ENVIRONMENTAL ASSESSMENT

Cattleman's Ditches Pipeline Project II
Montrose County, Colorado

Prepared For

U.S. Bureau of Reclamation
and
Cedar Canon Iron Springs Ditch & Reservoir Company

Prepared By
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September 2017

Cover Photograph:

Looking west from Highway 92 at a segment of the
mainline ditch of the Cattleman's Ditches system that flows around
the east side of Gould Reservoir (September 2016).
This segment is proposed to be piped in place.

FINDING OF NO SIGNIFICANT IMPACT

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

Cattleman's Ditches Pipeline Project II

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 Phase II of the Cattleman's Ditches Pipeline Project in Montrose County, Colorado. 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 by Reclamation 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 Phase II of the Cattleman's Ditches Pipeline Project.

Decision and Finding of No Significant Impact

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

Context

The Colorado River and its tributaries provide municipal and industrial water to about 35 million to 40 million people and irrigation water to nearly 4.5 million acres of land in the United States, and another 3.3 million people and 500,000 acres in Mexico. Elevated salinity concentrations in the River are a major concern in both the United States and Mexico. Elevated salinity levels have impacts to agricultural, municipal, and industrial water users.

In June 1974, Congress enacted the Colorado River Basin Salinity Control Act (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. In October 1984, Congress amended the original act by passing Public Law 98-569 to address wildlife habitat issues, including fish and wildlife values foregone, project funding, and operation and maintenance of habitat. In July 1995, Public Law 104-20 was enacted, authorizing the Secretary of Interior, through Reclamation, to implement a basinwide salinity control program and 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 may be required. Reclamation is one of the agencies working through the Colorado River Basin Salinity Control Program to implement salinity control projects in the Colorado River Basin. The program's overall goal is to cost-effectively reduce the level of salinity in the Colorado River.

The Cedar Canon Iron Springs Ditch and Reservoir Company of Crawford, Colorado, (Company) is a private, non-profit, mutually funded irrigation company. The Company has received a grant from Reclamation, through the Basinwide Salinity Control Program, to replace approximately 6.1 miles of the unlined, open Cattleman's Ditches system ("ditch system") with approximately 5.1 miles of buried irrigation pipe. The ditch system is located in the lower Gunnison River watershed of the upper Colorado River basin, in soils derived from Mancos Shale. The Mancos Shale is a Cretaceous-age saline marine deposit, which contributes salts to irrigation water. The purpose and need of the Proposed Action is to eliminate seepage and reduce salinity in the Colorado River basin by an estimated 2,183 tons of salt per year.

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. Mitigating measures were incorporated into the design of the action alternative to reduce impacts. The predicted short-term effects of the Proposed Action include impacts to fish and wildlife resources and habitat, due to ground and vegetation disturbance during construction and until revegetation is completed. The predicted long-term effects are adverse effects to ditch structures as cultural resources eligible for listing in the National Register of Historic Places (NRHP); loss of the ditch system'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 according to the State Historic Preservation Officer's (SHPO's) instructions. The long-term loss of artificial wetland and riparian habitat is being mitigated with a habitat replacement project. The Upper Colorado River Endangered Fish Recovery Program serves as mitigation for impacts to critical habitat of the Colorado River endangered fishes, as identified by U.S. Fish and Wildlife Service's 2009 *Final Gunnison River Basin Programmatic Biological Opinion* (PBO). To ensure the historic water depletions of the ditch system are covered under the umbrella of the PBO, the Company entered into a Recovery Agreement with the U.S. Fish and Wildlife Service (FWS) in 2012.

Implementation of the Proposed Action will result in beneficial effects related to reduction of salt and selenium loading in the Gunnison and Colorado River basins.

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; however, significant cumulative effects are not predicted, as described in the EA in Section 3.13.

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 has concurred with a determination of adverse effect to the irrigation ditch system involved in the Proposed Action. Reclamation has entered into a Memorandum of Agreement with the State Historic Preservation Officer and the Company to mitigate the impacts to the affected irrigation ditch system.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973**. Reclamation consulted with FWS regarding the effects on threatened or endangered species and critical habitat from the Proposed Action (TAILS 06E24100-2017-I-0450). FWS concurred that the Proposed Action may affect, but is not likely to adversely affect, the threatened Gunnison sage-grouse and its designated critical habitat. Timing restrictions are imposed on the Proposed Action to avoid potential impacts to grouse during critical times in the life cycle (nesting and brooding), and critical habitat will be restored to pre-construction conditions or conditions compatible with sage-grouse habitat (i.e., irrigated hay meadows will be reseeded in hay, and ditch corridors in sagebrush shrublands will be reseeded with sagebrush shrubland seed mix). The Proposed Action may affect, but is not likely to adversely affect, the threatened western yellow-billed cuckoo. There is no suitable nesting habitat for cuckoo in the Proposed Action Area, but yellow-billed cuckoo could migrate through the area during project activities; however, foraging or migrating habitat is not exceptional in the Proposed Action Area compared to surrounding areas. The Proposed Action may affect, and is likely to adversely affect the four endangered Colorado River fishes. The fishes occur downstream of the Proposed Action Area in the Gunnison and/or Colorado River basins, and may be indirectly affected by water depletions caused by consumptive use of water by the ditch system. Consumptive loss of water in the Gunnison and Colorado River basins due to agricultural irrigation from the ditch system results in an average annual depletion of approximately 2,363 acre-feet from the upper Gunnison River watershed, which affects downstream critical habitat for the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. Reclamation previously consulted with FWS on this annual historic depletion rate in 2012, during an initial salinity control project on the system (File ES/JG-6-CO-09-F-001-GP028 TAILS 06E24100-2015-F-0178). As a result of that consultation, the Company executed a Recovery Agreement with FWS to ensure compliance with the Endangered Species Act for water depletions in the basin. The annual depletion rate is not expected to change as a result of the Proposed Action. Therefore, it is expected that the Proposed Action would not destroy or adversely modify designated critical habitat for the Colorado River endangered fishes.

