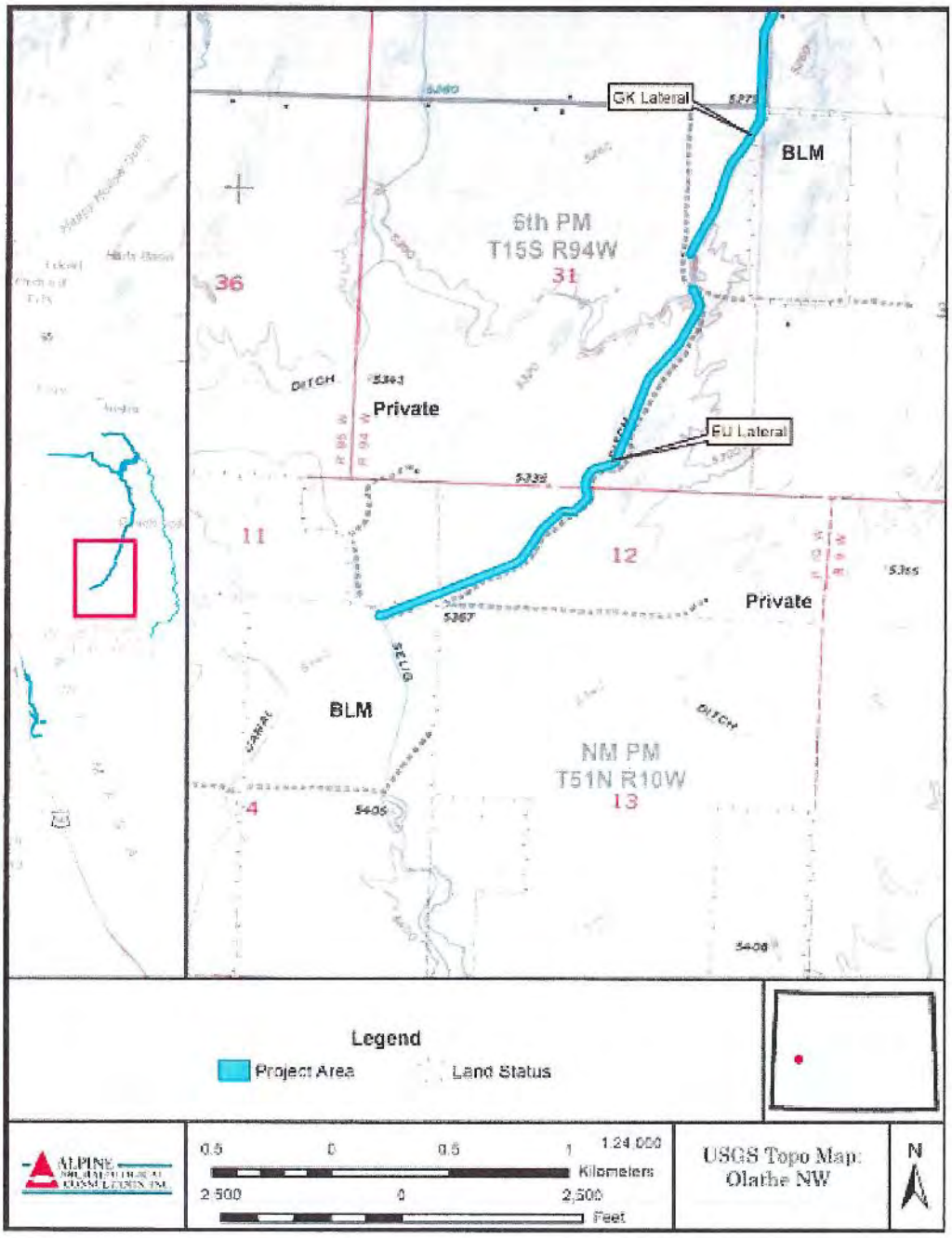
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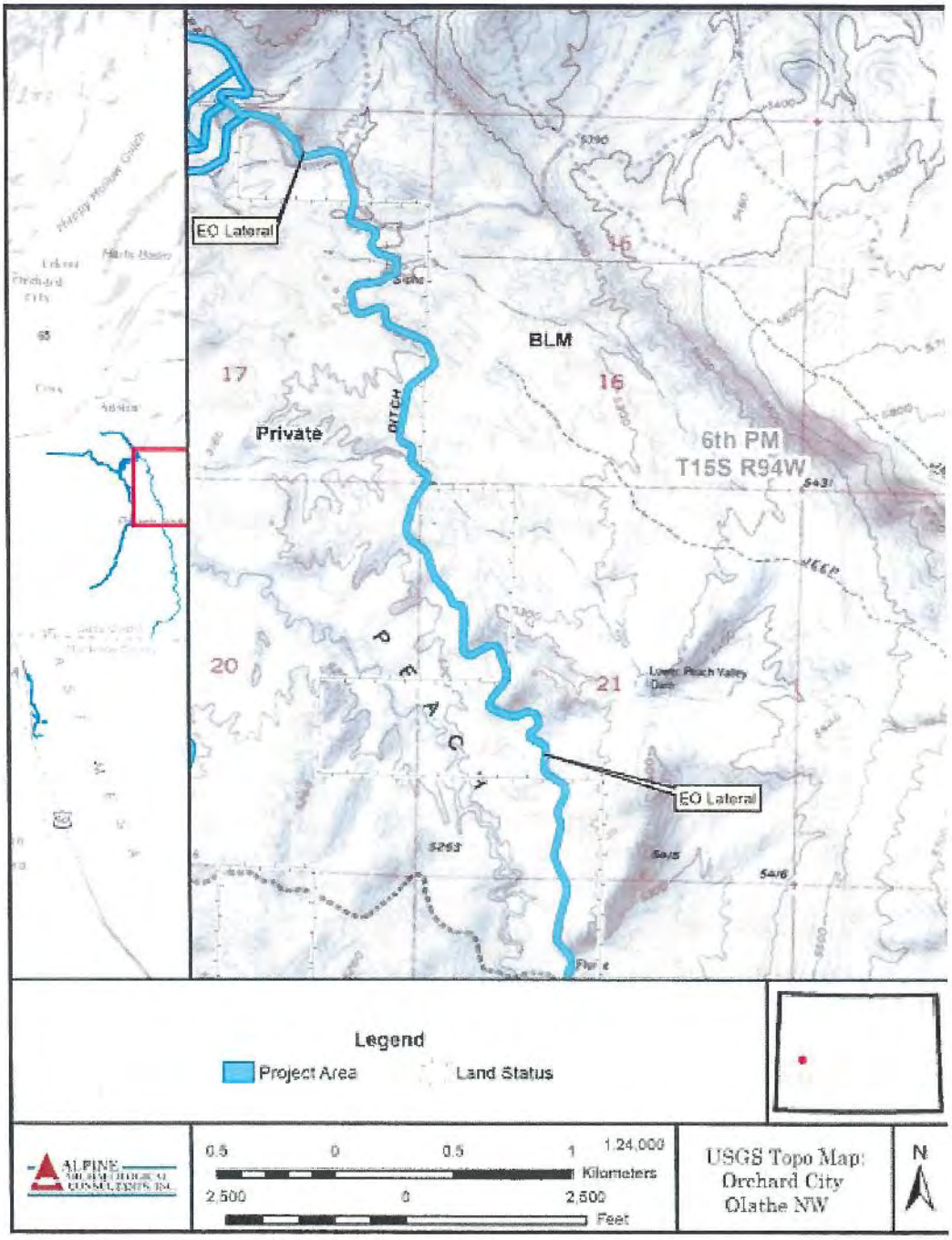
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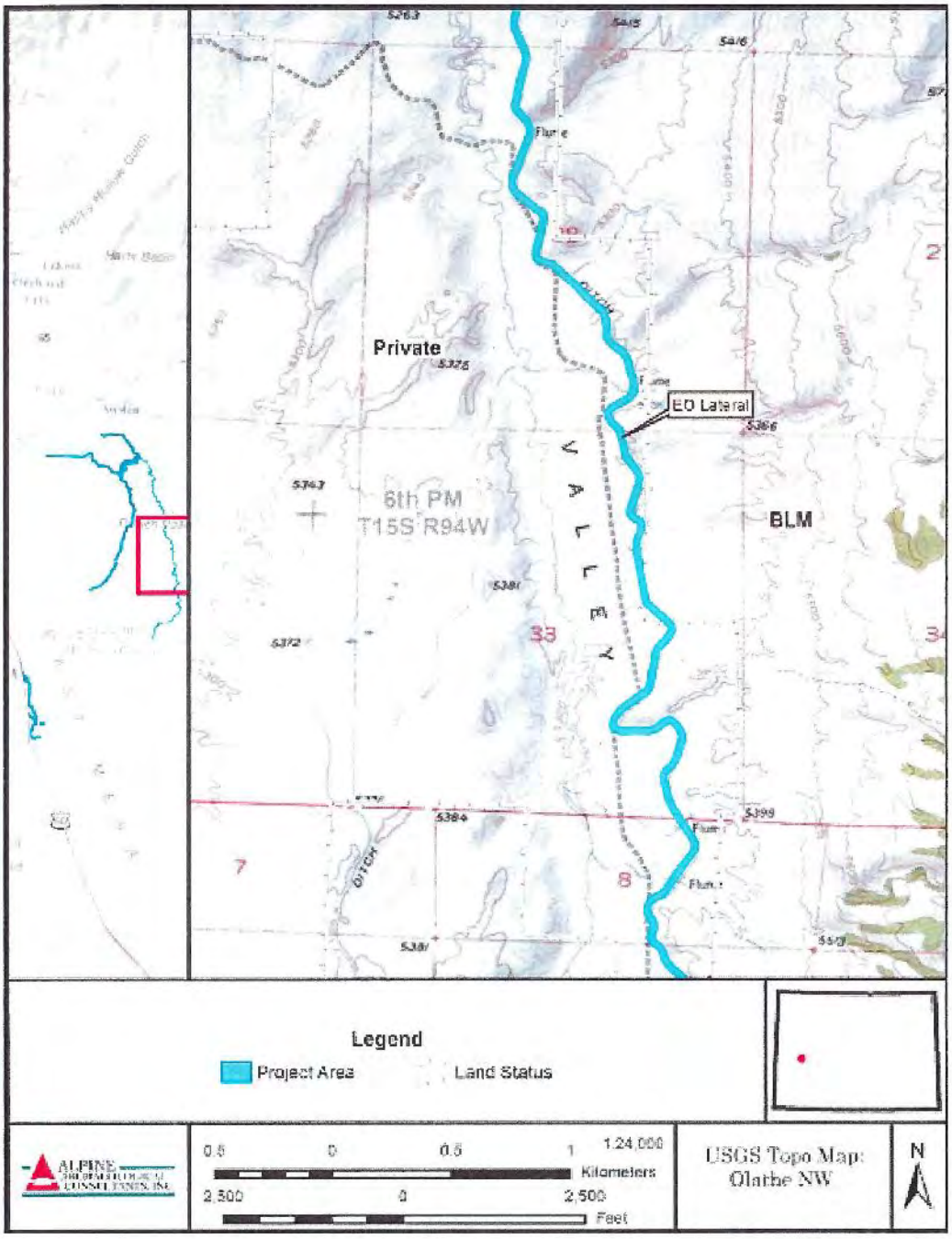
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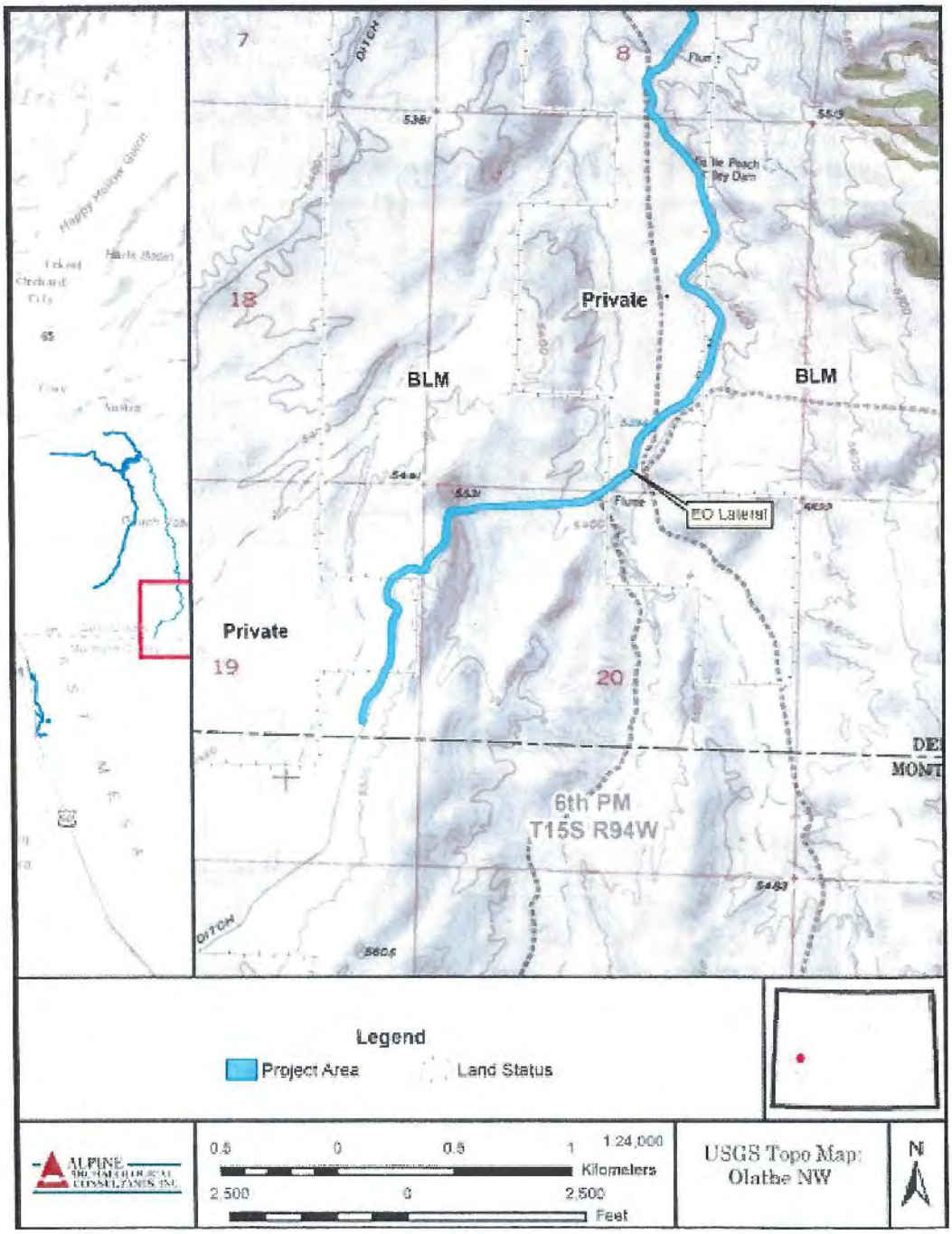
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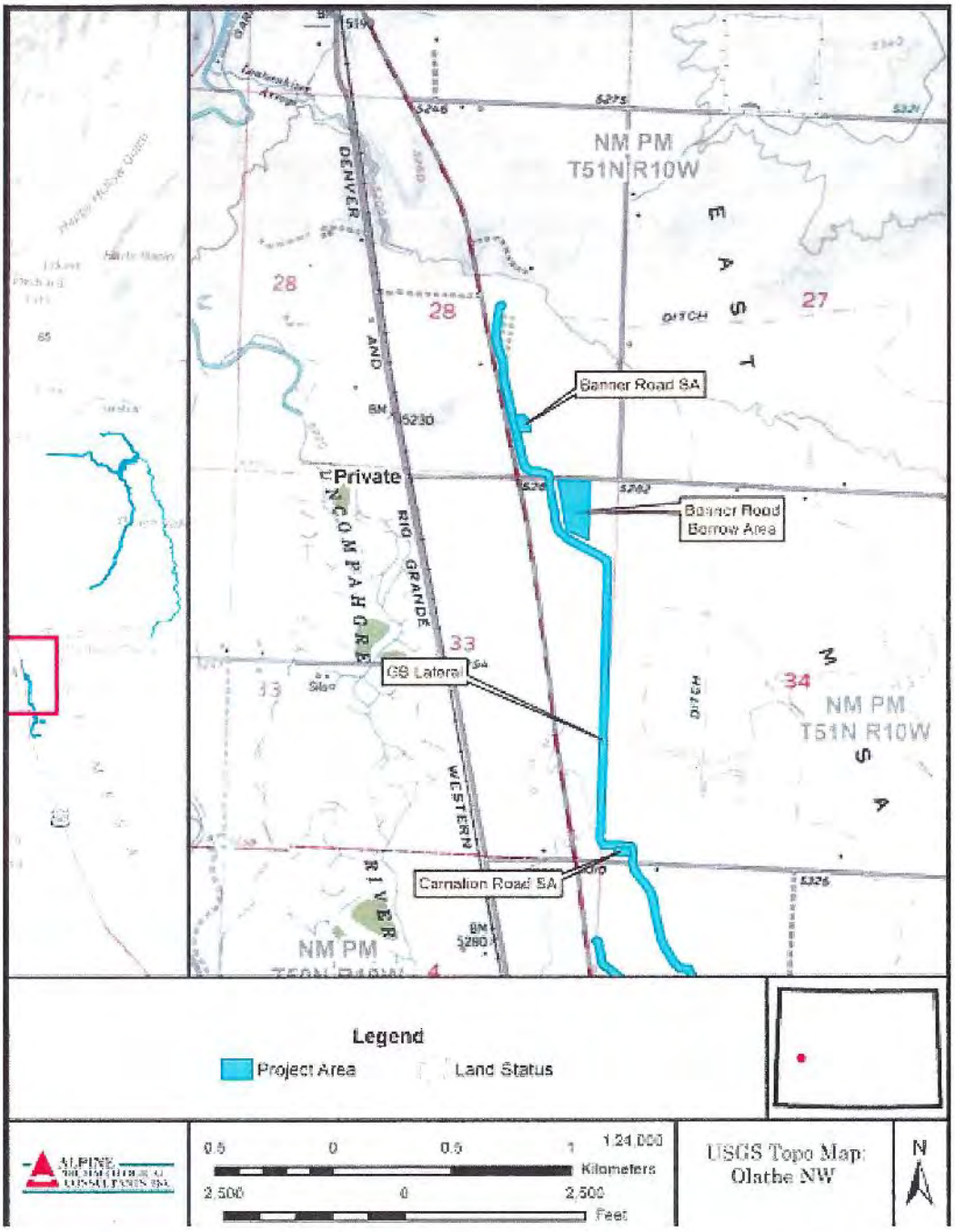
