

RECLAMATION

Managing Water in the West

Environmental Assessment and Finding of No Significant Impact

Crawford Clipper Ditch Company
Clipper Center Lateral Pipeline Project



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

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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
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CLIPPER CENTER LATERAL PIPELINE PROJECT

Introduction

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Reclamation (Reclamation) has conducted an environmental assessment (EA) for a Proposed Action of authorizing the use of Federal funds to implement the Crawford Clipper Ditch Company's (CCDC's) Center Lateral (Spurlin) Pipeline Project in Delta County, Colorado. Through Cooperative Agreement No. R16ACO0008, Reclamation is providing 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 Center Lateral (Spurlin) Project.

Decision and Finding of No Significant Impact

Based upon 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 Center (also known as the Spurlin) Lateral of the Crawford Clipper Ditch System located in southeast Delta County, Colorado between the towns of Hotchkiss and Crawford. Affected interests include Reclamation, the U.S. Bureau of Land Management (BLM), CCDC 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 ditch lateral's artificial wetland and riparian habitat; and water depletions to downstream critical habitat for Colorado River endangered fishes. The long-term effect on cultural resources is being mitigated by the preparation of archival documentation. The long-term loss of artificial wetland and riparian habitat is being mitigated with a habitat replacement project. Water depletions to critical habitat for Colorado River endangered fishes are mitigated by the Upper Colorado River Endangered Fish Recovery Program, as identified in the U.S. Fish and Wildlife Service's (FWS') 2009 *Final Gunnison River Basin Programmatic Biological Opinion* (PBO). The historic water depletions of the Crawford Clipper Ditch System are covered under a Recovery Agreement between the U.S. Fish and Wildlife Service and Crawford Clipper Ditch Company. The Recovery Agreement ensures that the historic depletions comply with the U.S. Endangered Species Act and fit under the umbrella of the 2009 PBO.

None of the environmental effects discussed in detail in the EA 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 irrigation structures involved in the Proposed Action. Reclamation has entered into a Memorandum of Agreement with the SHPO and CCDC 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 previously consulted with FWS on Colorado River Basin historic water depletions caused by the direct diversions from the Smith Fork River and from water drawn from Crawford Reservoir, which affect downstream critical habitat for Colorado River Endangered fishes (File ES/JG-6-CO-09-F-001-GP029 TAILS 06E24100-2016-F-0022). As a result of that consultation, CDCC executed a Recovery Agreement with FWS to ensure compliance with the Endangered Species Act for water depletions in the basin. The Proposed Action would have no effect to any other threatened or endangered species or critical habitat.
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 here 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 analysis shall be required for threatened or endangered species if construction plans or proposed disturbance areas are changed.

Approved by:

Ed Warner
Area Manager, Western Colorado Area Office

Date

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LIST OF ACRONYMS AND ABBREVIATIONS

BLM	U.S. Department of the Interior Bureau of Land Management
BMP	Best Management Practice
CCDC	Crawford Clipper Ditch Company
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
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
PL	Public Law
PM	Particulate matter
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
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
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 Crawford Clipper Ditch Company's (CCDC's or "Applicant's") proposed Clipper Center Lateral Pipeline Project (hereinafter, "Project" or "Proposed Action"). The Proposed Action is located in Delta County, Colorado, between the towns of Hotchkiss and Crawford (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 (Agreement No. R16AC00008) to CCDC for the Project under Funding Opportunity Announcement (FOA) R15AS00037. As the main funding agency, Reclamation is the lead federal agency for the NEPA analysis of the Proposed Action. Ongoing operation and maintenance of the constructed project would be funded through annual CCDC 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 acknowledging an historic prescriptive easement for the Center Lateral and issuing a temporary Right-of-way (ROW) for construction and staging for the Proposed Action.

After a public review period for the Draft EA, Reclamation 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 Crawford Clipper Ditch System) with buried pipe, which would reduce salinity in the Colorado River basin by an estimated 2,606 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); however, selenium reduction has not been quantified.

The purpose of the Proposed Action is to comply with the Colorado River Basin Salinity Control Act (Reclamation's federal nexus); 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 secure a temporary ROW permit for the construction of the Proposed Action 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 is located in southeastern Delta County, Colorado (Figure 1) and would replace approximately 4.3 miles of the existing unlined Center (Spurlin) Lateral of the Crawford Clipper Ditch System with approximately 4.1 miles of buried pipe. The Proposed Action would include construction of a proposed Habitat Replacement Site to mitigate for habitat losses which would result from the Project.

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.

A plan of development, conceptual maps and construction drawings for the Proposed Action were prepared by Harward Consulting & Engineering LLC of Springville, Utah. The Proposed Action is described in more detail in Section 2 and Figures are included with this EA. The Proposed Action would also include activities at a proposed Habitat Replacement Site to mitigate for habitat losses which would result from implementation of the Project. The Habitat Replacement Site lies on private land adjacent to the south part of the Project area. The Proposed Action is described in more detail in Section 2 and 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 would not provide funding to CCDC to pipe the Center Lateral of the Crawford Clipper Ditch System. Seepage from this structure would continue to contribute to salt and selenium loading in the Colorado River basin. Riparian and wetland habitats associated with the lateral 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 Proposed Action 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. For instance, CCDC considered installing the buried pipeline outside the existing lateral alignment across BLM land in order to reduce the amount of pipe required to complete the project. This alternative would have resulted in more disturbance to native semi-desert shrublands than the proposed alternative, which uses the existing ditch corridor through BLM land.

1.5 Location & Environmental Setting of the Proposed Action Area

The Proposed Action is in Delta County, between the rural communities of Hotchkiss and Crawford and east of State Highway 92, on a combination of lands administered by the BLM and privately-owned lands (Figure 1 [Appendix A]). The approximate x, y centroid (in the UTM NAD 83 Zone 13 [meters] coordinate system) of the Proposed Action is 268793, 4291982. The average elevation is approximately 5,900 feet above mean sea level (Figure 3 [Appendix A]).

The Proposed Action Area is located in Township 15 South, Range 92 West of the 6th Principal Meridian; Sections 9, 10, 15, 22, and 23, in Delta County (Figure 3 [Appendix A]). The Habitat Replacement Site is in the northwest $\frac{1}{4}$ of the southwest $\frac{1}{4}$ of Section 23 near the south end of the piping project, and lies on private land.

The environmental setting of the Proposed Action is the transition zone between the Colorado Plateaus and Southern Rocky Mountains physiographic provinces, in the lower Gunnison River watershed. The area has an arid continental climate characterized by low humidity and moderately low precipitation (averaging about 13 inches annually). Current uses on these lands and in the vicinity are livestock grazing, irrigated agriculture, rural residential, and recreation.

The Center Lateral is part of the Crawford Clipper Ditch System, components of which were established between 1884 and 1930. The system delivers irrigation water diverted from the Smith Fork River and Crawford Reservoir irrigating approximately 3,480 acres of hay crops, grass pasture, and other crops. The irrigation season typically runs from April through September, for an average of 173 days per year. On-farm irrigation is accomplished using ditches, gated pipe, or sprinkler systems. Drainage from the lands irrigated with the Center Lateral eventually returns to tributaries of the North Fork of the Gunnison River (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-cedars and Russian olives.

1.6 Relationship to Other Projects

The Center Lateral involved with the Proposed Action is part of the larger CCDC's Crawford Clipper Ditch irrigation water conveyance system. The proposed Center Lateral Project, if completed, would connect to the existing Clipper Irrigation Salinity Control Project 4 constructed in 2014. CCDC's Zanni Lateral Pipeline Project was completed in 2016 on a different lateral of the system. Both projects were funded by Reclamation. The Aspen Canal, a component of the federal Smith Fork Project, is being piped approximately 1 mile east of the Project Area. The Aspen Canal Piping Project is being funded through the Upper Colorado River Basin Fund. The general locations of these and other salinity control projects in progress or recently implemented in the vicinity are shown on Figure 2.

A regulating pond is planned for construction at the origin of the proposed Center Lateral pipeline. The regulating pond is a single and complete project with independent utility, which is being funded through the U.S. Department of Agriculture Natural Resources Conservation Service's (NRCS's) Regional Conservation Partnership Program (RCP) Lower Gunnison Project and has been analyzed under a programmatic biological assessment and programmatic EA (NRCS 2018).

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.

The Draft EA was available for public comment for a 30-day period (see Section 5). Public comments received on the Draft EA are included as Appendix B. Reclamation provided notice of the availability of the Draft EA to private landowners adjacent to the Proposed Action as well as the organizations and agencies listed in Appendix C.

Issues determined to be of potential significance, and therefore appropriate for further impacts analysis under this EA, are discussed in Section 3. The following issues were determined to be ***insignificant or not applicable***, 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 obtained 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 Proposed Action, and that a Clean Water Act Section 404 Permit is not required for habitat replacement activities (Appendix D).
- Wild and Scenic Rivers, Land with Wilderness Characteristics, or Wilderness Study Areas (not applicable). No Wild and Scenic Rivers, land with wilderness characteristics, or Wilderness Study Areas exist in the Proposed Action Area.

2 PROPOSED ACTION & ALTERNATIVES

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

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not authorize funding to CCDC to pipe the Center Lateral.

2.2 Proposed Action Alternative

The specific location of the Proposed Action Alternative is described in Section 1.3 and shown on Figure 3 (Appendix A).

Under the Proposed Action Alternative, Reclamation would authorize funding to CCDC to implement the Center Lateral Pipeline Project. Overall, approximately 4.1 miles of buried pipe would replace approximately 4.3 miles of the existing open Center Lateral and approximately 1.3 miles of the Center Lateral would be abandoned (Figures 1 and 3 [Appendix A]). BLM would provide acknowledgement of the historic alignment of the Center Lateral to allow for the conversion of open ditch to pipe on BLM lands, as well as a temporary ROW permit to use certain areas on BLM land for materials staging and access. Consistent with the Salinity Control Act, the Proposed Action includes an approximately 8-acre habitat replacement site to mitigate for riparian or wetland habitat that would be lost as a result of implementation of the Proposed Action. The proposed habitat replacement site is located in the south part of the Proposed Action Area on private land near the origin of the proposed pipeline (Figure 3 [Appendix A]).

Pipeline Installation and Canal Decommissioning

The buried pipe would initiate on the south end of the Project area at a planned regulating pond. The buried pipe inlet would be a 60-cubic-yard concrete screen structure on the regulating pond on private land, which would deliver water to the buried pipe beginning at the BLM boundary. Throughout BLM land, a total of about 3.1 miles of the pipeline would be buried in or very near the existing ditch prism. Upon transitioning to private land in the north part of the Proposed Action Area, the buried pipeline would depart from the existing Center Lateral alignment and cross upland areas for approximately 0.8 miles to its connection with the previously-completed CCDC Project 4 just west of Highway 92 (Figure 3 [Appendix A]). Approximately 1.3 miles of the open ditch alignment on private land would be abandoned and backfilled.

Two outlets to two 0.1-mile buried pipe laterals in the north part of the Proposed Action Area would serve private properties adjacent to the Proposed Action: the Carpenter outlet would feed the delivery laterals for existing irrigated pastures on the Carpenter property, and the Allen outlet would provide stock water to the Allen property. Both outlets would be on private land and would be equipped with electronic flow meters and control valves. Three stock water valves would be installed along the pipeline on BLM land to provide the BLM grazing allotment permit holder to fill livestock watering tanks temporarily placed during livestock grazing periods.

Table 1 summarizes the lengths of the proposed piping components, with a breakdown of components on BLM land vs. private land. The pipe for the Center Lateral component would consist of polyvinyl chloride (PVC) plastic irrigation pipe (PIP) ranging from 24 to 30 inches in diameter and rated between 80 and 125 psi. The Allen and Carpenter laterals would consist of 2-inch to 4-inch PVC pipe. 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.

No pumping or compressor stations would be associated with the Proposed Action. The project would supply pressurized water to water users served by the Center Lateral.

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 ditch lateral	4.4 mi	3.1 mi	1.3 mi
Pipe to be buried in existing lateral alignment	3.1 mi	3.1 mi	0 mi
Pipe to be buried outside existing lateral alignment	1.0 mi	0 mi	1.0 mi
Total amount of buried pipe to be installed	4.1 mi	3.1 mi	1.0 mi
Abandoned lateral alignment to be decommissioned by backfilling	1.3 mi	0 mi	1.3 mi

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 would be a simple trenching and pipe-laying operation. Excavation of the pipe trench and positioning the pipe in the trench would be performed with trackhoes. The decommissioned reach of the Center Lateral would be filled and smoothed with trackhoes to match the surrounding land contours and restore drainage patterns.

Several construction staging areas (a total of approximately 19 acres) have been identified for the Proposed Action, including one approximately 8.2-acre staging area on BLM land (Figure 3 [Appendix A]). Front end loaders with pallet forks would likely be used to handle pipe in the staging areas. Pipe arriving at the staging areas would be transported on 50-foot flatbed trucks.

Fill material needed for construction would be generated within the construction footprint; however, if additional borrow material is needed, it would be obtained either from the regulating pond site, from previously-disturbed ground on one of the staging areas located on private land, or from a commercial source. Fill and borrow material would be transported in tandem dump trucks loaded with a trackhoe or loader.

The existing lateral alignment is in historic prescriptive easements on private and BLM lands. All private landowners in the footprint of the Proposed Action where activities would take place outside the prescriptive easement have agreed to allow the activities of the Proposed Action to be conducted on their lands. These easements are anticipated to be approximately 50 feet wide. Construction would occur within the prescriptive easement on BLM lands and within a temporary ROW granted for construction activities. The ROWs and easements for the Proposed



Photograph 1. Looking east along the Center Lateral on BLM land in the middle part of the Proposed Action Area.



Photograph 2. Looking north along the Center Lateral on private land in the north part of the Proposed Action Area.



Photograph 3. View of the Habitat Replacement Site on private land in the south part of the Proposed Action Area.

Action and their specific locations will be clearly marked on the construction drawings. Dedicated easements for the new pipeline locations on private land would be recorded in Delta County when the as-built pipe alignment is completed and surveyed.

The Proposed Action would cross State Highway 92 at its northern end. The road crossing would occur where the existing 36-inch ditch lateral culvert currently passes under the highway. The crossing would be a slip-pipe crossing or the pipe would be placed in the existing culvert and the annulus space filled with concrete.

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 prism, or existing private roads or BLM routes (Figure 3 [Appendix A]). Three existing BLM routes are proposed for access. The BLM route lengths are approximately 1,160 feet (north route, in the NW corner of Section 1), 2,005 feet (central route, in the SW corner of Section 1), and 3,230 (south route, in the south part of Section 22). All BLM routes are approximately 12 feet wide and would be used in their existing conditions (e.g., they would not be widened or graded). Some private accessways may require some minor grading and smoothing to provide for truck travel to the project alignment. Private accessways and highway crossings would be returned to the same or better condition than they were prior to construction.