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

Environmental Commitments

- Pursuant to the funding agreement between the Company and Reclamation, the Company shall permanently dewater, remove from irrigation service, and render incapable of irrigation water delivery those open ditches abandoned as part of the Proposed Action.

- Best Management Practices (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; to protect recreation, visual, agricultural, and grazing resources; and to minimize the spread of weeds (Section 4 of the EA is incorporated here by reference).

- Required permits, licenses, clearances, and approvals shall be acquired prior to implementation of the Proposed Action (see Section 4.14 of the EA).

- 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 Memorandum of Agreement with the SHPO are incorporated here by reference.

- In the event that 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.

Approved by:

Ed Warner
Area Manager, Western Colorado Area Office

9-29-17
Date

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TABLES

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ATTACHMENTS (Following Figures)

LIST OF ACRONYMS AND ABBREVIATIONS

BLM	U.S. Department of the Interior Bureau of Land Management
BMP	Best Management Practice
CAA	Clean Air Act
CDPHE	Colorado Department of Public Health & Environment
CFR	Code of Federal Regulations
Company	Cedar Canon Iron Springs Ditch & Reservoir Company
CPW	Colorado Department of Natural Resources Division of Parks & Wildlife
CWA	Clean Water Act
CWCB	Colorado Water Conservation Board
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
ESA	U.S. Endangered Species Act
FONSI	Finding of No Significant Impact
FWS	U.S. Fish & Wildlife Service
GMU	Game Management Unit
HQS	Habitat Quality Score
HUC	Hydrologic Unit Code
IPaC	Environmental Conservation Online System Information for Planning and Conservation
LLC	Limited Liability Company
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
mi	Mile
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NM PM	New Mexico Principal Meridian
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
PBO	Programmatic Biological Opinion
PM	Particulate matter
Reclamation	U.S. Department of the Interior Bureau of Reclamation
RMP	Resource Management Plan
SHPO	State Historic Preservation Office
SMPW	Selenium Management Program Workgroup
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
WAPA	Western Area Power Administration

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1 INTRODUCTION

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act (NEPA) to disclose and evaluate the potential environmental effects of Cedar Canon Iron Springs Ditch & Reservoir Company's (the "Company's" or "Applicant's") proposed Cattleman's Ditches Pipeline Project II (hereinafter, "Pipeline Project," "Project" or "Proposed Action"). The Proposed Action is located in northeastern Montrose County, Colorado, south of the Town of Crawford (Figure 1).

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 funding agreement to the Company for the Project under the 2015 Funding Opportunity Announcement (FOA) R15AS00037.

After a public review period for this EA, Reclamation has determined that no further study and a Finding of No Significant Impact (FONSI) for the Proposed Action are warranted, and an Environmental Impact Statement is not required before the Proposed Action can be implemented.

1.1 Background

The Colorado River and its tributaries provide municipal and industrial water to about 35 million to 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 shows the locations of Program projects completed and/or recently funded in the vicinity of the Proposed Action. The Proposed Action connects with the Cattleman's Ditches Pipeline Project Phase I, which was completed in 2015 with Basinwide Salinity Control Program funding.

1.2 Purpose & Need for the Proposed Action

The Proposed Action focuses on an unlined ditch system located in the lower Gunnison River watershed of the upper Colorado River basin, in soils derived from Mancos Shale. The Mancos Shale is a Cretaceous-age saline marine deposit, which contributes salts to irrigation water.

The Proposed Action will replace the existing system of unlined irrigation ditches with a buried pipe delivery system, which will eliminate ditch seepage and reduce salinity in the Colorado River basin by an estimated 2,183 tons of salt per year. An additional beneficial effect of the Proposed Action is the potential reduction of selenium in the Colorado River basin (SMPW 2011); however, the amount of selenium reduction has not been quantified.

The Proposed Action is consistent with the Colorado River Basin Salinity Control Act and helps fulfill the goals of the Basinwide Salinity Control Program. Salinity reduction in the Colorado River basin will provide benefits for a broad spectrum of downstream water users, as explained in Section 1.1, above.

1.3 Description of Proposed Action & Alternatives

The Proposed Action is located in northeastern Montrose County, Colorado (Figure 1), and entails replacing a total of approximately 6.1 miles of open irrigation ditches of the Cattleman's irrigation system with a total of approximately 5.1 miles of buried irrigation pipe. The Proposed Action would occur in three discrete areas as shown on Figure 1, and would also 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 public land administered by the U.S. Department of the Interior Bureau of Land Management ("BLM land").