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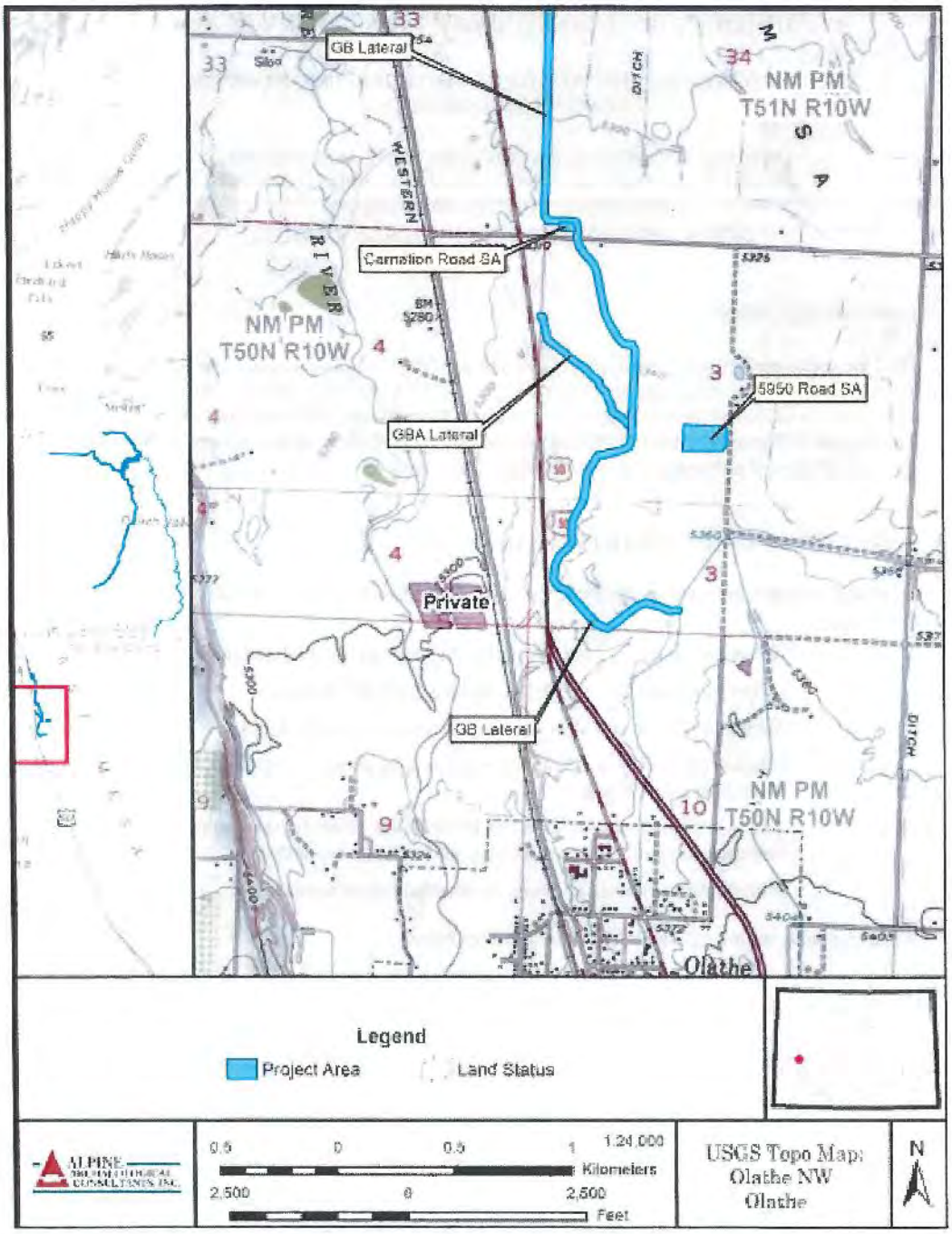
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ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION
PHASE IX OF THE EASTSIDE LATERALS PIPING PROJECT
SALINITY CONTROL PROGRAM,
DELTA AND MONTROSE COUNTIES, COLORADO

1. INTRODUCTION

The Uncompahgre Valley Water Users Association (UVWUA) plans to pipe approximately 6.4 miles of the GK Lateral and the entirety of the EU, EO, and GB Laterals. 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 UVWUA 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:	Reclamation Project Overseer:
Steve Anderson	Jennifer Ward
970-249-3813	970-248-0651
sanderson@montrose.net	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 UVWUA 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 UVWUA 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 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 entirely on private lands, and the requirements under State Law Colorado Revised Statute (CRS) 24-80 part 13 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, UVWUA will comply with the procedures outlined in CRS 24-80-1301-1305, and will coordinate with the following contacts:

Delta County Sheriff (970) 874-2000	Delta County Coroner (970) 874-5918
Montrose County Sheriff (970) 252-4023	Montrose County Coroner (970) 249-7755

Colorado State Historic Preservation Office 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 the Bureau of Reclamation, SHPO, affected 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.

7. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A professional archaeologist must determine the boundaries of the discovery location. In consultation with SHPO and affected tribes, the Project Manager and Project Overseer 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 UVWUA and the Bureau of Reclamation determine that compliance with state and federal laws is complete.