A one-lane dirt road (a maintenance and access road) would be maintained in the buried pipeline corridor following construction. Restoration activities would occur in all other areas of surface disturbance. Vegetation slash

would be hauled off-site to one of the several identified proposed staging areas and chipped at that location. Vegetation slash may also be burned on private land staging areas. All disturbed areas would be seeded with drought-tolerant seed mixes approved by Reclamation (and by BLM on BLM lands), appropriate for the surrounding native vegetation, and monitored subject to BLM stipulations and agreements between CCDC and individual land owners.

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. Noxious weeds would be controlled in disturbed areas according to ROW stipulations and county standards (Delta County 2010). BMPs and other protective measures are described and analyzed as part of the Proposed Action in Section 3 (Affected Environment & Environmental Consequences) under each resource topic, and summarized in Section 4 (Environmental Commitments).

The piping component of the Proposed Action would occur incrementally across the Proposed Action Area in the existing lateral alignment during the irrigation off-season (approximately November through March). The proposed pipeline outside the existing lateral alignment could be installed at any time of year. Decommissioning and backfilling of the reach of the Center Lateral to be abandoned would be performed after proper operation of the new buried pipeline 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 4.

Habitat Replacement

Habitat value lost due to the canal piping project would be offset at the Habitat Replacement Site in accordance with a Habitat Replacement Plan (CCDC 2019). The habitat replacement project would occur on approximately 6.5 acres ("Habitat Replacement Site") of private land (Figure 3c [Appendix A]). The Habitat Replacement Site is within a livestock pasture adjacent to the south part of the Project Area, with a preponderance of non-native vegetation.

The Habitat Replacement Plan would enhance the wildlife values of the parcel by modifying existing wet pasture areas using techniques such as creating several shallow emergent wetland areas or swales, planting native riparian trees and shrubs, seeding or plugging with native grasses, pasture grasses, sedges, and bulrushes, and controlling and removing noxious weeds, including areas of salt cedar (aka tamarisk). Implementation of the Habitat Replacement Plan would result in enhanced wildlife habitat with riparian and wetland character near the Project location, consisting of a mosaic of native wooded areas and meadows which would be attractive to a variety of wildlife.

Construction of the shallow emergent wetland areas would be accomplished by making shallow, irregularly-edged excavations with heavy equipment. Salt cedar 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 chipped and shredded onsite. Native shrubs and small trees would be planted by hand or with the assistance of a small tractor. The plantings would be fenced while they are young to protect them from big game and livestock grazing damage. The plantings would be in areas that receive sub-irrigation from other sources to the south. Supplemental irrigation water for the plantings would be supplied when necessary from the Center Lateral and with overflow water from the regulating pond, either by piping or ditching.

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.

The Habitat Replacement Plan (CCDC 2019) 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). CCDC would execute a 50-year lease agreement with the property owner and 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 historic ditch acknowledgment and temporary ROW construction permit, application in progress by CCDC.
- ROW approvals from private landowners outside the prescriptive easement of the Center Lateral with land involved in the Proposed Action, obtained by CCDC.
- 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 Response Plan, to be prepared in advance of construction by the contractor for areas of work where spilled contaminants could flow into water bodies.
- Utility clearances, to be obtained by the construction contractor prior to construction activities from local utilities in the area.
- Colorado Department of Transportation (CDOT) authorization for work in the State Highway 92 ROW.

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 CCDC, 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 Crawford Clipper Ditch Company is a privately owned, non-profit, mutually-funded irrigation company incorporated and operating in Delta County since 1885, with several absolute decreed water rights totaling 164.3 cubic feet per second (cfs), most of which were appropriated between 1884 and 1930. A stock right of 10 cfs was appropriated in 1883 for use during the non-irrigation season. The total average rate of annual diversions of irrigation water through the Crawford Clipper Ditch system (including direct diversion from the Smith Fork River and water called from Crawford Reservoir) is approximately 18,000 acre-feet. The irrigation season is approximately 173 days long, and approximately 3,480 acres of hay crops and pasture are irrigated with the system. The Crawford Clipper Ditch system originates at a head gate on the Smith Fork River at a location just south of the Town of Crawford, and provides users with irrigation water and winter stock water across Crawford and Spurlin Mesas. Late season water called from Crawford Reservoir is also delivered in the Crawford Clipper Ditch system. Irrigation is primarily accomplished by flood methods directly from ditch laterals, and to a lesser extent with gated pipe and sprinklers. The system also carries winter stock water during the non-irrigation season for an annual average of 190 days.

The Center Lateral is diverted from the system at the Crawford divider headgate (aka “The Mill”) in the Town of Crawford, near the intersection of Colorado Highway 92 and Dogwood Avenue. The Center Lateral conveys an average of 21.64 cfs daily during irrigation season. During winter, the Center Lateral conveys an average of 2 cfs daily of stock water. The Center Lateral irrigates approximately 520 acres consisting mostly of grass pasture and alfalfa.

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, the capacity of the Center Lateral would be maintained. CCDC would have the ability to better manage its water rights with efficiencies gained from eliminating seepage by piping the system. Efficiencies gained may result in more water availability during the irrigation season; however, the proposed action does not include new storage or the irrigation of new lands. Stock water conveyance and distribution through the non-irrigation season would be maintained. There would be no new depletions or water storage associated with the piping project. 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 irrigation systems for users served by the lateral. The Habitat Replacement Site would be 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 Gunnison River watershed, 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 not been quantified for the Proposed Action, but 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 Proposed Action is located within the Cottonwood Creek hydrologic unit (hydrologic unit code [HUC] 140200040504) and the Short Draw-North Fork Gunnison River hydrologic unit (HUC 140200040507) in the Gunnison River watershed. Official designated uses for these units is a combination of water supply and agriculture.

Currently, the hydrologic units involved in the Proposed Action are under monitoring and evaluation for sulfate, dissolved manganese, and/or iron impairments (CDPHE 2018). Both the North Fork of the Gunnison River and the mainstem of the Gunnison River downstream are listed impaired waters due to failure to meet iron, dissolved manganese, and sulfate standards. Further, none of these units meets state selenium standards. For these units, there are no 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 2,606 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 Center Lateral, reducing salt loading to the Colorado River basin at an estimated rate of 2,606 tons per year, at a cost-effectiveness value of approximately \$50.43 per ton (CCDC 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]) although the amount has not been quantified. 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 the existing lateral alignment 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 of the Clean Water Act applies to the pipeline component of the Proposed Action and no Section 404 permit is required for habitat replacement activities. The exemption and no-permit-required finding was verified in

writing by the U.S. Army Corps of Engineers (Appendix D); therefore, no Section 401 Water Quality Certification is required for the Proposed Action.

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 County is 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 Center Lateral would continue to operate in its current condition and dust and exhaust would occasionally be generated by vehicles and equipment conducting routine maintenance and operation.

Proposed Action: There would be no long-term impacts to air quality from the Proposed Action. 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 route in the vicinity of the Proposed Action is State Highway 92, between the towns of Hotchkiss and Crawford (Figure 1 [Appendix A]). The Proposed Action Area would be accessed from private roads and existing BLM roads off Highway 92 (Figure 3 [Appendix A]). These roads generally provide access and mobility for local residents.

The Delta County Sheriff, the North Fork Ambulance District, and the Delta County Fire Protection Districts 3 and 4 (Hotchkiss and Crawford areas) cover the Proposed Action Area in Delta County.

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 ROW. Access on existing BLM roads would be in accordance with BLM standard ROW stipulations (Appendix E). 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 roadways adjacent to the Proposed Action Area from construction vehicles entering and exiting the local roadways. CCDC and the construction contractor would coordinate with CDOT and sheriff departments if traffic or access would be delayed or significantly re-routed. Road closures are not anticipated to be necessary, but would be coordinated with CDOT, Delta County, and local law enforcement and emergency services to ensure public safety.

3.5 Recreational & Visual Resources

Public lands involved in the Proposed Action are lands administered by BLM (Figure 3 [Appendix A]), and do not lie within a Special Recreation Management Area or other BLM administrative units requiring specific management considerations for recreation (BLM 2016). The BLM lands in the Proposed Action Area are “OHV limited,” meaning off-highway vehicle (OHV) travel is limited to designated or existing roads and trails (BLM 2016). The BLM land involved with the Proposed Action is primarily used for livestock grazing and is not a popular recreational destination either regionally or locally.

The BLM lands involved with the Proposed Action fall within the “Grand View Mesa” Scenic Level Rating Unit (Unit 23) described in BLM’s 2009 Visual Resource Inventory (Otak 2009). The Visual Resource Inventory characterizes this unit as a Visual Resource Management (VRM) Class III visual resource (Otak 2009). The majority of the Proposed Action Area on BLM land is not visible from State Highway 92. 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 50-foot buffer on either side of the ditch lateral involved with the Proposed Action as well as a materials staging area, a total of approximately 38 acres of BLM land would be involved in the Proposed Action. Construction of the Proposed Action could disrupt recreational enjoyment on BLM land in the immediate Project Area, due to construction activities (noise, presence of heavy equipment). However, these disruptions would be temporary, and take place incrementally in the Project Area, mostly during winter over the course of construction. 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 in the Project Area. 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 a portion of the “South of Town” Grazing Allotment (3,812 acres). This allotment supports winter and early spring sheep grazing. The grazing allotment encompasses mostly the salt desert ecological types with its characteristic sparse vegetative growth and fragile soils. In the area of the Proposed Action, the vegetative communities offer relatively poor grazing opportunities, due to sparse cool season grass cover, low perennial forb cover, and presence of exotic invasive plants. Water flowing in the Center Lateral provides a source of stock water during livestock grazing periods.

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 allotment in the Proposed Action Area would occur during construction. Surface disturbances would be reclaimed as explained in other sections of this EA.

Livestock grazing in the allotment could be temporarily affected by construction; however, the quality of the grazing range in the Proposed Action Area is relatively poor and represents less than 1 percent of the overall grazing allotment. The allotment permittee 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 entrapment 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 Proposed Action 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. Three livestock water valves would be provided on the pipeline alignment through BLM land, so that the grazing allotment permittee may provide stock water in temporary tanks at three locations.

3.7 Vegetative Resources & Weeds

Figure 4 (Appendix A) shows the general landcover types in the Proposed Action Area. Landcover types in the vicinity of the Proposed Action include low semi-desert shrublands dominated by shadscale, mat saltbush, greasewood, or sagebrush, with areas of disturbed ground and irrigated hayfields or pastures. On BLM land, the semi-desert shrublands surrounding the Project Area are in relatively natural condition (see Photograph 1, above), with plant composition and abundance typical of the region and ecological conditions. Shrubs provide approximately 30 to 50 percent canopy cover, native grasses and forbs provide about 10 to 20 percent ground cover, and the remainder of the space between shrubs is mostly bare ground or cryptogam soils. Occasional occurrences of typical non-native herbaceous plants common in the region are scattered in the community, including cheatgrass and annual mustards.

On private land in the north part of the Proposed Action Area, the proposed pipeline corridor passes through degraded semi-desert shrublands, livestock corral areas, and heavily grazed irrigated pastures. The degraded semi-desert shrublands are used as sheep lambing areas and confinement and feeding areas. Many of these areas are dominated by ruderal or noxious weeds and shrubs are heavily browsed or in decadent condition.

Water flowing in the existing irrigation ditch lateral has created narrow corridors of riparian and wetland habitat along the lateral itself and in drainage patterns downgradient of the lateral. These areas are vegetated with coyote willow stands, saltgrass, and occasional mature cottonwoods, but also with common ruderal weeds and noxious weeds. The prevalent noxious weeds are whitetop, Russian knapweed, Canada thistle, salt cedar and Russian olive. Flowing water in the ditch lateral is a vector for the continued spread of weeds. Vehicles, people, livestock, and wildlife traveling on the ditch access road can also help weeds spread along ditch alignments. Noxious weeds are occasionally sprayed by CCDC, and CCDC occasionally removes dense willows and other riparian vegetation from along the ditch banks to keep the ditch access road open.

The riparian and wetland vegetation along the open lateral corridor 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 adjacent private lands used as seasonal livestock pasture. It is currently dominated by non-native woody plants, including salt cedar and a few Russian olive, with saltgrass and cheatgrass in the understory.

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

Proposed Action: Construction activities would directly disturb upland semi-desert shrublands and habitat in the Proposed Action Area. Semi-desert shrublands disturbed by construction and backfilled canal areas would be contoured 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 riparian and wetland vegetation associated with the open unlined canal laterals and downgradient seepage from the laterals. The riparian and wetland vegetation would transition to species similar to those present in the surrounding vegetation community types which are adapted to drier conditions. 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 (Rare Earth 2018a). The evaluation followed methodology outlined in Reclamation’s *Basinwide Salinity Control Program: Procedures for Habitat Replacement* (April 2018). In accordance with the evaluation method, a Total Habitat Value (THV) is calculated for each affected wetland or riparian habitat area by multiplying its acreage by its habitat quality score (HQS), which is assigned based on a series of 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 33.9 (Rare Earth 2018a).

To compensate for the loss of 33.9 total habitat value units that would be caused by implementation of the Proposed Action, CCDC would implement a habitat replacement project in the Proposed Action Area, adjacent to the south part of the project (Figure 3 [Appendix A]). Noxious weeds would be reduced by treatment and removal efforts. Native species abundance and diversity would increase from seeding and planting activities.

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 ROW stipulations and Delta County standards (Delta County 2010).

Curtailing the spread of noxious weeds is of primary concern to BLM and CCDC. Construction footprints in certain areas may extend into previously undisturbed ground, creating conditions for weeds to spread. Construction BMPs (such as cleaning vehicles and equipment prior to bringing them onsite) would help minimize the risk of such infestations, and ongoing weed management efforts by CCDC would be implemented during revegetation of construction alignments.

In the long-term, piping the canal laterals would remove an important vector of weed seed transport—open water. In the north part of the Proposed Action Area where part of the Center 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 Center Lateral provides 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) maps the entire Project area within a resident mule deer population area, a mule deer concentration area, and mule deer severe winter range; and within elk severe winter range and an elk winter concentration area (Figures 7 and 8 [Appendix A]). However, the quality and abundance of big game forage in and surrounding the Center Lateral corridor is poor, and deer and elk are uncommon there. Some reaches of the ditch are severely downcut with high vertical banks, limiting big game access to both fringe riparian vegetation and drinking water. Other live water resources are available year-round in the nearby Cottonwood Creek drainage and agricultural ponds. The Proposed Action Area also falls within overall range of black bear and mountain lion (CPW 2018).