A Plan of Development, conceptual maps, and construction drawings for the Proposed Action were prepared by Applegate Group, Inc. of Glenwood Springs and Denver, Colorado. The Proposed Action is described in more detail in Section 2 and Figures are included with this EA.

In accordance with NEPA and the Council of 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 the Company to pipe the Cattleman's ditches. Seepage from these structures would continue to contribute to salt and selenium loading in the Colorado River basin. Riparian and wetland habitats associated with the ditches would likely remain in place and continue to provide benefits to local wildlife.

1.4 Alternatives Considered but Not Carried Forward

Several alignment alternatives were considered during the conceptual design process for the Project, but eliminated from detailed analysis in accordance with 40 Code of Federal Regulations (CFR) 1502.14 because they were determined to be technically challenging, economically prohibitive, and potentially more destructive to existing habitat than the Proposed Alternative.

Initially, only existing ditch alignments were considered as the primary route for the Proposed Action. Deviations from the existing ditch alignments were designed when the ditch alignment encountered one or more of the factors described below.

- Excessive curvature in the existing ditch alignment. In locations where there was excessive curvature in the existing ditch alignment, efforts were made to straighten the pipeline alignment where the topography would allow.

- Deep drainage crossings. Methods considered for deep drainage crossings with the pipeline alignment included bored crossings under drainages, suspended span crossings, and culverted embankment-fill spans. Culverted embankment-fill spans are earthen spans supporting the pipelines over drainages at the necessary elevation. The earthen spans contain appropriately sized culverts to allow for intermittent or seasonal normal flows and expected high flows. Pipe crossings bored under the deep drainage channels were determined infeasible in certain locations because low points beneath the drainage channel would require sediment clean-outs that would be impractical to install and maintain (requiring prohibitive lengths of drain pipe to be installed in the drainage bottoms extending downgradient from the earthen spans). Alternatively, spanning the creek channel with suspended pipe would not be feasible because the pipelines would carry winter stock water and must be protected from freezing.

- Existing ditch alignment using natural drainage. Approximately 1.75 miles of the existing mainline ditch along Highway 92 in the Upper Proposed Action Area uses a natural channel to convey irrigation water. This segment would be bypassed with buried pipe in a different location, rather than piping the ditch through the natural drainage.

1.5 Location & Environmental Setting of the Proposed Action Area

The Proposed Action Area lies in the Crystal Creek, Iron Creek, and Muddy Creek drainages of the Gunnison River watershed, about 150 miles southwest of Denver and south of the Town of Crawford, in northeast Montrose County, Colorado (Figure 1). The approximate x, y centroid (in the UTM NAD 83 Zone 13 [meters] coordinate system) of the Proposed Action is 27639, 4275104.

There are three general physical locations involved in the Proposed Action: the Upper, Middle, and Lower Proposed Action Areas (Figures 3a, 3b, and 3c):

- The Upper Proposed Action Area (Section 1) is in Sections 28, 33, and 34, Township 50 North (T50N), Range 6 West (R6W) of the New Mexico Principal Meridian (NM PM). The Upper Proposed Action lies entirely on private property. The Upper Proposed Action Area begins at the Cattleman's Ditches system diversion (the mainline ditch) on Crystal Creek

and ends just south of Montrose County Road F81 and east of State Highway 92 (Figure 3a).

- The Middle Proposed Action Area (Section 2) is in Sections 7, 17, 18, and 28, T50N, R6W of the NM PM (Figure 3b). The Middle Proposed Action Area lies on BLM land, beginning just south of Gould Reservoir at an existing diversion structure north of County Road E81. From this structure, the existing ditch contours north-by-northwest between the east edge of Gould Reservoir and State Highway 92 to an existing inlet structure that transfers water to the previously-piped portion of the Cattleman's Ditches system. If funding is available, an existing irrigation lateral diversion structure (the Pipher-Keel Split) on the Cattleman's mainline ditch in Onion Valley would also be repaired in its current location on private property in the northwest quarter of Section 28, T50N, R6W, NM PM (Figure 3b).

- The Lower Proposed Action Area (Section 3) is in Sections 25 and 36, T51N, R7W of the NM PM; Section 1, T50N, R7W of the NM PM; and Section 6, T50N, R6W of the NM PM (Figure 3c). The Lower Proposed Action Area of the Proposed Action lies entirely on private property, and has two parts. In the south part, an irrigation pipeline would initiate at a previously piped lateral of the Cattleman's Ditches system and terminate to the northwest at an existing Stirrup Bar Ranch (aka Harris Ranch) irrigation pipeline. In the north part of the Lower Proposed Action Area, other pipelines would be buried in an existing irrigated hay meadow to provide irrigation and stockwater to existing points of diversion lower on the system. Additionally, a habitat water pipeline would be installed in the east part of the Lower Proposed Action Area (in Section 32, T51N, R6W, NM PM).

The Proposed Action lies in the transition zone between the Colorado Plateaus and Southern Rocky Mountains physiographic provinces, and has a semi-arid continental climate characterized by low humidity and moderately low precipitation (averaging about 13 inches annually). The average elevation in the Proposed Action Area is about 7,500 feet above mean sea level. Current uses on these lands and in the vicinity are livestock grazing, irrigated agriculture, rural residential, and recreational hunting.

The ditches subject to the Proposed Action are privately owned irrigation conveyances charged by water diverted from Crystal Creek at the initiation point of the Proposed Action in the Upper Proposed Action Area (Figures 1 and 3a). A total of approximately 2,800 acres of grass pasture and hay crops are served by the ditches subject to the Proposed Action. The irrigation season is approximately 150 days long. The system also conveys stockwater during the irrigation off-season. On-farm irrigation is accomplished primarily using ditches, gated pipe or sprinkler systems. Drainage from the Proposed Action Area eventually flows to Crawford Reservoir, north of the Proposed Action Area (Figure 1).

Landcover in the vicinity of the Proposed Action Area consists primarily of irrigated hay meadows and pastures, pinyon-juniper woodlands, and sagebrush or mixed montane shrublands (Figure 4). Within the agricultural, woodland, or upland shrub matrix, areas adjacent to ditches and downgradient areas receiving leakage from the ditches have converted to riparian and/or wetland habitats. The existing ditch alignments are vegetated mostly with coyote willow and occasional cottonwoods, but also support scattered stands of common ruderal herbaceous weeds.

1.6 Relationship to Other Projects

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

- Cattleman's Ditches Pipeline Project Phase I (south of the Town of Crawford, in the Alkali Creek drainage)
- C Ditch Company's C Ditch/Needle Rock Pipeline Project (3 miles north of the Town of Crawford in the Cottonwood Creek drainage)
- Clipper Irrigation Salinity Control Project 4, Zanni Lateral Pipeline Project, and Center Ditch Pipeline Project (2.5 miles southeast of the Town of Hotchkiss and immediately west of the Town of Crawford in the Cottonwood Creek drainage)
- Grandview Canal Piping Project (just south of the Town of Hotchkiss in the Smith Fork River drainage)
- Rogers Mesa Water Distribution Association's Slack and Patterson Laterals Piping Project (about 3 miles west of the Town of Hotchkiss)
- Minnesota Canal Piping Project (near the Town of Paonia in the North Fork of the Gunnison River drainage)
- Lower Stewart Ditch Pipeline Project (near the Town of Paonia in the North Fork of the Gunnison River drainage)
- Bostwick Park Water Conservation District's Siphon Lateral Salinity Control Project (near the City of Montrose)
- Forked Tongue/Holman Ditch Company's Salinity Control Project (near the Town of Eckert in the Tongue Creek drainage)
- Uncompahgre Valley Water Users Association Phases 7 and 8
- North Delta Irrigation Canal Salinity Control Project I (northeast of the City of Delta)

1.7 Scoping, Coordination, & Public Review

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

- U.S. Bureau of Land Management, Uncompahgre Field Office, Montrose, CO
- Colorado Office of Archaeology & 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
- Colorado Department of Transportation, Grand Junction, CO

- U.S. Department of Energy, Western Area Power Administration, Montrose, CO
- Southern Ute Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)

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

In compliance with NEPA, the Draft EA and Draft FONSI were available for public comment for a 30-day period (see Section 5). The Draft EA was distributed to Company shareholders, private landowners adjacent to the Proposed Action, and the organizations and agencies listed in Attachment A. No comments were received.

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 and 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 along the Proposed Action alignment. As an agricultural irrigation construction project, the Proposed Action is exempt from requiring a Section 404 Permit pursuant to the Clean Water Act (33 U.S. Code [USC] 1344). The applicable exemption from Section 404 of the Clean Water Act (CWA) is for Farm or Stock Pond or Irrigation Ditch Construction or Maintenance. A copy of the Section 404 Exemption Summary and written confirmation of the Proposed Action's exemption has been provided by the U.S. Army Corps of Engineers (USACE) (Attachment B).

- 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 the Company to pipe the Cattleman's Ditches. Irrigation practices and seepage from these structures would continue to contribute to salt and selenium loading in the Colorado River basin. Riparian and wetland habitats associated with the ditches would likely remain in place and continue to provide benefits to local wildlife.

2.2 Proposed Action Alternative

Under the Proposed Action, Reclamation would authorize funding to the Company to pipe the Cattleman's Ditches. The specific locations of the Proposed Action are described in Section 1.5 and shown on Figures 3, 3a, 3b, and 3c. Subsections 2.2.1, 2.2.2 and 2.2.3 describe the Proposed Action within each distinct Proposed Action Area.

Note that the final construction plans are not yet complete, so all linear pipe mileages should be considered estimates—however, the locations of the Proposed Action features and work alignments will not change significantly from what is depicted on the figures, contained in existing resource survey areas, and analyzed in this EA. No pumping or compressor stations or water storage facilities are associated with the Proposed Action.