A variety of small mammals, reptiles, and amphibians also inhabit the general area. Those that would be likely to use the Center Lateral 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 beaver, 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 and riparian habitat associated with the lateral would remain in its current condition. No displacement of wildlife would occur, other than the ongoing removal of beavers and beaver dams (which threaten to damage the ditch system), and the occasional cleaning of riparian vegetation from the lateral banks. 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. The proximity of natural and modified habitats provides reliable shelter and sources of food and water for wildlife.

Impacts to big game would include short-term disturbances and periodic displacement while construction is underway. Big game 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. Given the poor quality of habitat and low usage of the Project Area by big game, BLM winter construction timing limitations are not warranted.

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 (CCDC 2019) to be created and maintained by CCDC. The riparian vegetation and open water along and downgradient of the canal represents a small percentage of the overall habitat and water available to wildlife in the vicinity of the Proposed Action Area, and similar habitat is in close proximity (within approximately 1 mile).

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 hunting habitat) and Brewer's sparrow (breeding). Brewer's sparrow nests in sagebrush or semi-desert shrublands and has been documented in Delta County (Kingery 1998). 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 Brewer's sparrow and other 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 mile 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 (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 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.

Three red-tailed hawk nests (active in 2016) are in cottonwood trees along the Center Lateral corridor in or near the Proposed Action Area (Figure 6 [Appendix A]). The nearest known active bald eagle nest is on Rogers Mesa more than 5 miles from any part of the Proposed Action Area (Figure 6 [Appendix A]). 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. Like migratory songbirds, raptors disturbed during nesting may abandon their eggs or be less successful at feeding their young. However, individual birds can habituate or exhibit a higher level of tolerance to disturbance. 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 effects 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 three red-tailed hawk nests in the Proposed Action corridor lie inside the CPW-recommended buffer zone for red-tailed hawks (1/3 mile), in cottonwoods adjacent to the ditch. To avoid disturbance to nesting raptors at these locations, pipeline construction activities would either avoid red-tailed hawk nesting season (February 15 through July 15), or the nest trees would be grubbed prior to February 15. 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 1 mile 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 2018b) was completed for the Proposed Action Area.

Table 2 presents the federally-listed species identified in FWS’ IPaC that may occur within or near the Proposed Action Area 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				
Gunnison sage-grouse <i>Centrocercus minimus</i>	Threatened	Large contiguous patches of sagebrush (>200 acres) with an abundant/tall herbaceous understory, interspersed with wet swales. Proposed Action Area lies in CPW mapped gross historic range, but not within currently-mapped occupied or potentially occupied range. Sagebrush habitat in the Proposed Action area is neither high quality (it has insufficient understory) nor of large enough patch size to support sage-grouse. There is no designated critical habitat in the Proposed Action Area.	No	No
Yellow-billed cuckoo <i>Coccyzus americanus</i>	Threatened	Breeds in low elevation river corridors with extensive mature cottonwood galleries with high amounts of vertical vegetative stratification in the understory; breeding cuckoos have been detected in the nearby North Fork River valley almost annually since 2003. Habitat in the Proposed Action Area is not suitable for nesting. The Proposed Action Area does not lie within proposed critical habitat.	No	No

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
FISHES				
Greenback cutthroat trout <i>Oncorhynchus clarkia stomias</i>	Threatened	High elevation cold water streams and cold water lakes with adequate stream spawning habitat present during spring. No spawning habitat or perennial water exist in the Proposed Action Area. The nearest known populations are the Minnesota Creek and Terror Creek drainages near Paonia (Dare et al. 2011).	No	No
Bonytail <i>Gila elegans</i> Colorado pikeminnow <i>Ptychocheilus lucius</i> Humpback chub <i>Gila cypha</i> Razorback sucker <i>Xyrauchen texanus</i>	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 <i>Gulo gulo luscus</i>	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.	No	No (restricted to high-elevation habitat with persistent spring snow cover)

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
PLANTS				
Clay-loving wild buckwheat <i>Eriogonum pelinophilum</i>	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. None observed during inspection of Proposed Action Area. Nearest documented occurrence and designated critical habitat exists in Delta County but is approximately 11 miles west-by-northwest of the Proposed Action Area.	No	--

Dismissed from analysis due to lack of range or habitat in the Proposed Action Area are Green-Backed Cutthroat Trout, North American Wolverine, Western Yellow-billed Cuckoo and its proposed critical habitat, Gunnison Sage-Grouse and its designated critical habitat, and Clay-Loving Wild Buckwheat and its designated critical habitat (see Table 2). There is no potential for these species or their critical habitats to be affected by the Proposed Action and they are therefore dismissed from further evaluation in this EA.

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 from operation of the Crawford Clipper Ditch system. Water depletion has the potential to diminish backwater spawning areas and other habitat in downstream designated critical habitat. Reclamation previously consulted with FWS on CCDC’s total system annual depletion rate in 2016, during the Zanni Lateral of the Crawford Clipper Ditch Pipeline Project (File ES/JG-6-CO-09-F-001-GP029 TAILS 06E24100-2016-F-0022). As a result of that consultation, FWS issued a biological opinion and executed a Recovery Agreement with CCDC to ensure compliance with the U.S. Endangered Species Act for depletions to the Gunnison River Basin (Appendix F).

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

No Action: In the absence of the Proposed Action, historic water depletions would continue, and salt and selenium loading from the Proposed Action Area would continue at current rates, continuing to affect downstream critical habitat for endangered fishes.

Proposed Action: A threatened and endangered species inventory (Rare Earth 2018b) was completed for the Proposed Action. The determination of effects set forth in this EA on listed species and their critical habitats are based on the inventory, as follows:

- *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 Crawford Clipper Ditch system, including the ditch lateral involved in the Proposed Action, results in an average annual depletion of approximately 5,776 acre-feet from the upper Gunnison River watershed. This depletion affects downstream critical habitat for the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. Reclamation previously consulted with FWS on this annual depletion rate in 2016 (File ES/JG-6-CO-09-F-001-GP029 TAILS 06E24100-2016-F-0022). As a result of that consultation, FWS issued a Biological Opinion and executed a Recovery Agreement with CCDC to ensure compliance with the U.S. Endangered Species Act for CCDC's depletions to the Gunnison River Basin (Appendix F). The annual depletion rate is not anticipated to change as a result of the Proposed Action. Therefore, the Proposed Action would not destroy or adversely modify the designated critical habitat for the Colorado River endangered fishes.

BLM Sensitive Species

The Proposed Action is partially located on BLM lands 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 <i>Falco peregrines</i>	Uses open country near cliff habitat, often near water. The nearest active CPW-documented peregrine falcon nest site lies more than 5 miles east of the Proposed Action Area on Needle Rock (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 <i>Haliaeetus leucocephalus</i>	See Section 3.9 for analysis.	Winter foraging habitat only
Burrowing owl <i>Athene cunicularia</i>	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 <i>Spizella breweri</i>	See Section 3.9 for analysis.	Yes
Ferruginous hawk <i>Buteo regalis</i>	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 County. 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 <i>Aquila chrysaetos</i>	See Section 3.9 for analysis.	Foraging habitat only
FISHES		
Bluehead sucker <i>Catostomus discobolus</i>	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 downstream
Flannelmouth sucker <i>Catostomus latipinnis</i>	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

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Roundtail chub <i>Gila robusta</i>	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
MAMMALS		
Fringed myotis <i>Myotis thysanodes</i>	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 <i>Euderma maculatum</i>	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 <i>Corynorhinus townsendii</i>	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
White-tailed prairie dog <i>Cynomys leucurus</i>	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 Proposed Action Area during a biological survey.	Yes
HERPTILES		
Midget faded rattlesnake <i>Crotalus viridis concolor</i>	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

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Northern leopard frog <i>Rana pipiens</i>	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 <i>Lomatium concinnum</i>	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. A large population has been documented on BLM and private land west of State Highway 92 (Holsinger, pers. comm.). Six occurrences of this species were documented on BLM land during a biological survey for the Proposed Action.	Yes

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 lessened 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).

Six occurrences of the BLM Sensitive Colorado desert parsley were documented in the Proposed Action Area. The distances between the nearest edge of the occurrences and the project centerline ranged between 25 feet and 80 feet. The occurrences contained as few as one plant, to as many as 300 plants, and were in both native undisturbed soils and disturbed soils (soils compacted by vehicles). The most populous occurrence was 80 feet from the Center Lateral centerline. Construction activities are not anticipated to directly affect occurrences of Colorado desert parsley containing more than 15 plants. Following construction of the pipeline, the potential exists for Colorado desert parsley to increase in the area. Piping of the open Center Lateral would create more upland habitat in the immediate area, and informal observations in the local region suggest that Colorado desert parsley increases following surface soil disturbance (Holsinger, pers. comm.; Reeder, pers. comm.). Therefore, no sustained adverse impact to Colorado desert parsley is anticipated due to the Proposed Action.

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.

Metcalf 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, any new 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 irrigation structures 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 the Center Lateral, which is a resource eligible for listing in the NRHP. A Memorandum of Agreement (MOA) has been executed between Reclamation and the Colorado SHPO, with CCDC participating as an invited party, to mitigate the adverse effects of the Proposed Action (Appendix G). The MOA stipulates that Level II 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 II documentation be made available to the public via the Reclamation Western Colorado Area Office's cultural resources webpage (<https://www.usbr.gov/uc/wcao/rm/cr/index.html>).

3.11 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 Center Lateral conveys irrigation water to agriculturally significant lands; however, no change in the configuration of CDCC-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 Chipeta silty clay, 3 to 30 percent slopes and Killpack silty clay loam, 3 to 12 percent slopes. Each soil type 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).

Overall, the Proposed Action would give CCDC the ability to better manage irrigation 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	Smith Fork drainage and Crawford Reservoir	50 years

Resource	Spatial Limits of Analysis	Temporal Limits of Analysis
Water Quality	Cottonwood Creek within and downstream of the Proposed Action and the Lower North Fork of the Gunnison River	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	Cottonwood Creek drainage within 1 mile of the Proposed Action	50 years
Threatened and Endangered Species	Cottonwood Creek drainage within 1 mile of the Proposed Action	50 years
BLM Sensitive Species	Cottonwood Creek drainage within 1 mile of the Proposed Action	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 – 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) – with potential impacts to soils, vegetation, and special status (BLM Sensitive) species. Grazing permit stipulations, grazing timing, and stocking rates minimize impacts.
- The Aspen Canal Piping Project (Figure 2 [Appendix A]) – this reasonably foreseeable future action lies within the spatial and temporal boundaries of the Proposed Action, with potential impacts to water quality, air quality, vegetation, and aquatic and terrestrial wildlife.

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 lateral), and wildlife using wetland and riparian habitat generated by the lateral. 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 2,606 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 (amount unquantified). 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	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.
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.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
Vegetative Resources and Weeds	No Effect	Impacts to vegetation where construction would occur in upland areas. Estimated long-term loss of 33.8 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 lateral 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. Three red-tailed hawk nests are inside the COW-recommended buffer distance of 0.3-mile for red-tailed hawks. Work within the buffer distance of 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 lateral would be mitigated with the Habitat Replacement Site.
Threatened and Endangered Species	Salt and selenium loading from the Proposed Action Area would continue to affect aquatic dependent species	Water depletions (irrigation water consumption) would continue at historic levels, and would continue to adversely affect downstream designated critical habitat for the four Colorado River federally endangered fishes. However, the Upper Colorado River Endangered Fish Recovery Program and an existing Recovery Agreement serve 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.

Resource Issue	Impacts	
	No Action Alternative	Proposed Action Alternative
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 not cause long-term impacts to Colorado desert parsley, which is present in the Proposed Action Area. 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.
Cumulative Impacts	No Effect	None of the anticipate 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 reduce adverse impacts from the Proposed Action to a non-significant level. The cooperative agreement between Reclamation and CCDC requires that CCDC 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, CCDC shall use this checklist to document compliance with each environmental commitment. CCDC shall submit the relevant component of the completed checklist to Reclamation immediately following each phase of the Project, i.e., Pre-Construction, During Construction, and Post-Construction, along with documents generated to meet environmental commitments.

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

Table 6. Environmental Commitment Checklist

Environmental Commitment	Resource(s) that Benefit	Initials and Date of Compliance
<i>Pre-Construction</i>		
CCDC shall submit BLM’s signed FONSI and Record of Decision for the Proposed Action to Reclamation prior to any work being authorized on the project.	All	
No Project activities may take place outside the spatial area analyzed in this EA without being subject to additional review by Reclamation and BLM.	All	
CCDC shall submit an SF299 Application to BLM to receive an acknowledgment of the prescriptive easement for the Center Lateral through BLM, as well as a temporary ROW / construction permit for staging areas on BLM land. CCDC shall receive such documents prior to any work being conducted on BLM land.	Vegetation, habitat, special status species	
A spill response plan shall be prepared in advance of construction by the contractor for areas of work where spilled contaminants could flow into water bodies.	Water Quality	
A 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 II Documentation,” and to post this documentation on the Reclamation Western Colorado Area Office’s cultural resources webpage.	Cultural Resources	

Environmental Commitment	Resource(s) that Benefit	Initials and Date of Compliance
Construction limits shall be clearly flagged onsite to avoid unnecessary plant loss or ground disturbance.	Vegetation, Weeds, Habitat, Wildlife	
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	
Hold a pre-construction orientation meeting with the contractor to familiarize the contractor with environmental commitments of the Project.	Special Status Species, Soil, Vegetation, Weeds, Habitat	
Prior to construction, vegetative material shall be removed by mowing or chopping, and either hauled to the County landfill or to a proposed private land staging area to be burned, chipped, and/or mulched. Stumps shall be grubbed and hauled to the County landfill or a proposed private land staging area to be burned.	Soil, Vegetation, Weeds, Habitat	
Temporary fencing or flagging and signage prohibiting disturbance shall be placed around biologically sensitive areas (rare plant occurrences). These areas shall be clearly marked on construction drawings.	Special Status Species	
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	

Environmental Commitment	Resource(s) that Benefit	Initials and Date of Compliance
Notification to the public lands grazing permit holder(s) shall be made if construction is to occur during a grazing period.	Livestock Grazing	
<i>During Construction</i>		
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	
Construction equipment shall be parked, stored, and serviced only at an approved staging area.	Water Quality, Soil	

Environmental Commitment	Resource(s) that Benefit	Initials and Date of Compliance
<p>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.</p>	<p>Water Quality, Soil</p>	
<p>Ground disturbances and construction areas shall be limited to only those areas necessary to safely implement the Proposed Action.</p>	<p>Soil, Vegetation, Weeds, Habitat, Wildlife</p>	
<p>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.</p>	<p>Wildlife, Grazing, Recreation</p>	
<p>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.</p>	<p>Cultural Resources</p>	
<p>In the event that threatened or endangered species are encountered during construction, CCDC 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.</p>	<p>Special Status Species</p>	
<p>Non-native tree and shrub removal at the Habitat Replacement Site shall avoid the primary breeding season of migratory birds (April 1 – July 15).</p>	<p>Special Status Species</p>	

Environmental Commitment	Resource(s) that Benefit	Initials and Date of Compliance
<p>Three red-tailed hawk nests in the Project Area lie inside the CPW-recommended buffer zone for the species (1/3 mile), in cottonwoods adjacent to the ditch. To avoid disturbance to nesting raptors, pipeline construction activities in those areas would either avoid red-tailed hawk nesting season (February 15 through July 15), or the nest trees would be grubbed prior to February 15. Project work areas affected by the nesting red-tailed hawk timing restriction shall be clearly marked on construction drawings.</p>	<p>Special Status Species</p>	
<p>If a new active raptor nest is discovered within 1/3 mile of the Proposed Action during construction, or a bald eagle 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.</p>	<p>Special Status Species</p>	
<p>Access to the public land grazing allotment shall not be affected by the Project.</p>	<p>Grazing</p>	
<p>Post-Construction</p>		
<p>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.</p>	<p>Soil, Vegetation, Weeds, Habitat</p>	
<p>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.</p>	<p>Vegetation, Weeds, Habitat</p>	

Environmental Commitment	Resource(s) that Benefit	Initials and 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, CCDC 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 CCDC or CCDC's contractor in accordance with BLM ROW stipulations and current County weed control standards (Delta County 2010).	Soil, Vegetation, Weeds, Habitat	

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 between December 21, 2018 through January 21, 2019. During this time, one comment

document was received. A summary of the comments and responses to the comments are provided in Appendix B and in changes to this Final EA.