The Proposed Action would involve replacement of a total of approximately 6.1 miles of open, unlined irrigation ditches with approximately 5.1 miles of buried irrigation pipe (including installation of a total of approximately 1.6 miles of pipeline in the prisms of existing irrigation ditches; installation of approximately 3.5 miles of pipeline outside existing ditch prisms; and decommissioning by abandonment, backfilling, and/or breaching of a total of approximately 4.5 miles of existing irrigation ditches) and improvement of irrigation control structures (including improvement of the system's main irrigation diversion on Crystal Creek; removal and/or replacement of existing irrigation control structures on the system; and the optional repair and improvement of an existing lateral split structure on the system). Additionally, habitat replacement activities would also occur to mitigate for the loss or alteration of wildlife habitat that would result from the Proposed Action. Table 1 (below) summarizes the approximate lengths of the proposed piping components, with a breakdown of components by Proposed Action Area.

Table 1. Summary of Piping Components Analyzed for the Proposed Action by Area

Component	Upper	Middle	Pipher-Keel Split Option	Lower	Habitat Replacement Pipeline	Totals
Existing irrigation ditch involved (miles)	2.9	1.1	0.1	2.0	0	6.1
Pipe to be buried in existing ditch alignments (miles)	0.4	1.1	0.1	0	0	1.6
Pipe to be buried outside existing ditch alignments (miles)	1.6	0	0	1.5	0.4	3.5
Total amount of buried pipe to be installed (miles)	2.0	1.1	0.1	1.5	0.4	5.1
Ditch alignments to be abandoned (miles)	2.5	0	0	2.0	0	4.5

Several construction staging areas and two borrow areas have been identified for the Proposed Action (Figures 3a through 3c). All staging will take place on private lands in agricultural areas or on previously disturbed ground. Borrow material would be generated within the construction footprint. If additional material is needed, it would be obtained in the identified borrow areas.

The Proposed Action lies on private lands, except for the main pipeline work in the Middle Proposed Action Area, which lies on BLM land (Figure 3). The existing ditch alignments on private lands operate in prescriptive easements. All private landowners in the footprint of the Proposed Action have agreed to allow the activities of the Proposed Action to be conducted on their lands. BLM issued a Ditch Right-of-Way Acknowledgment to the Company (BLM 2016) for the Middle Proposed Action Area, under the Act of July 26, 1866 (R.S. 2339, 43 U.S.C. 661, 14 Stat. 253).

Throughout the Proposed Action Area, construction footprints would be limited to 20 to 30 feet wide on either side of the Proposed Action centerline depending on their location and purpose. The requested rights-of-way for the Proposed Action and their specific locations will be clearly marked on the construction drawings. 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 will be on county roads or existing private roads (Figures 3a, 3b, and 3c).

The Proposed Action would occur incrementally across the Proposed Action Area during the months of August through February.

Vegetation slash would be hauled off-site to one of the several identified proposed staging areas and chipped or burned at that location. All disturbed areas would be revegetated with appropriate seed mixes approved by BLM and Reclamation, and monitored subject to agreements between the Company and individual land owners. Best Management Practices (BMPs) would be used to control erosion, and noxious weeds would be controlled in disturbed areas according to right-of-way stipulations and Montrose County standards (Montrose County 2011, 2017).

Upper Proposed Action Area

The Upper Proposed Action Area begins at the Cattleman's Ditches system diversion on Crystal Creek and ends just south of Montrose County Road F81 and east of State Highway 92 (Figure 3a). The existing Cattleman's mainline ditch is diverted from Crystal Creek and contours west along the south-facing slope of the creek terrace for approximately 1 mile before flowing into a natural drainage (a gully) that continues approximately 2.8 miles north to the south end of Onion Valley to a point just south of an existing divider structure (the Pipher-Keel Split; Figure 3b). From there, the existing ditch leaves the natural drainage and contours another approximately 2.5 miles to a divider structure just south of Gould Reservoir and north of County Road E81 (Figure 2b).

As a part of the Proposed Action, the existing diversion on Crystal Creek will be improved at its current location. Approximately 300 feet downstream of the diversion, the existing ditch will be piped in the ditch prism for approximately 0.4 mile, to just east of the Dyer Fork Ditch channel.


Upper Proposed Action Area

At this point, the buried pipeline will cross over the Dyer Fork Ditch in an embankment-fill span—an earthen span supporting the pipeline over the drainage at the necessary elevation. An appropriately-sized culvert would be installed through the fill embankment to allow for intermittent or seasonal normal and expected high flows of Dyer Fork Ditch through the embankment. From the Dyer Fork Ditch crossing, the pipeline will continue outside the existing ditch prism and across an irrigated pasture and mixed montane shrublands for approximately 1.6 miles, ending at the existing ditch alignment just south of Montrose County Road F81. The existing ditch alignment will continue to carry irrigation water between the endpoint of the Upper Proposed Action Area to the beginning of the Middle Proposed Action Area. No piping will occur in the natural drainage that currently serves as part of the conveyance of Cattleman's Ditches system irrigation water. As a result of the Proposed Action, approximately 1.75 miles of the natural drainage will no longer convey irrigation water, since it will be bypassed with buried pipe (Figure 3a), and approximately 0.8 mile of existing irrigation ditch will be decommissioned by backfilling or breaching. The bypassed area of the natural drainage will remain in its current condition (i.e., will not be back-filled). The natural flow regime of the natural drainage is intermittent or seasonal.