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 C. This Final EA is also 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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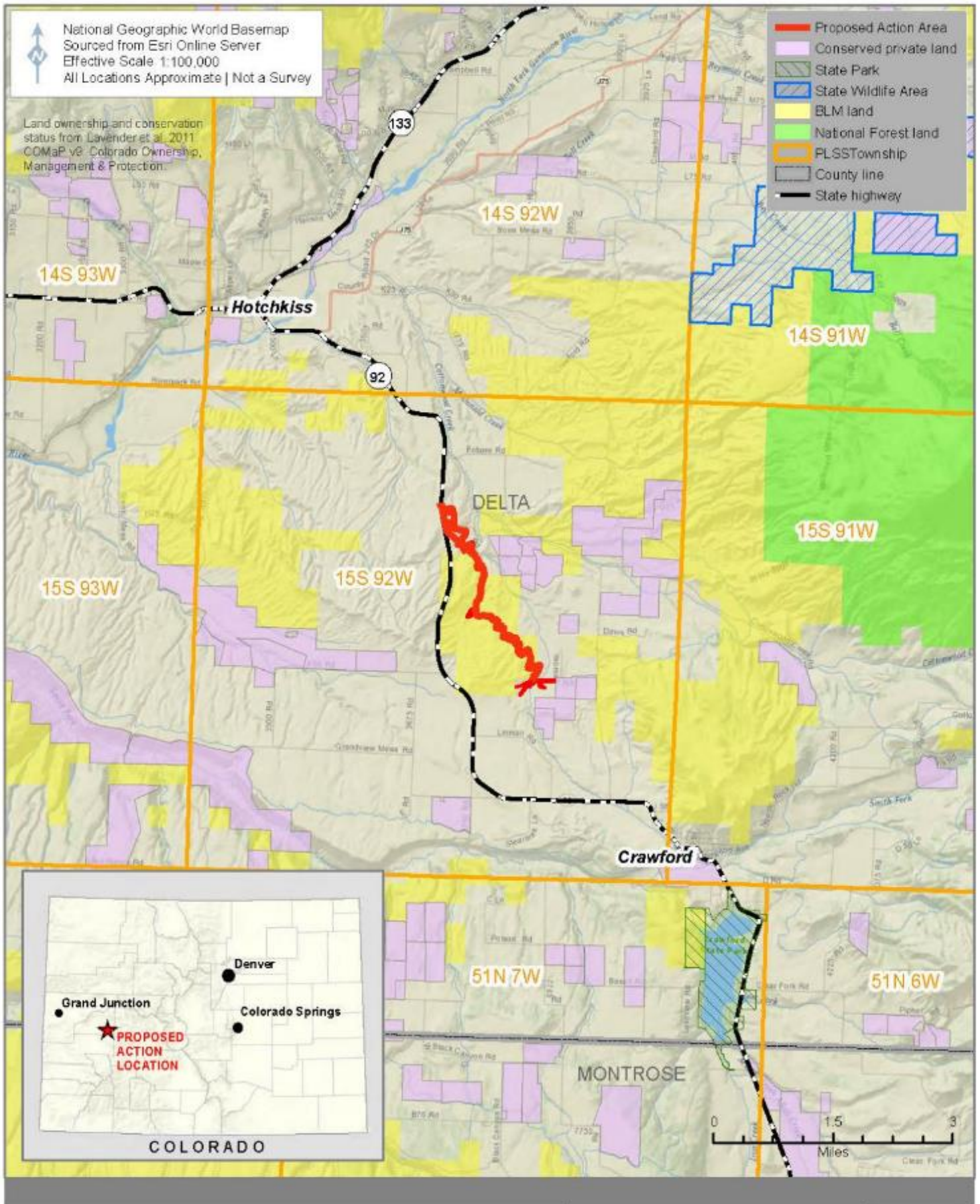
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APPENDIX A

Figures

1. Regional & Local Locator Maps
2. Regional Salinity Control Projects
3. Topography & Land Status
4. Landcover Map
5. Hydrologic Units Map of the Project Vicinity
6. Bald Eagle Range & Red-Tailed Hawk Nests
7. Elk Range
8. Mule Deer Range
9. Soils of Agricultural Significance

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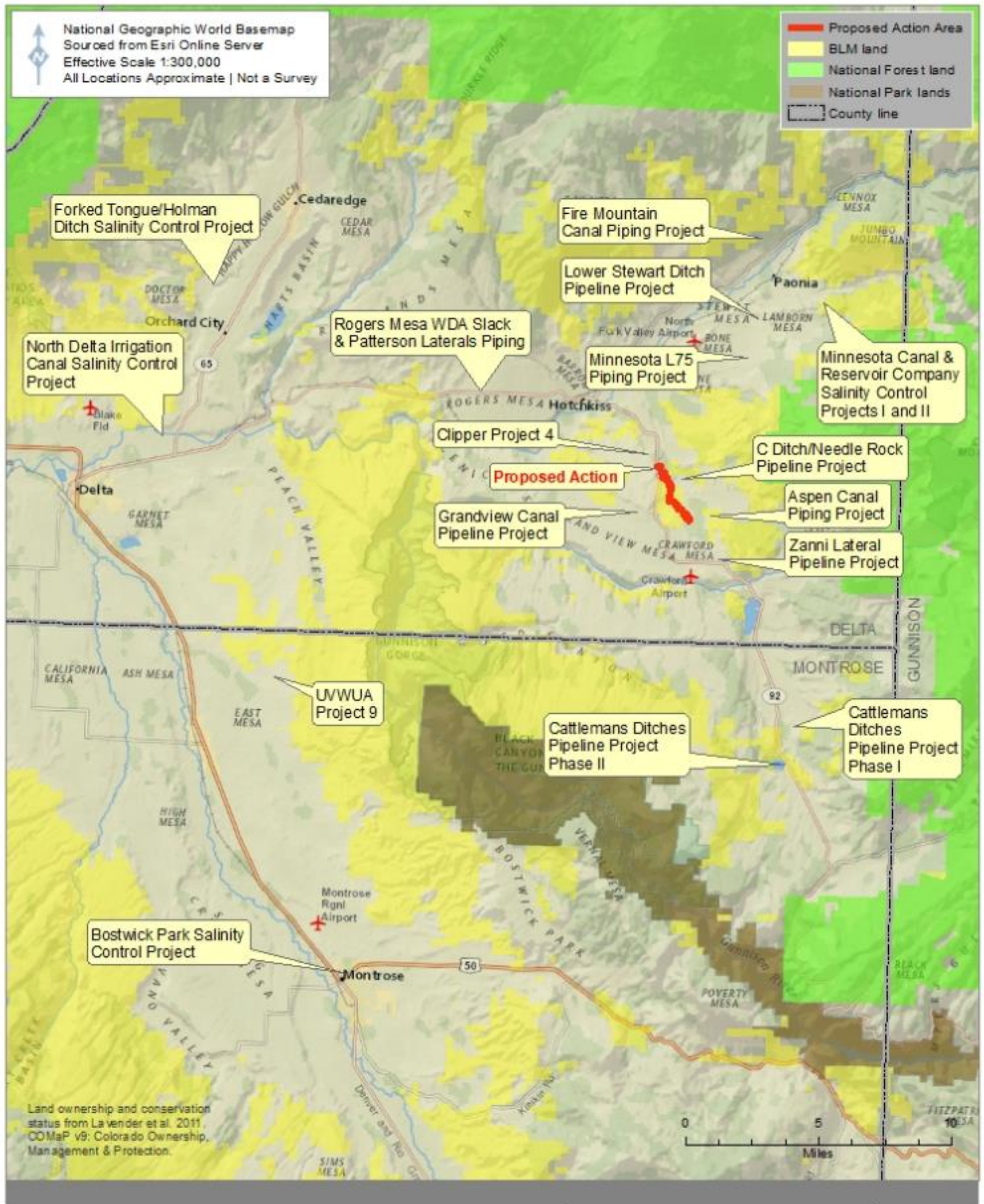


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 Delta County, Colorado
www.rareearthscience.com
 Map by D. Reeder | October 2018

Regional & Local Locator Maps

CENTER LATERAL PIPELINE PROJECT

FIGURE

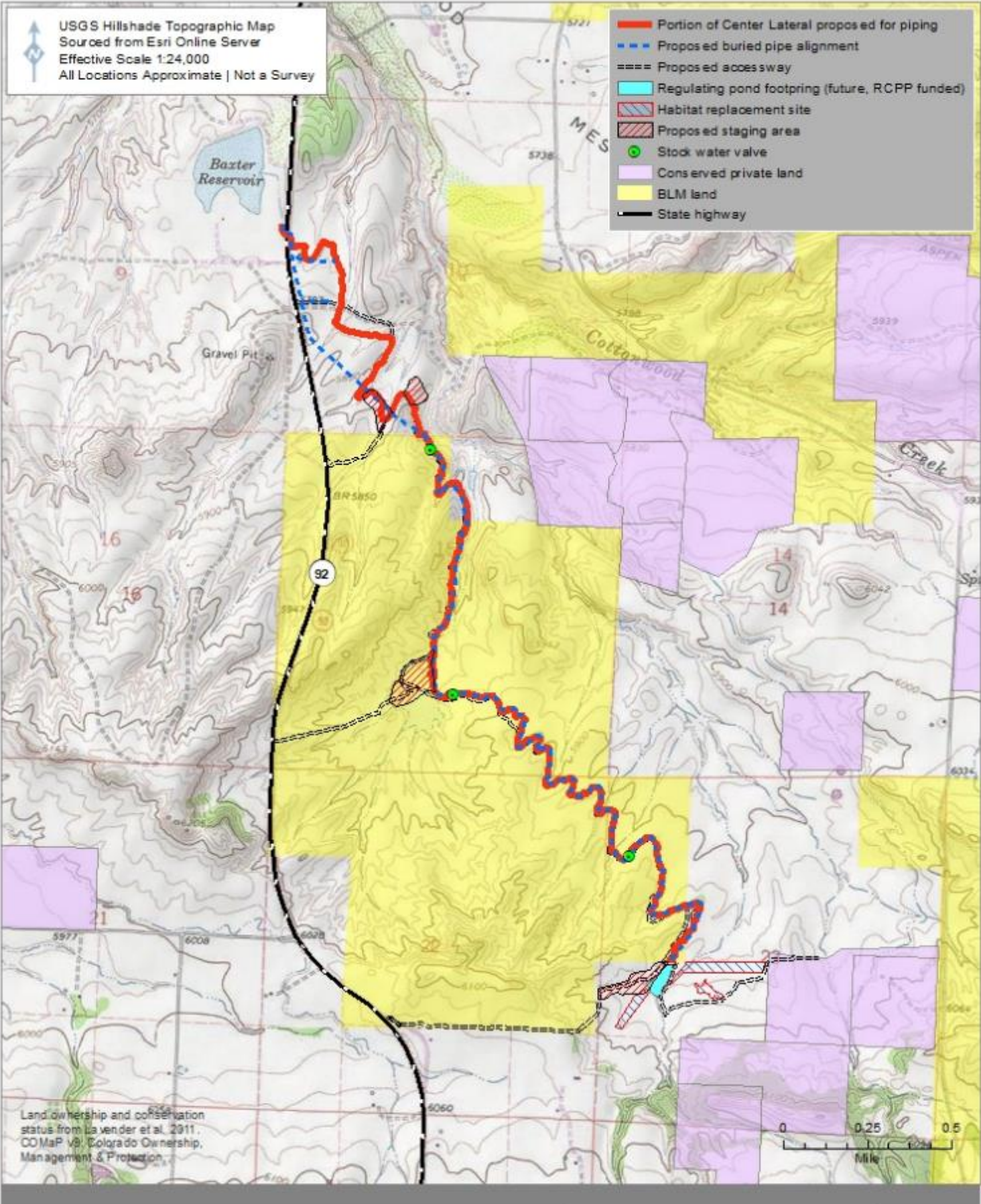


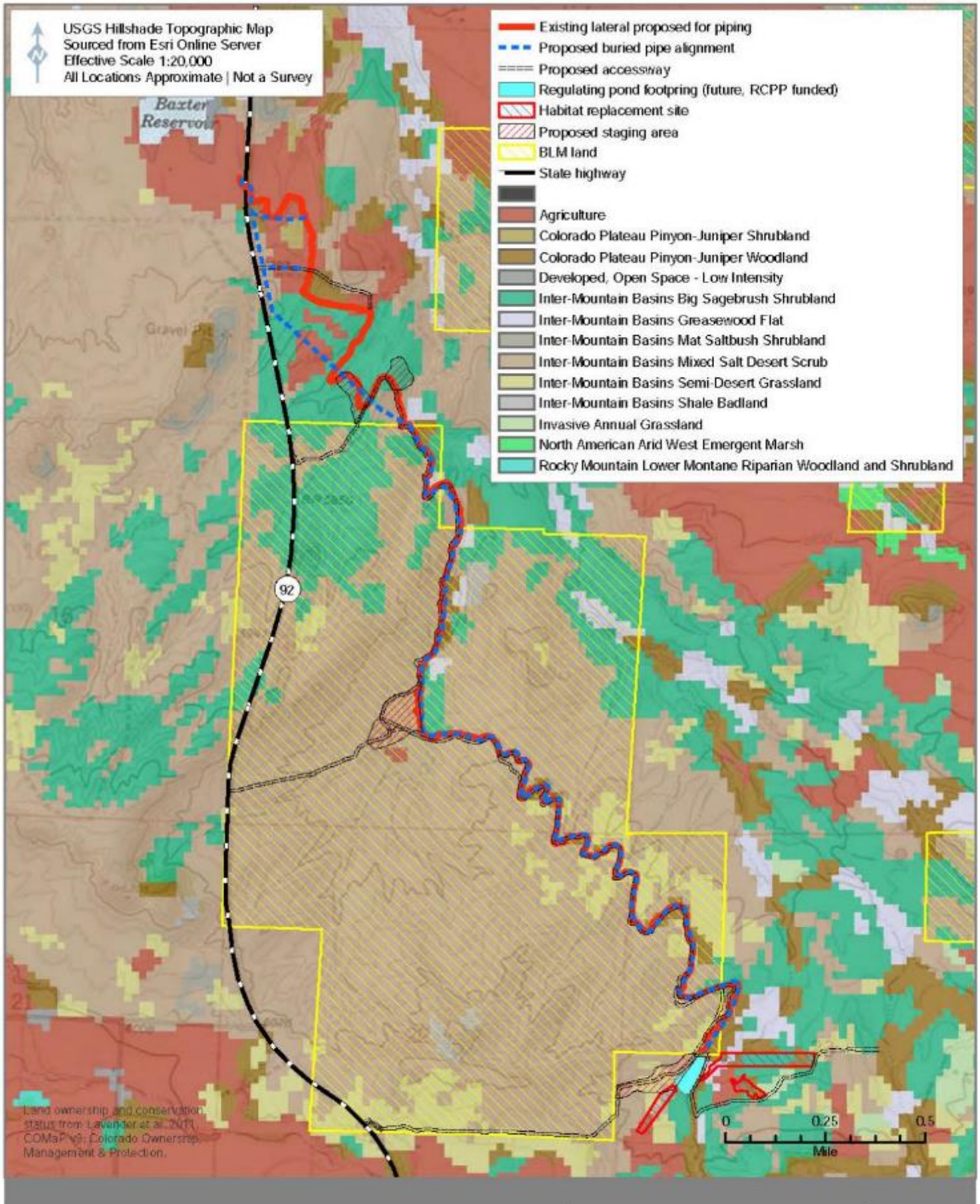
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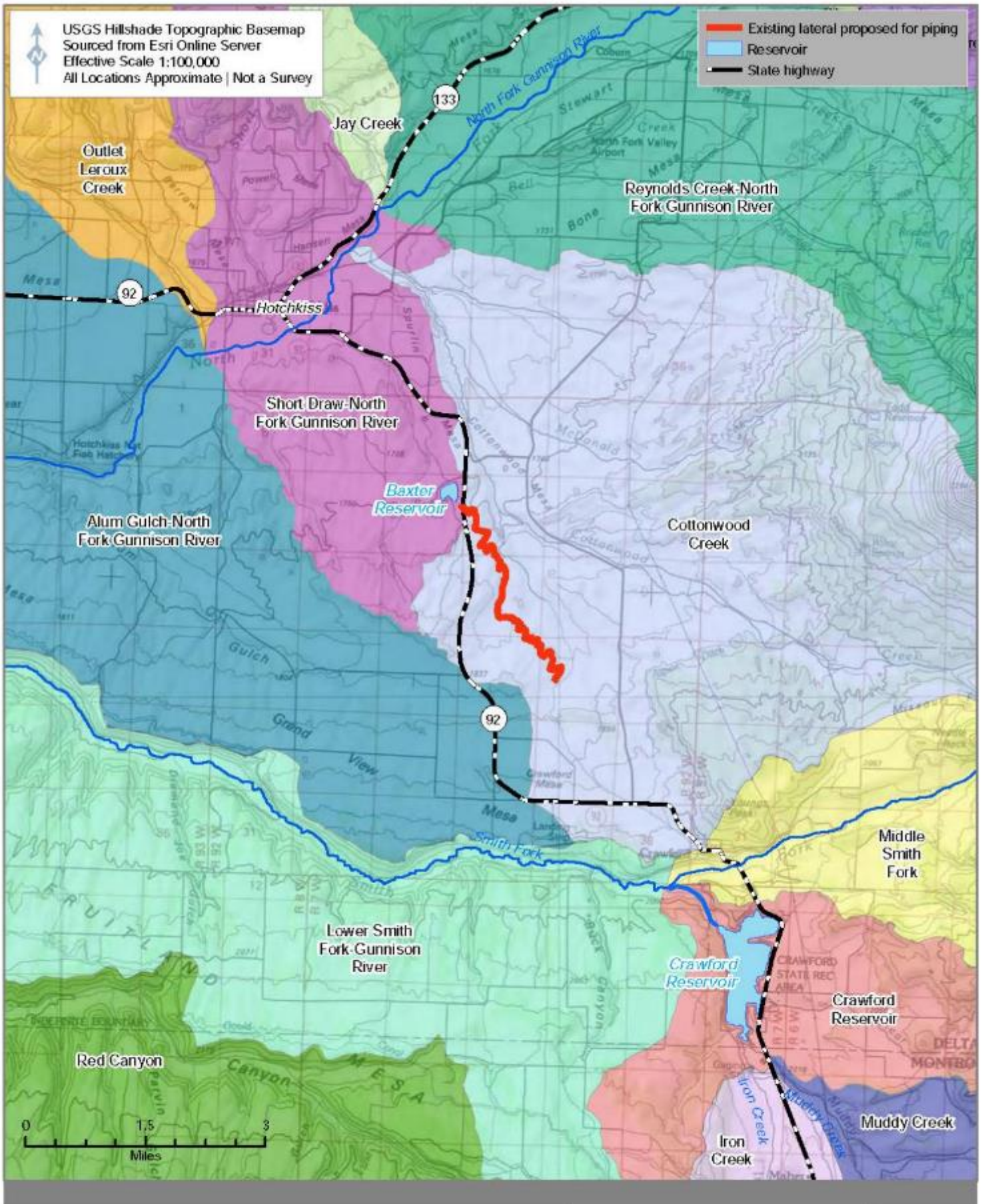
Regional Salinity Control Projects

CENTER LATERAL PIPELINE PROJECT

FIGURE
2





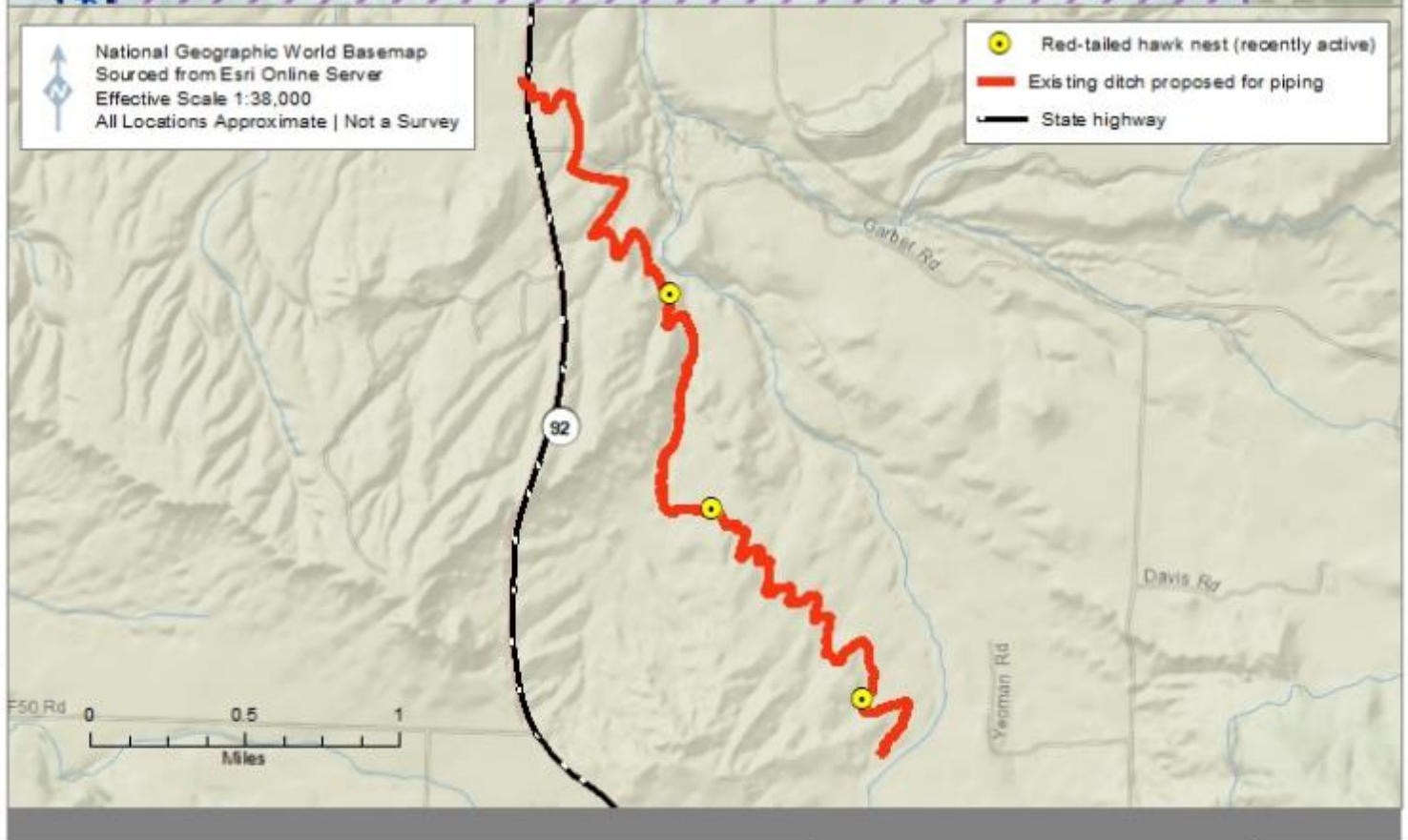
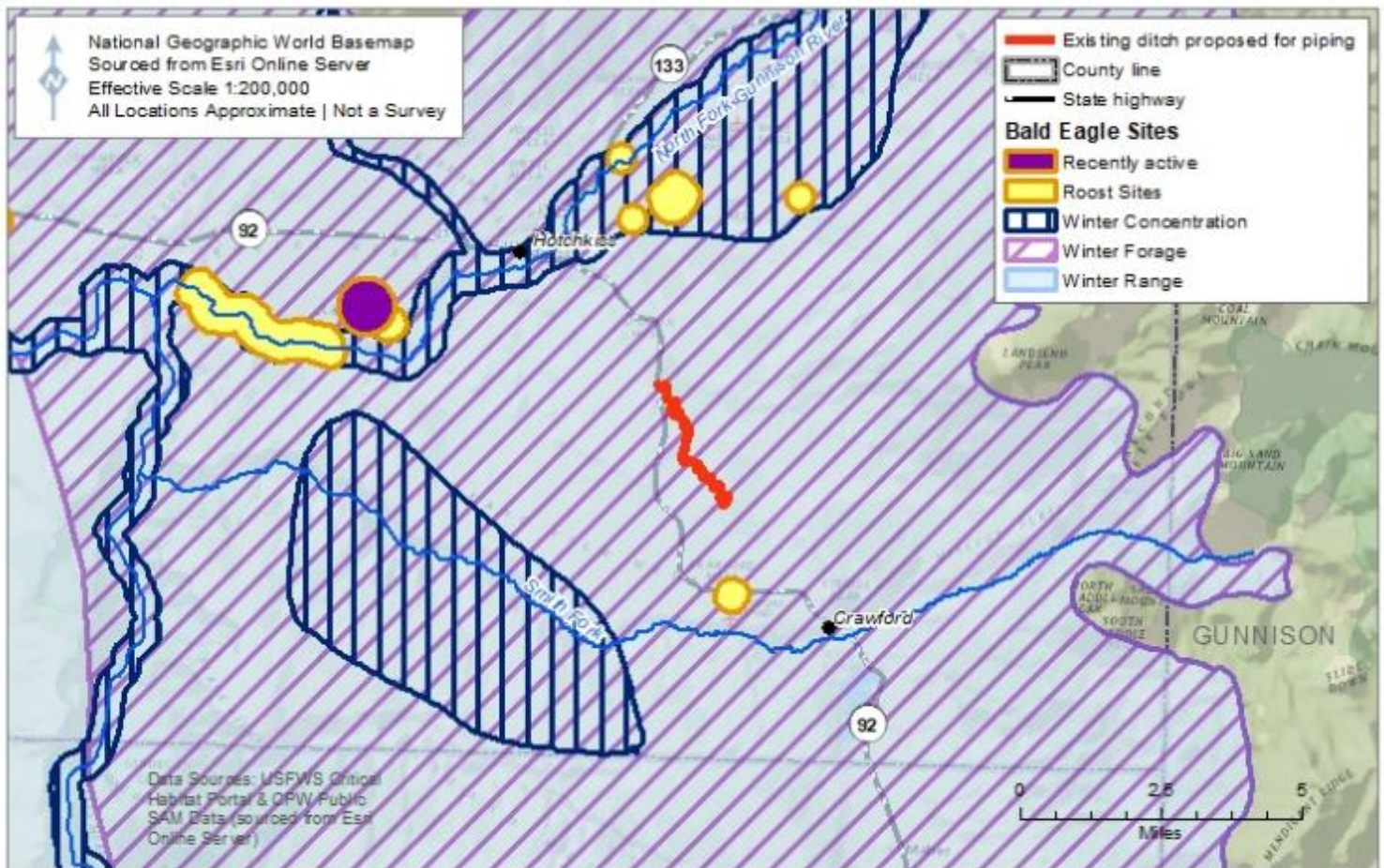