Access ways for the Upper Proposed Action Area are on existing roads. Borrow and staging areas are on uplands. Work outside the existing ditch alignment would be accomplished during the timeframe of August through February, with an anticipated construction duration of 2 months. Work in the existing ditch alignment would take place in the irrigation off-season between October and February with an anticipated construction duration of 3 months, including the diversion structure on Crystal Creek.

Middle Proposed Action Area

The Middle Proposed Action Area lies on BLM land, beginning just south of Gould Reservoir at an existing diversion structure north of County Road E81 (Figure 3b). From this structure, the existing ditch contours north-by-northwest for approximately 1.1 mile between the east edge of Gould Reservoir and State Highway 92 to an existing inlet structure that transfers water to the previously-piped portion of the Cattleman's Ditches system (Figure 3b). As a part of the Proposed Action, the divider structure north of County Road E81 will be improved at its existing location. The ditch will be piped from this diversion structure in the existing ditch alignment alongside Gould Reservoir to connect with the previously-piped portion of the Cattleman's Ditches system (Figure 3b). The existing pipe inlet structure at the connection point will be replaced with a manhole or pipe transition structure. A local overhead utility line traverses BLM land roughly parallel to the existing ditch alignment, and it will be necessary to relocate one of the utility poles during construction. No natural drainages are crossed by this part of the Proposed Action.

Middle Proposed Action Area. Highway 92 is on the left; Gould Reservoir is on the right.

State Highway 92 stormwater culvert outlets within 50 feet of the Proposed Action Area will be fitted with energy dissipation (rip rap) to protect the Proposed Action Area from erosion. This part of the Proposed Action would take place during the irrigation off-season (between the months of October and February) while no irrigation water is running in the ditch. Construction is anticipated to require a total of 3 months. Access ways for the Middle Proposed Action Area are on existing roads, staging will occur within the Proposed Action work area (within the ditch's historic right-of-way), and no off-site borrow material would be required.

If funding is available, an existing irrigation lateral diversion structure (the Pipher-Keel Split) on Cattleman's Ditch in Onion Valley will be repaired in its current location on private property (Figure 3b). The diversion is in poor condition. Erosion around the diversion structure from this location has inundated downstream infrastructure with significant amounts of silt and poses a risk to the new components of the Proposed Action. Repair would involve replacement of the existing structure and stabilization/piping of approximately 0.1 mile of ditch channel upstream and downstream of the structure. The repair would take place during the irrigation off-season (between October and February) and would require a total of approximately 4 weeks to complete.

Lower Proposed Action Area

The Lower Proposed Action Area lies entirely on private property. The new pipeline would cross irrigated pastures and hay meadows, and cross over a drainage in an embankment-fill span—

an earthen span supporting the pipeline over the drainage at the necessary elevation. An appropriately-sized culvert would be installed through the fill embankment to allow for intermittent or seasonal normal and high flows of the drainage through the embankment.

In the north part of the Lower Proposed Action Area, approximately 0.3 mile and 0.2 mile of pipeline would be buried through irrigated hay meadows to provide irrigation water to Harris Ranch existing points of diversion and/or downstream users. In the south part of the Lower Proposed Action Area approximately 1.0 mile of pipeline would be buried through irrigated hay meadows to provide irrigation water to the pipeline in the north and to Harris Ranch existing points of diversion. An existing Harris Ranch irrigation pipeline would connect the south and north parts of the Lower Proposed Action Area pipelines as shown on Figure 3c. As a result of the Proposed Action, approximately 2 miles of an irrigation ditch (the "Wolf Ditch") in Iron Creek canyon would be abandoned and backfilled, and its two control structures would be removed (Figure 3c).


Lower Proposed Action Area

Access ways for the Lower Proposed Action Area are on existing roads. Borrow and staging areas are on uplands on private property. Pipelines outside existing ditch alignments would be installed between the months of August and February, and work in the existing ditch alignments would take place in the irrigation off-season during the timeframe of October through February. Ground smoothing and reseeding in irrigated meadow areas in the Lower Proposed Action Area would take place sometime during the period of August through May 15, when seeding conditions are most favorable. Anticipated construction duration outside existing ditch alignments is anticipated to be 2 months, and construction duration within the existing ditch alignments is anticipated to be 1 month.

In accordance with the Basinwide Salinity Control Program requirements, riparian/wetland habitat replacement would mitigate wildlife habitat loss caused by the Proposed Action. A previously established habitat replacement site, the Cathedral Habitat Replacement Site or Cathedral site, would satisfy the mitigation requirements for the Proposed Action. The Cathedral site is in the Lower Proposed Action Area on private land protected by a conservation easement (on Hart Ranch). The Cathedral site is an existing man-made wetland area created by overflow from a Cathedral Domestic Water Company storage tank about 2 miles east of the pipeline activities (Figure 3c). This site was developed for Phase I of the Cattleman's Ditches Pipeline Project in 2015 and analyzed during the NEPA process for that project (see the EA available at https://www.usbr.gov/uc/envdocs/ea/pdf/CattlemansFinalEA.pdf). Surplus habitat developed at the Cathedral site would satisfy a part of the mitigation requirements of the Proposed Action. A habitat water pipeline (Figure 3c) would be installed to augment the wetland hydrology at the Cathedral site as a part of the current Proposed Action. The habitat water pipeline would extend from an existing irrigation line approximately 0.4 mile across uplands adjacent to the Hart's residential driveway to the Cathedral site.