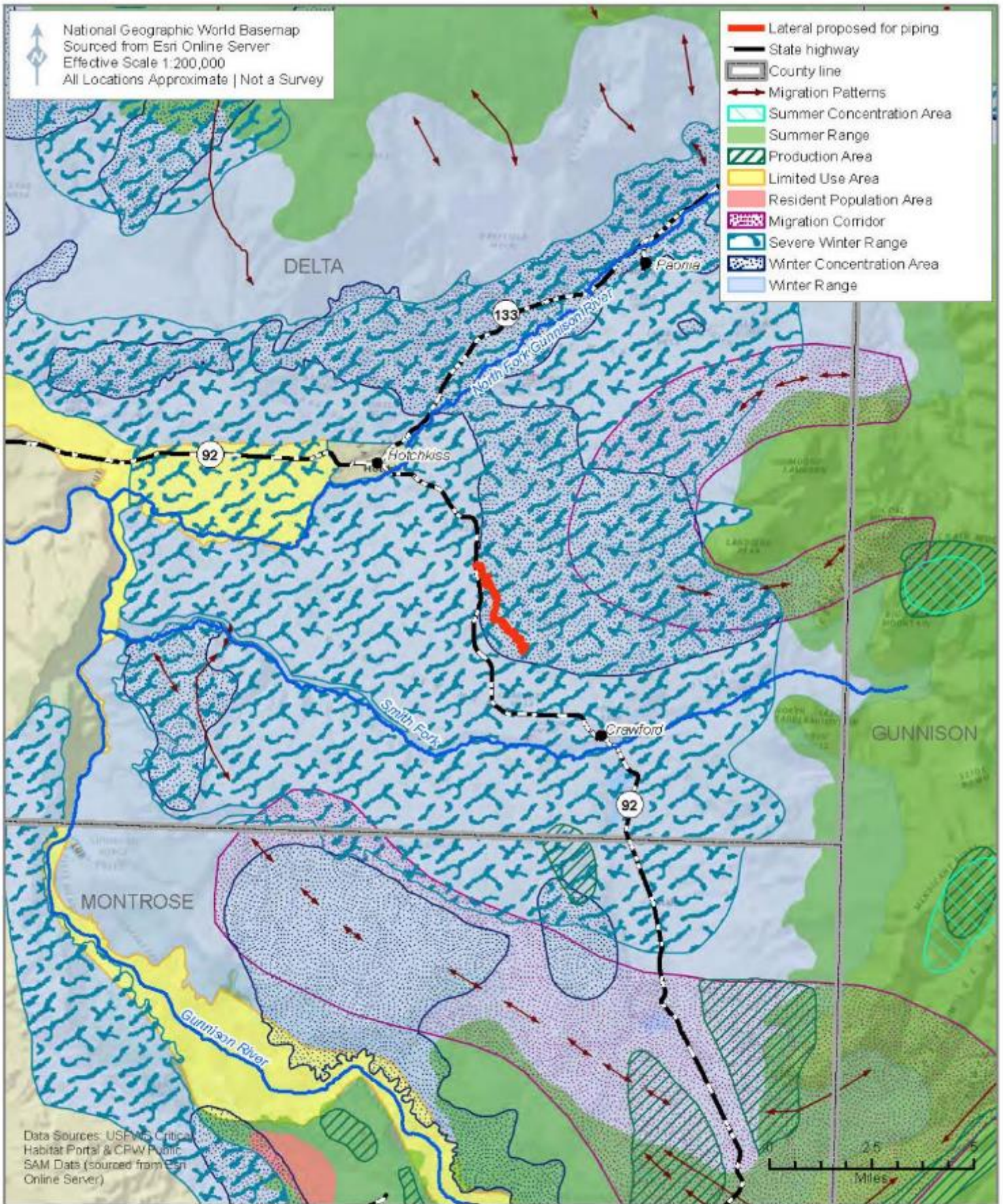
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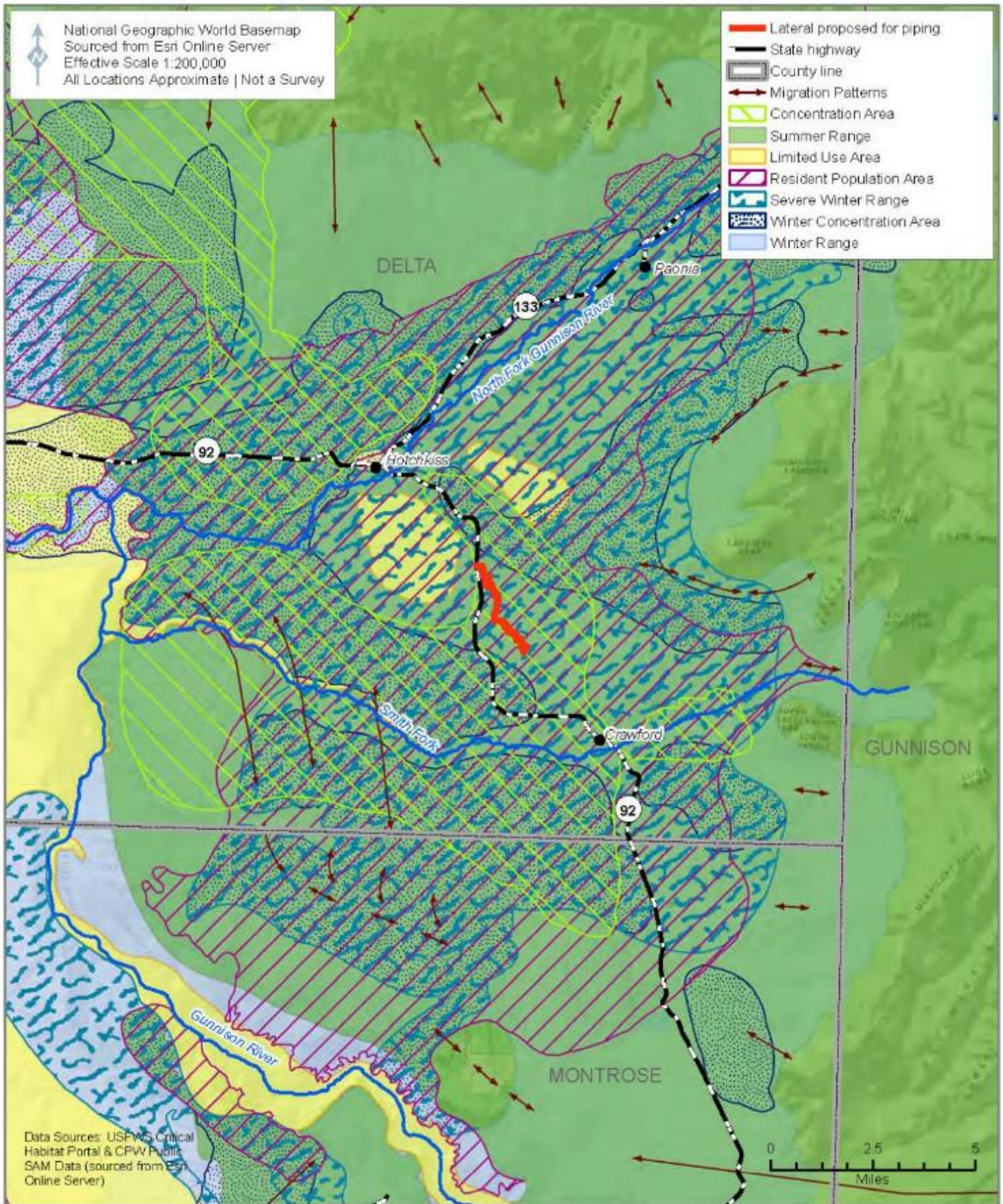
Hydrologic Units Map of the Project Vicinity

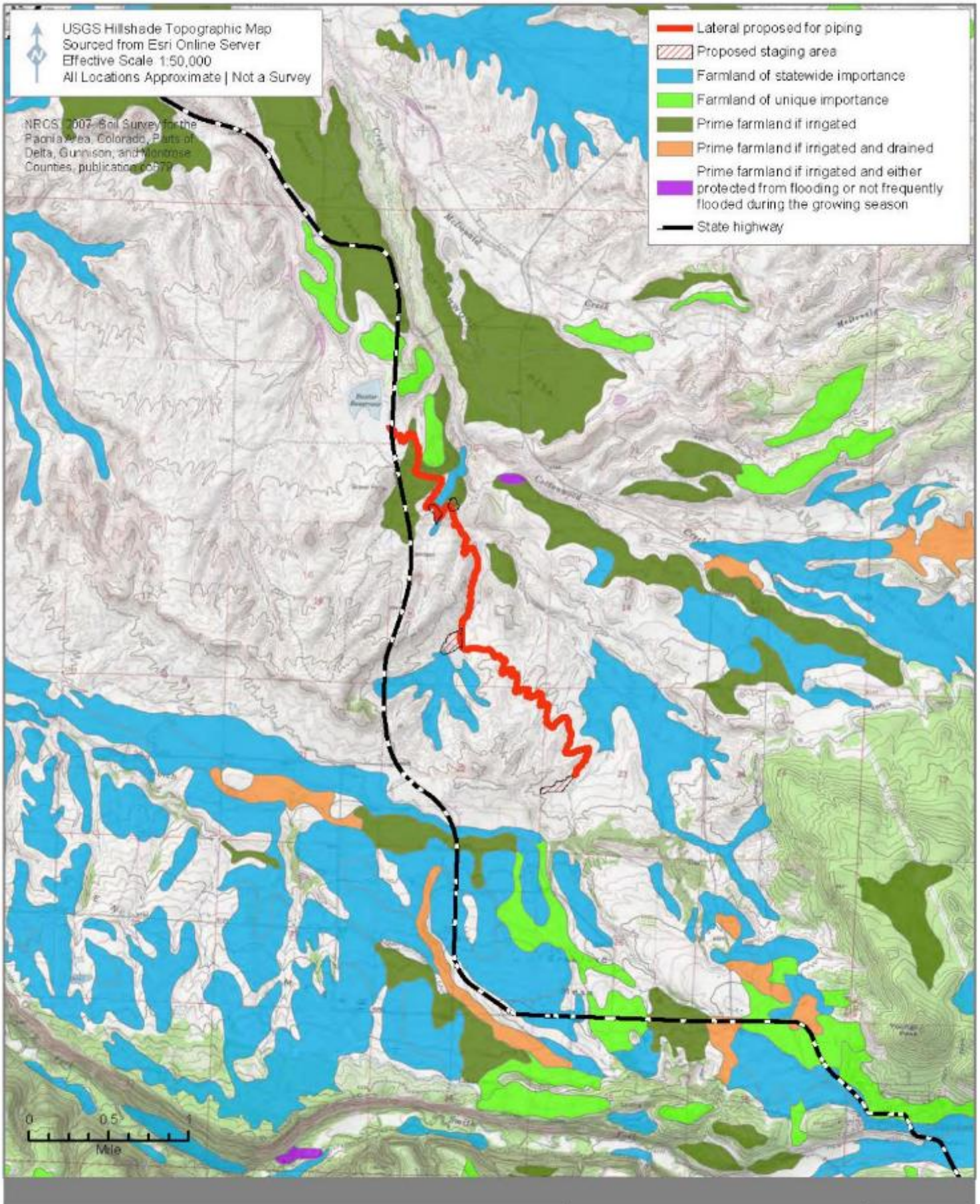
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FIGURE
 5









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**Soils of Agricultural
Significance**

**CENTER LATERAL
PIPELINE PROJECT**

FIGURE

9

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APPENDIX B

Comments on the DRAFT EA and Responses

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Comment Summaries and Responses

One comment document was received during the comment period containing 2 distinct, substantive comments. The comments concerned the availability of drinking water for wildlife and potential fire hazards from dead vegetation. In compliance with 40 CFR 1503.4, possible responses to these comments include:

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

Reclamation reviewed each comment and classified them according to topic or comment category below. Summary comments and consolidated responses follow. Changes were made to supplement, improve, or modify the EA as a result of these comments and the reader is referred to the section of the EA where the changes occurred.

Category: Wildlife

Comment Number: 1

Summary comment: Commenter is concerned over the availability of water for wildlife.

Response: Further discussion on wildlife habitat and water availability for wildlife has been included in Section 3.8 of the Final EA.

Category: Fire Management

Comment Number: 2

Summary comment: Commenter is concerned about vegetation which is supported by ditch seepage dying and posing a fire hazard in the area.

Response: The majority of the vegetation supported by the ditch seepage is located on the fringes of the canal prism and will be removed during pipeline construction. Other vegetated areas which are supported by the ditch are either isolated from other vegetation and therefore lack fuel to transport a fire or are in close proximity to other water sources which would help to lessen the spread of a fire.

1/2/2019

DEPARTMENT OF THE INTERIOR Mail - Fwd: [EXTERNAL] Comment Clipper Center Lateral Pipeline Project



Ward, Jennifer <jward@usbr.gov>

Fwd: [EXTERNAL] Comment Clipper Center Lateral Pipeline Project

McWhirter, Lesley <lmcwhirter@usbr.gov>

Mon, Dec 31, 2018 at 9:05 AM

To: Mark Warner <mwarnke@usbr.gov>, John P. Sottilare <jsottilare@usbr.gov>, Jenny Ward <jward@usbr.gov>, Amanda Ewing <aeewing@usbr.gov>

----- Forwarded message -----

From: Nathan Sponseller <nathasponseller@gmail.com>

Date: Wed, Dec 26, 2018 at 1:24 PM

Subject: [EXTERNAL] Comment Clipper Center Lateral Pipeline Project

To: <lmcwhirter@usbr.gov>

Comment

Dear Mr Warner, I spent some time reviewing the online FONSI report to try to understand the proposed project better. From what I glean, I have no objections to this project. I think the biggest impacts would be on availability of water for local wildlife and the need to consequently keep any former ditch areas clear of flammable debris (as vegetation that had previously been saved by the ditch water would die and become a fire hazard. If these two issues are mitigated properly, I can understand the benefit of this project and do not object.

I would like to comment on the future possibility of "undergrounding" the Clipper ditch running on the south edge of the Town of Crawford. I have been a resident of Crawford for 23 years and have a home and business that borders the north side of the ditch along the highway. I have been concerned that the section of the ditch through Town might someday be targeted for undergrounding and, for that project, I do have some salient concerns and would urge restraint on any such project for the following reasons:

- The Clipper Ditch pre-dates the foundation of the Town of Crawford, and the Town has grown up around the Ditch. The Clipper Ditch is one defining historical feature of the Town, that if lost would diminish the historic cohesiveness of Crawford and diminish the town's overall appeal to both residents and to visitors to the Town.
- The Clipper Ditch rides the north rim of the Smith Fork Canyon, through Crawford. Over the years, seepage from the Ditch has been sufficient to sustain vegetation and trees lining the ditch and down the slope of the north rim of the canyon. While it would be conservationally- desirable to reduce this seepage, the removal of this water supply from the surrounding area would create a significant fire hazard to the Town of Crawford, as vegetation dies back. The rugged terrain would be difficult to either clear or access by firefighters.
- Wildlife, including mule deer, black bear, mountain lion, beaver, muskrat, many species of duck and heron, as well as trout (up to 16" in length) and minnows are regularly observed in the Clipper Ditch within the Town limits. Undergrounding the Ditch would both remove this habitat for the animal populations, and diminish the quality of life for the residents of Crawford, that the presence of these animals affords.
- Unlike rural areas of the Clipper Ditch system, the in-town portion of the Ditch cannot easily or safely be burned annually to mitigate fire hazards.
- Currently, the Town of Crawford claims to "not be in the business of managing rainfall runoff". While this is a matter for the Town to address within the Town limits, one fact is that currently rain runoff runs down "C Hill" on the north edge of Town, down the State highway (and other roads) and into the Clipper Ditch. The removal of access to the Ditch would create a significant runoff management issue for the Town of Crawford.