Access ways for the habitat water pipeline installation are on existing private ranch roads. No borrow or staging areas would be associated with the habitat water pipeline installation. Construction of the habitat water pipeline would take place during a 2-week period any time of the year, with vegetation clearing activities occurring outside migratory bird nesting season (i.e., April 1 through July 15).

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 the Company, 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. This section concludes with a summary of impacts/environmental consequences.

3.1 Water Rights & Use

The Gunnison River basin is approximately 8,000 square miles in size. 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 Cedar Canon Iron Springs Ditch and Reservoir Company is a privately owned, non-profit, mutually-funded irrigation company incorporated and operating in Montrose County since 1883. The Company holds a 54.6 cubic-foot-per second (cfs) direct flow water right, appropriated in October 1883, for Crystal Creek, a Gunnison River tributary. The full decree is typically not available year-round and flows are significantly reduced in August and September. A stock right of 5 cfs was appropriated in May 1882 and decreed in August 1936 for use during the non-irrigation season (November through mid-April).

The Company's head gate structure is on Crystal Creek in the Upper Proposed Action Area, and supplies more than 16 miles of a combination of irrigation canals and pipelines that flow generally north, parallel to Highway 92, to ultimate delivery points on either side of the highway between Gould Reservoir and Black Canyon Road, south of Crawford Reservoir. The system irrigates approximately 2,800 acres of hay crops and livestock pasture. Irrigation is accomplished by flood methods directly from ditch laterals, and with gated pipe and sprinklers. The sprinkler systems work off of head pressure developed within existing pipelines.

> No Action: The No Action Alternative would have no direct 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 Company 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. Therefore, no direct adverse effects on water rights in the Gunnison River Basin are expected to occur due to implementation of the Proposed Action.

3.2 Water Quality

The Proposed Action area lies within the watershed of the Gunnison River, 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 lightly elevated amounts. Selenium loading has not been quantified for the Proposed Action Area, but it is potentially contributing to an adverse effect on the water quality of the Colorado River basin.

The Proposed Action Area is located within two hydrologic units of the Smith Fork River watershed (the Iron Creek unit - Hydrologic Unit Code [HUC] 140200021203 and the Muddy Creek unit - HUC 14020021202); and within one hydrologic unit tributary to the mainstem of the Gunnison River (Crystal Creek unit - HUC 140200021004). Figure 5 shows the hydrologic units in the vicinity of the Proposed Action.

Iron Creek and its unnamed tributaries drain the Middle and Lower Proposed Action Areas and the majority of the Upper Proposed Action Area. A portion of the Upper Proposed Action area drains to Crystal Creek; however, all water diverted by the Cattleman's Ditches system from Crystal Creek is conveyed out of the Crystal Creek drainage to the Iron Creek drainage. The habitat water pipeline is within the Muddy Creek unit near Muddy Creek. Both the Muddy Creek and Iron Creek units (and runoff from the Company's irrigation system) ultimately drain to Crawford Reservoir. Crawford Reservoir is tributary to the Smith Fork River, and irrigation withdrawals from Crawford Reservoir are conveyed north into the Cottonwood Creek and North Fork of the Gunnison River drainages.

Official designated uses for the Smith Fork River and Muddy Creek include coldwater aquatic habitat class I (currently capable of sustaining a variety of coldwater biota), recreation class E (existing primary contact use), water supply, and agriculture. Official designated uses for Crawford Reservoir are warmwater aquatic habitat class 1 (currently capable of sustaining a variety of warmwater biota), recreation class E (existing primary contact use), and agriculture. Official designated uses for all Smith Fork tributaries not on the Gunnison National Forest (including Iron Creek) are warmwater aquatic habitat class 1 (currently capable of sustaining a variety of warmwater biota), recreation class P (potential primary contact use), water supply, and agriculture (CDPHE 2017a, 2017b). Maintenance or improvement of water quality in the Smith Fork River drainage and Crawford Reservoir would be of significant importance to users of these water resources.

Currently, none of the drainages in the hydrologic units named above are on the Colorado Department of Public Health and Environment's (CDPHE's) list of water quality-impaired waters in the State of Colorado (CDPHE 2016), with the exception of Crawford Reservoir. Crawford Reservoir has a dissolved oxygen (temperature) impairment, due to the warm season draw-down occurring on the reservoir by its many irrigation users.

Muddy Creek and Cottonwood Creek are each currently on Colorado's Monitoring & Evaluation list, which identifies water bodies where there is a reason to suspect water quality problems, but uncertainty exists regarding one or more factors (CDPHE 2016). Muddy Creek is listed for E. coli, and Cottonwood Creek is listed for iron, manganese, and sulfate.

Several of the hydrologic units in the Proposed Action Area were previously on the state's list of impaired waters due to their failure to meet selenium standards. In instances where waterbodies fail to support classified uses and/or fall within assigned numeric water quality standards, a Total Maximum Daily Load (TMDL) is used to determine the maximum amount of pollution that can be introduced into a waterbody daily while still keeping that waterbody and downstream waterbodies within the limits of the numeric water quality standard. Selenium TMDLs for the area's waterbodies were assessed in 2011 by the CDPHE (CDPHE 2011), resulting in the removal of the waterbodies from the impaired waters list.