For the above listed reasons, I strongly encourage the Bureau of Reclamation to avoid action on undergrounding the Clipper Ditch within the limits of the Town of Crawford. I thank you for the opportunity to comment on this action. Please place me on an email and mailing list for future contact relating to future undergrounding actions on the Clipper Ditch. Best Regards, Nathan

Nathan R. Sponseller
 Titchelss Community Chamber of Commerce - President
 Stone House Inn - Owner
 PO Box 15
 Crawford, CO 81413
 970 585 2903 (cell)

—
Lesley McWhirter
 Environmental & Planning Group Chief
 Western Colorado Area Office
 Upper Colorado Region, Bureau of Reclamation
 Office: 970-248-0608
 Mobile: 970-250-1909

<https://mail.google.com/mail/u/0/?ik=6ae7c9481f3&view=pt&search=all&permmsgid=msg-F%3A1621384121053825099&siml=msg-F%3A16213841210...> 1/1

APPENDIX C

Distribution List

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

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APPENDIX D

Section 404 Clean Water Act Exemptions Documentation

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1/30/2019

Rare Earth Science, LLC Mail - FORMAL REQUEST: Crawford Clipper Center Lateral Project Section 404 Exemption / NPR Verification



Dawn Reeder <dawn@rareearthscience.com>

FORMAL REQUEST: Crawford Clipper Center Lateral Project Section 404 Exemption / NPR Verification

Morse, W Travis CIV USARMY CESPCK (USA) <w.travis.morse@usace.army.mil>

Tue, Jan 29, 2019 at 2:02 PM

To: Dawn Reeder <dawn@rareearthscience.com>

Cc: "Ward, Jennifer" <jward@usbr.gov>, "Orton, Marcel" <marcel@harwardengineering.com>, "Harward, Calvin" <calvin.harward@harwardengineering.com>, Michael Cleary <mikecleary@orbisengr.com>, Crawford Clipper Ditch Board <board@clipperditch.com>

Hi Dawn,

Due to the urgency of your request and confirmation of the same from Ms. Ward at the Bureau of Reclamation (cc'd), I am providing you informal confirmation that coordination with my office is unnecessary for the subject activity. Specifically, I agree that the activity is exempt from Section 404 of the Clean Water Act for irrigation ditch construction (i.e., ditch-to-pipe conversion) and that the recapture provision would not be met. Further, I agree that the habitat replacement project would not be regulated under Section 404 of Clean Water Act and would not require a Department of the Army authorization. For your convenience, I have attached RGL 07-02, which provides details regarding the scope of CWA exemptions for ditch work.

Sincerely,

Travis Morse
Senior Project Manager
Colorado West Section
U.S. Army Corps of Engineers
400 Rood Avenue, Room 224
Grand Junction, Colorado 81501
(970) 243-1199 ext. 1014

Please provide us with your feedback by filling out a customer survey at http://corpsmapu.usace.army.mil/cm_apex/?p=regulatory_survey

For more information about our program, you can visit our website at <http://www.spk.usace.army.mil/Missions/Regulatory.aspx>

Please note: Our out-of-office notification has been disabled. As I may be out of the office, please allow three-business days for a response before calling the main office for assistance at 970-243-1199.

-----Original Message-----

From: Dawn Reeder [mailto:dawn@rareearthscience.com]

Sent: Tuesday, January 22, 2019 8:08 AM

To: Morse, W Travis CIV USARMY CESPCK (USA) <w.travis.morse@usace.army.mil>

Cc: Ward, Jennifer <jward@usbr.gov>; Orton, Marcel <marcel@harwardengineering.com>; Harward, Calvin <calvin.harward@harwardengineering.com>; Michael Cleary <mikecleary@orbisengr.com>; Crawford Clipper Ditch Board <board@clipperditch.com>

Subject: [Non-DoD Source] FORMAL REQUEST: Crawford Clipper Center Lateral Project Section 404 Exemption / NPR Verification

Dear Travis,

I, along with Jennifer Ward of the Bureau of Reclamation, are writing to ask for your formal concurrence that an irrigation project—the Clipper Center Lateral Pipeline Project ("Proposed Action")—meets the Irrigation Exemption under Section 404 of the Clean Water Act, and that no permit is required for its associated Habitat Replacement Project.

In this case, we are requesting a rush response from you, due to the timing sensitivity of the Proposed Action. The project is scheduled to begin in February 2019.

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1/30/2019 Rare Earth Science, LLC Mail - FORMAL REQUEST: Crawford Clipper Center Lateral Project Section 404 Exemption / NPR Verification

The DRAFT EA for the project (including a complete project description and maps) is here: [Blockedhttps://www.usbr.gov/uc/enwdocs/ea/CrawfordClipperDitchCompanyClipperCenterLateralPipelineProject-DraftEAandFONSI.pdf](https://www.usbr.gov/uc/enwdocs/ea/CrawfordClipperDitchCompanyClipperCenterLateralPipelineProject-DraftEAandFONSI.pdf)

Proposed Action Summary

This Proposed Action is an agricultural irrigation salinity control project authorized by the Colorado River Basin Salinity Control Act and funded through the U.S. Department of the Interior's Bureau of Reclamation's ("Reclamation's") Colorado River Basinwide Salinity Control Program. The Proposed Action consists of a pipeline component and a habitat replacement component.

Pipeline Component

Approximately 4.1 miles of buried pipe would replace approximately 4.3 miles of the existing open Center Lateral and approximately 1.3 miles of the Center Lateral would be abandoned (Draft EA Figure 3 [Appendix A]). The buried pipe would initiate on the south end of the Project area at a planned re-regulating pond analyzed in a different NEPA process (you informally verified the Section 404 Irrigation Exemption for this pond in an email dated October 10, 2017). A total of about 3.1 miles of the pipeline would be buried in or very near the existing ditch prism across BLM land. Upon transitioning to private land in the north part of the Proposed Action Area, the buried pipeline would depart from the existing Center Lateral alignment and cross upland areas for approximately 0.8 miles to its connection with the previously-completed Clipper Ditch Project 4 just west of Highway 92 (Draft EA Figure 3 [Appendix A]). Approximately 1.3 miles of the open ditch alignment on private land would be abandoned and backfilled. Two outlets to two 0.1-mile buried pipe laterals in the north part of the Proposed Action Area would serve private properties adjacent to the Proposed Action. Both pipe laterals would be installed across uplands. The water carried by the Clipper Ditch system is used for agricultural purposes. The canal currently supports (via seepage and leakage) a narrow margin of emergent wetland vegetation at the canal waterline, as well as downgradient saline wetlands in drainage patterns that cross the canal alignment.

Habitat Replacement Component

This loss of wetlands associated with piping of the Center Lateral would be compensated for with the offsite habitat replacement project. The habitat replacement project would occur on a total of approximately 9.15 acres of land ("Habitat Replacement Site") in the south end of the project area (Draft EA Figure 3 [Appendix A]). The Habitat Replacement Site is a rangeland seasonal livestock pasture with a preponderance of non-native vegetation, and which has patches of sub-irrigated ground with potentially hydric soils. The plan is to enhance the wildlife values of the site by seeding and/or planting mix of native riparian grasses, forbs, shrubs, and trees, and by controlling and removing noxious weeds (thistles, Russian knapweed, Russian olive, and tamarisk). Irrigation of the plantings would be augmented with small-diameter buried PVC pipes feeding drip emitters and with overflow from the re-regulating pond. The plantings would be fenced to protect them from big game and livestock damage. For more detail, the habitat replacement plan can be found here: [Blockedhttps://www.dropbox.com/s/ya89d23w477x7ky/Habitat%20Replacement%20Plan%2001092019.doc?dl=0](https://www.dropbox.com/s/ya89d23w477x7ky/Habitat%20Replacement%20Plan%2001092019.doc?dl=0)

Information in Support of the Section 404 Irrigation Exemption

a. Under Regulatory Guidance Letter 07-02 (RGL 07-02), the canals of the Clipper Ditch system meet the definition of an irrigation ditch because they are man-made features that convey water to an ultimate irrigation use. No part of the Clipper Ditch system involved in the Proposed Action is a natural or man-altered natural water body. The activities to be conducted under the Proposed Action, including installation of buried pipe both within and outside the existing ditch alignment, and the installation of small-diameter buried pipe to irrigate the habitat replacement component, meet the definition of "construction" in that they are associated with construction or maintenance of "siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant to and functionally related to irrigation ditches."

b. The Recapture Provision of RGL 07-02 does not apply because canal piping and irrigation of the habitat replacement site involved in the Proposed Action will not result in a significant discernible alteration in flow or circulation, or a reduction in reach, of waters of the U.S. The location and amount of water currently being diverted will not change. Appropriate Best Management Practices will be implemented during construction to ensure that there will be no discharge of dredged or fill material into waters of the U.S. which contains toxic pollutants as defined under Section 307 of the Clean Water Act. The Proposed Action would not result in converting an area of jurisdictional aquatic resources into a use to which it was not previously subject.

Information in Support of the No Permit Required for Habitat Replacement Activities

* The habitat replacement activities (including weed control and installation of native plants) would not involve

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1/30/2019 Rare Earth Science, LLC Mail - FORMAL REQUEST: Crawford Clipper Center Lateral Project Section 404 Exemption / NPR Verification
discharge of fill or dredging of wetlands or waters of the U.S.


Do you agree with our determination that the above-described Proposed Action qualifies for the Section 404 Irrigation Exemption, and that the habitat replacement activities would not require a Section 404 Permit?

Please let us know if you need further information.

Thank you,

-dr

Dawn Reeder
Rare Earth Science
PO Box 1245
Paonia, Colorado 81428
(970) 527-8445
dawn@rareearthscience.com <<mailto:dawn@rareearthscience.com>>

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APPENDIX E

BLM DRAFT ROW Permit Legal Description & Stipulations

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BLM DRAFT ROW Permit Legal Description

Short-Term Pipeline ROW for Construction (rent)

6th Principal Meridian

T. 15 S., R. 92 W.,

sec. 15, SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4, and W1/2SE1/4 and SE1/4SE1/4;

sec. 22, NE1/4NE1/4;

sec. 23, W1/2NW1/4.

13,420 feet long by 100 feet wide containing 30.8 acres more or less. (The construction ROW is adjacent to the historic 50 foot ROW on the west side of the existing ditch)

Staging Area – for construction (rent)

6th Principal Meridian

T. 15 S., R. 92 W.,

sec. 15, E1/2SW1/4.

Site contains approximately 8 acres more or less.

Permanent Pipe Acknowledgement

6th Principal Meridian

T. 15 S., R. 92 W.,

sec. 15, SW1/4NE1/4, NE1/4NW1/4, E1/2SW1/4, and W1/2SE1/4 and SE1/4SE1/4;

sec. 22, NE1/4NE1/4;

sec. 23, W1/2NW1/4.

13,420 feet long by 100 feet wide containing 30.81 acres more or less (50 feet each side of centerline of existing ditch/pipe)

Access Roads – off of pipe alignment

6th Principal Meridian

T. 15 S., R. 92 W.,

sec. 15, N1/2NW1/4, and S1/2SW1/4;

sec. 22, NE1/4SW1/4 and N1/2SE1/4.

9,216 feet long by 30 feet wide containing 6.35 acres more or less.

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BLM ROW Permit DRAFT Stipulations

STIPULATIONS

1. The holder shall contact the authorized officer at least five days prior to the anticipated start of construction and/or any surface disturbing activities. For emergencies, the holder will contact the BLM as soon as possible after maintenance activities. The authorized officer may require and schedule a preconstruction conference with the holder prior to the holder's commencing construction and/or surface disturbing activities on the right-of-way. The holder and/or his representative shall attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, shall also attend this conference to review the stipulations of the grant. The BLM authorized representative is the Environmental Protection Specialist, who can be reached at the Uncompahgre Field Office, 2465 South Townsend, Montrose, Colorado 81401 or phone at (970) 240-5333. An alternate contact is the Realty Specialist, Uncompahgre Field Office, (970) 240-5322.
2. The holder shall submit a plan or plans of development that describe in detail the construction, operation, maintenance, and termination of the right-of-way and its associated improvements and/or facilities. The degree and scope of these plans will vary depending upon (1) the complexity of the right-of-way or its associated improvements and/or facilities, (2) the anticipated conflicts that require mitigation, and (3) additional technical information required by the authorized officer. The plans will be reviewed, and if appropriate, modified and approved by the authorized officer. An approved plan of development shall be made a part of the right-of-way grant.
3. The holder shall not initiate any construction or other surface disturbing activities on the right-of-way without the prior written authorization of the authorized officer. Such authorization shall be a written notice to proceed issued by the authorized officer. Any notice to proceed shall authorize construction or use only as therein expressly stated and only for the particular location or use therein described.
4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.
5. Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
6. Use of pesticides/herbicides shall comply with the applicable Federal and state laws. Pesticides/herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides/herbicides, the holder shall obtain from the authorized officer written approval of the applicant's plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of

storage and disposal of containers, and any other information deemed necessary by the authorized officer. The plan should be submitted no later than March 1st of any calendar year to cover the proposed activities for the next growing season. Emergency use of pesticides/herbicides shall be approved in writing by the authorized officer prior to such use.

7. The holder shall be responsible for noxious weed control within the limits of the right-of-way. The holder is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations), including pesticides/herbicides approved for use on BLM land.
8. Noxious weed inventories will be conducted prior to construction of the pipeline and if necessary, weeds will be treated to reduce spreading along the right-of-way and onto adjacent lands.
9. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated regarding toxic substances or hazardous materials. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, section 102b. A copy of any report required or requested by any federal agency of state government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency of State government.
10. It is the holder's responsibility to comply with all applicable Federal, State, and local laws and regulations existing or hereafter enacted or promulgated.
11. The holder shall obtain and comply with all County, State and Federal permit requirements, regulations and resolutions.
12. The authorized officer may suspend or terminate in whole, or in part, any construction or maintenance activities, when in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.
13. All construction, operation and maintenance shall be within the authorized limits of the right-of-way granted herein. The holder shall clearly flag the exterior boundaries of the right-of-way, prior to any surface disturbing activities, in order to identify the location and limits for all surface disturbing activities as determined by the authorized officer.
14. No burning of trash, litter, trees, brush or other vegetative material shall be allowed under this grant.
15. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support such equipment. If the equipment creates ruts in excess of four (4) inches deep, the soil shall be deemed too wet to adequately support the construction equipment. Emergency repairs to restore and maintain the authorized facility are exempt; however, any damages to resources caused by emergency repairs during wet conditions will be repaired as

directed by the authorized officer as soon as possible after the occurrence.

16. The holder shall seed all disturbed areas with the following seed mix. There shall be no primary or secondary noxious weed seed in the seed mixture. In addition, there should be no more than 0.5% total weed seed, less than 2% other seed, and no trash larger than ¼ inch in length. Seed shall not be stored in burlap bags. Seed going on projects less than 20 acres or less than 200 lbs. shall be tested, and the viability testing of seed shall be done in accordance with State law(s). Seed tests shall be less than one year old and can be from the company's seed test. Seed test documents can be from: a) certified "blue" tag(s); b) an independent seed lab test; or c) a seed lab analysis either by seed lot or by seed mix. Copies of the seed test documents shall be forwarded to the BLM, Uncompahgre Field Office. Commercial seed shall be either certified or registered pure live seed (PLS). The seed container shall be tagged in accordance with State law(s) and available for inspection by the authorized officer. Only State Certified weed free mulch shall be used.

The seed shall be evenly and uniformly planted over any disturbed areas. Seed shall be broadcast and the area shall be raked or chained to cover the seed. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of the second growing season after seeding. The authorized officer is to be notified a minimum of two days prior to seeding of the project. Seeding shall be completed at a time of optimum soil moisture content, i.e., early spring or the fall.

17. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination and rehabilitation plan as necessary. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surface material, recontouring, topsoiling, or seeding. The authorized officer must approve the plan in writing prior to the holder's commencement of any termination activities.

Fire Prevention and Control Stipulations

1. The Holder shall indemnify the United States for any and all injury, loss or damage to life or property, including fire suppression costs, the United States may suffer as a result of losses, claims, demands or judgments caused by Holder's use or occupancy of public lands under this grant or permit.
2. The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his or her judgment, conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.
3. Holder shall maintain the ROW in a safe, usable condition.
4. When performing construction and maintenance (including emergency repairs) activities during the "closed" fire season (May 10 – October 20), as set by Colorado State Law, or during any other closed fire season prescribed by the BLM Colorado State Director, the Holder, including any persons such as contractors, etc. working on their behalf, shall equip at least one on-site vehicle with firefighting equipment, including, but not limited to, fire suppression hand tools (i.e. shovels, rakes, Pulaski's, etc.), a 16-20 pound fire extinguisher, and a sufficient supply of water for initial attack, with a mechanism to effectively spray the water (i.e. backpack pumps, water sprayer, etc.).
5. During conditions of extreme fire danger or when the State of Colorado and/or the BLM Colorado

State Director issues a fire restriction order, operations shall be limited or suspended in specific areas, or additional mitigation measures may be required by the BLM Authorized Officer.

6. In accordance with 43 CFR 2805.12(d) (or subsequent revisions), the Holder shall do everything reasonable to prevent fires on or in the immediate vicinity of the ROW. The Holder will immediately report fires to the BLM local fire dispatch at **970-249-1010** and take all necessary fire suppression actions, when safe to do so, with their personnel and equipment on any fires they cause to ignite.
7. Holder shall maintain the condition of the origin area of the fire from further damage to enable the Fire Investigator to properly assess the origin area and cause of the fire. The Holder shall report to the Fire Investigator or BLM Incident Commander and shall not enter into the origin area on fires unless given permission to do so.
8. The Holder will cooperate with the BLM in its efforts to investigate, suppress and respond to all future fires. The duty to “cooperate” includes, but is not limited to, the following duties regardless of whether BLM is on the scene:
 - i. The duty to provide the BLM local fire dispatch **970-249-1010** with reasonable and timely notice concerning all fires involving the Holder’s facilities, or discovered during routine operations.
 - ii. The duty to share factual information with the BLM concerning fires, including but not limited to the names of Holder’s employees and/or contractors with knowledge of the incident; and to allow employees and/or contractors to be interviewed by BLM’s investigators regarding factual information relating to a fire.
 - iii. It is the duty of the Holder to preserve the point of ignition, fire scene and reasonably account to the BLM for Holder’s actions taken at the scene of a fire.
 - iv. The duty to minimize disturbance of potential evidence located at the scene; to not engage in any evidence collection or destructive testing without BLM and or its counsel’s express written consent; to properly handle and preserve any evidence collected and to make all documents and evidence, including expert reports, available to the BLM in a rapid and timely manner upon request of BLM and/or its counsel.
 - v. The duty to not hamper the BLM investigation of origin and cause of the fire; and to reasonably assist BLM’s investigation at the scene.
 - vi. The duty to provide information upon request of BLM and/or its counsel concerning the construction, monitoring, inspection, maintenance and/or repairs of any of Holder’s facilities located at or adjacent to a fire.
 - vii. The duty to provide information upon request of BLM and/or its counsel concerning the monitoring, inspection, and or alteration by Holder of any condition on public land, including but not limited to, public land adjacent to any of the Holder’s facilities.
 - viii. The duty, during BLM fire suppression efforts: to defer to and follow the instructions of the BLM’s Incident Commander regarding activities within the boundaries of the fire and checking in and out of the fire; and to recognize BLM’s primary authority over the incident scene.

APPENDIX F

Endangered Species Act Compliance Documents

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GUNNISON RIVER RECOVERY AGREEMENT

This RECOVERY AGREEMENT is entered into this 8th day of January, 2014, by and between the United States Fish and Wildlife Service (Service) and **Crawford Clipper Ditch Company** (Water User).

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

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

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

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

WHEREAS, Water User is the **Crawford Clipper Ditch Company**, which causes or will cause depletions to the Gunnison River subbasin from its **Crawford Clipper Ditch System diversion on the Smith Fork of the Gunnison River** with the implementation of **Salinity Control Projects** (Water Projects); and

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

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

NOW THEREFORE, Water User and the Service agree as follows:

I. The Service agrees that implementation of the Recovery Elements specified in the 2009 Opinion will avoid the likelihood of jeopardy and adverse modification under section 7 of the ESA, for depletion impacts caused by Water User's Water Project. Any consultations under

section 7 regarding Water Project's depletions are to be governed by the provisions of the 2009 Opinion. The Service agrees that, except as provided in the 2009 Opinion, no other measure or action shall be required or imposed on Water Project to comply with section 7 or section 9 of the ESA with regard to Water Project's depletion impacts or other impacts covered by the 2009 Opinion. Water User is entitled to rely on this Agreement in making the commitment described in paragraph 2.

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

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

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

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

- a. The Service removes the listed species in the Upper Colorado River Basin from the endangered or threatened species list and determines that the Recovery Elements are no longer needed to prevent the species from being relisted under the ESA; or
- b. The Service determines that the Recovery Elements are no longer needed to recover or offset the likelihood of jeopardy to the listed species in the Upper Colorado River Basin; or
- c. The Service declares that the endangered fish in the Upper Colorado River Basin are extinct; or
- d. Federal legislation is passed or federal regulatory action is taken that negates the need for [or eliminates] the Recovery Program.

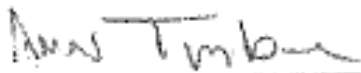
6. Water User may withdraw from this Recovery Agreement upon written notice to the Service. If Water User withdraws, the Service may request reinitiation of consultation on Water Project without reinitiating other consultations as would otherwise be required by the Reinitiation Notice section of the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



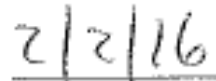
Crawford Clipper Ditch Company
Water User Representative



Date



Western Colorado Supervisor
U.S. Fish and Wildlife Service



Date

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APPENDIX G

Cultural Resource Compliance Documents

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**MEMORANDUM OF AGREEMENT
AMONG
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,
BUREAU OF LAND MANAGEMENT, UNCOMPAHGRE FIELD OFFICE,
CRAWFORD CLIPPER DITCH COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
CRAWFORD CLIPPER CENTER LATERAL PIPING PROJECT,
COLORADO RIVER BASIN SALINITY CONTROL PROGRAM,
LOCATED IN DELTA COUNTY, COLORADO**

WHEREAS, the Bureau of Reclamation (Reclamation) and the Crawford Clipper Ditch Company (CCDC) plan to pipe 4.3 miles of the Spurlin Mesa Lateral (Project); and

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

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

WHEREAS, Reclamation has defined the undertaking's area of potential effect (APE) as contained within a 200-foot-wide corridor centered on the portions of the existing Spurlin Mesa Lateral alignment located on lands managed by the BLM, a 100-foot-wide corridor centered along the existing and proposed Spurlin Mesa Lateral alignment and two proposed laterals, a habitat replacement project site, and three staging areas, totaling 70 acres on BLM-managed land and 121.3-acres on private land, as described in Attachment A; and

WHEREAS, Reclamation as lead Federal agency has determined, in consultation with the Colorado State Historic Preservation Officer (SHPO), that the recorded segment of the Spurlin Mesa Lateral (SMN1811.6) is eligible for listing on the National Register of Historic Places (NRHP) under Criterion A, and that the Project will result in an adverse effect to historic properties; and

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

WHEREAS, Reclamation consulted with the Southern Ute Indian Tribe, Ute Indian Tribe – Uintah and Ouray Reservation, and the Ute Mountain Ute Tribe via an August 28, 2018 letter to invite the tribes to participate in the proposed undertaking, and only the Southern Ute Indian Tribe responded that they have chosen not to participate in the consultation, and the other two tribes did not respond; and

WHEREAS, Reclamation consulted with the Delta County Commissioners via an August 28, 2018 letter to invite the local government to participate in the proposed undertaking, and they did not respond; 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 Spurlin Mesa Lateral, Reclamation will ensure that the segment (5DT1811.6) shall be recorded in accordance with the guidance for Level II Documentation found in "Historic Resource Documentation, Standards for Level I, II, and III Documentation" (Office of Archaeology and Historic Preservation Publication 1595, March 2013). The documentation will be of archival quality, and will include a detailed narrative history, plan mapping of the property and photographic documentation of the portions of the historic property to be included in the project. Photographs will be black and white archival quality (4" x 6") prints. Features will be plotted on the maps with GPS waypoints and will be extensively described and indexed in the report. Representative design drawings consisting of four (4) cross section maps will be prepared.

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

II. GENERAL REQUIREMENTS AND STANDARDS

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

III. INFORMATION ACCESSIBILITY

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

IV. DURATION

This MOA will expire if its terms are not carried out within two (2) years from the date of its execution. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the agreement and amend it in accordance with Stipulation VIII below.

V. POST-REVIEW DISCOVERIES

If potential historic properties are discovered or unanticipated effects on historic properties found, the CCDC 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, CCDC 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 CCDC's efforts to carry out the terms of this MOA.

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

VII. DISPUTE RESOLUTION

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

- a. Forward all documentation relevant to this dispute, including Reclamation's proposed resolution, to the ACHP. The ACHP shall provide Reclamation with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, Reclamation shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. Reclamation will then proceed according to its final decision.
- b. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, Reclamation may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, Reclamation shall prepare a written

response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

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

VIII. AMENDMENTS

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

IX. TERMINATION

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

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

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

LIST OF ATTACHMENTS

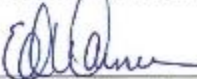
Attachment A: Area of Potential Effect and Site Locations
Attachment B: Unanticipated Discovery Plan

SIGNATORIES:

Colorado State Historic Preservation Office

By:  Date: 1/4/19
Steve Turner, AIA, State Historic Preservation Officer

Bureau of Reclamation, Western Colorado Area Office

By:  Date: 12-29-18
Ed Warner, Area Manager

Bureau of Land Management, Uncompahgre Field Office

By:  Date: 12/14/18
Greg Larson, Field Office Manager

INVITED SIGNATORIES:

Crawford Clipper Ditch Company

By:  ^{for Linman} Date: 12-4-18
Les Linman, President

ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

CRAWFORD CLIPPER DITCH COMPANY CRAWFORD CLIPPER CENTER LATERAL PIPING PROJECT SALINITY CONTROL PROGRAM, DELTA COUNTY, COLORADO

1. INTRODUCTION

The Crawford Clipper Ditch Company (CCDC) plans to pipe approximately 4.3 miles of the Spurlin Mesa 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 CCDC 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:

Les Linman
970-314-0129
crawfordclipperditch@gmail.com

Reclamation Project

Overseer:
Jennifer Ward
970-248-0651
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 CCDC 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 CCDC 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.

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

B. Project Overseer's Responsibilities

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

BLM Archaeologist:

Shane Rumsey
970-240-5303
srumsey@blm.gov

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

Colorado State Historic Preservation Office:

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

C. Further Activities

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

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

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

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

80-1301-1305) applies if the human remains are Native American and/or determined to be of archaeological interest.

In the event possible human skeletal remains are discovered, work in that portion of the project shall stop immediately. The remains shall be covered and/or protected in place in such a way that minimizes further exposure of and damage to the remains, and Reclamation shall immediately notify the Delta County Coroner and the Delta County Sheriff. If the remains are found to have no forensic value, the coroner shall notify the SITPO, in accordance with applicable law. A plan of action shall be developed by SITPO in consultation with appropriate federally recognized Indian tribes, the Colorado Commission of Indian Affairs and the landowner following the Process for Consultation, Transfer, and Reburial of Culturally Unidentifiable Native American Human Remains and Associated Funerary Objects Originating from Inadvertent Discoveries on Colorado State and Private Lands. If the remains are discovered on BLM-managed land, BLM will develop and implement a NAGPRA Plan of Action in consultation with the appropriate Indian tribes. If the remains are not Native American, and are otherwise unclaimed, the appropriate local authority shall be consulted to determine final disposition of the remains. Avoidance and preservation in place is the preferred option for treating human remains.

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

Reclamation CR Manager (970) 385-6500	BLM Archaeologist (970) 240-5303
Delta County Sheriff (970) 874-2000	Delta County Coroner (970) 874-5918
Colorado Deputy State Historic Preservation Officer and State Archaeologist Holly Norton (303) 866-2736	

A. Further Activities:

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

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

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

The Project Manager will ensure the proper documentation and assessment of any discovered cultural resources in cooperation with Reclamation, BLM, SHPO, affiliated tribes, and a contracted consultant (if any). All prehistoric and historic cultural material discovered

during project construction will be recorded by a professional archaeologist in accordance with all state and federal laws and Stipulation II above.

7. PROCEEDING WITH CONSTRUCTION

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