No Action: Under the No Action Alternative, the estimated 2,183 tons of salt annually contributed to the Colorado River basin from this system would continue. Current selenium loading levels would continue.

Proposed Action: The Proposed Action would eliminate seepage from the ditch system, reducing salt loading to the Colorado River basin at an estimated rate of 2,183 tons per year, at a cost-effectiveness value of approximately $51 per ton (as per the Funding Agreement). 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]); however, these benefits have not been quantified. Improved water quality would likely benefit downstream aquatic species by reducing salt and selenium loading in the Smith Fork, Gunnison, and Colorado rivers. No long-term change in water quality would occur to the Crystal Creek drainage as a result of the Proposed Action (since water is diverted away from the Crystal Creek drainage as a part of system operations, and this diversion would continue). In the short-term, construction activities in waterbodies have the potential to mobilize sediments. Burial of irrigation pipe in existing ditch alignments would occur during the irrigation off-season (while no water is flowing in the ditches). The culverted embankment stream crossings would take place in seasonal or ephemeral drainages, and are expected to be constructed during early fall or winter months, when no water is flowing in the stream channels. Water quality construction BMPs and permanent stabilization and revegetation of the culverted embankment fills, along with proper sizing of the culverts to allow for seasonal or intermittent flow through the embankments, would be environmental commitments for the Proposed Action. Exemptions from Section 404 of the Clean Water Act apply to the Proposed Action, and are verified in writing by the U.S. Army Corps of Engineers (see Attachment B); 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 (CAA) 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. Montrose County is in attainment for all criteria pollutants (EPA 2016).

No Action: There would be no effect on air quality in the Proposed Action Area from the No Action Alternative. The ditch system would continue to operate in its current configuration and dust and exhaust would occasionally be generated by vehicles and equipment conducting routine maintenance and operation.

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

3.4 Access, Transportation, & Public Safety

The major transportation resource in the Proposed Action Area is Colorado State Highway 92 (Figures 2 and 3), which runs north-south in the immediate vicinity between the Town of Crawford in Delta County and Black Mesa in Montrose County. County Road J82, County Road F81, and County Road E81, all Montrose County roads off Highway 92, would provide access to the Upper and Middle Proposed Action Areas (Figures 3a and 3b). Several local private roadways and driveways off Highway 92 exist within the vicinity and would provide access to the Lower Proposed Action Area. The habitat water pipeline area would be accessed from Clear Fork Road and private roads. Both private and county roads provide access and mobility for residents traveling in and out of the area. The Montrose County Sheriff and the North Fork Ambulance Service and Volunteer Fire Department cover the Proposed Action Area.

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

Proposed Action: The Proposed Action Area would be accessed using existing public roads connecting directly to the Proposed Action Area (namely Highway 92 and County Roads J82, F81, E81, and Clear Fork Road) or to existing private roads on private lands. A Ditch-Right of Way Acknowledgment has been issued by BLM for Proposed Action activities on BLM land in the Middle Proposed Area. A Western Area Power Administration (WAPA) representative visited the Proposed Action Area and provided clearance for the Proposed Action, provided that all equipment and construction activities be maintained at least 20 feet from WAPA stanchion structures or transmission lines. There would be no need for construction of new access roads for the Proposed Action, as construction access would be on existing roads and within the construction right-of-way. There are no known bridges with weight restrictions that would be used by construction vehicles. Implementation of the Proposed Action may cause limited minor delays along roadways adjacent to the Proposed Action Area from construction vehicles entering and exiting the local roadways.

3.5 Recreational & Visual Resources

Public lands involved in the Proposed Action are lands administered by BLM in the Middle Proposed Action Area (Figure 3b). These BLM lands lie within the "Other Public Lands" Management Unit 6-2 (MU6-2) in the Gunnison Gorge National Conservation Area (NCA) Planning Area (BLM 2004). No official recreation trails or other developed recreational public access resources exist on BLM lands involved in the Proposed Action (BLM 2004).

The Proposed Action is located in Colorado Parks & Wildlife Game Management Unit (GMU) 63, and licensed game hunters may hunt on BLM lands encompassing the Proposed Action Area or on BLM lands near the Proposed Action Area during hunting seasons. The level and nature of public use of the BLM lands involved in the Proposed Action is unknown, but expected to be low, due to lack of developed public access routes directly into the Proposed Action Area.

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, and are used to provide guidance to BLM and project proponents when contemplating proposed surface disturbing activities. 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. The BLM land in the Proposed Action Area is assigned VRM Class IV by the Gunnison Gorge NCA Resource Management Plan (RMP) (BLM 2004). The BLM lands involved in the Proposed Action are visible from Highway 92 along the West Elks Scenic & Historic Byway.

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: The BLM land in the Middle Proposed Action Area falls into Recreation Management Unit MU6-2, in an area designated for limited off-highway vehicle use (BLM 2004), but without designated trails or public access routes, public use of the area is expected to be low. Construction of the Proposed Action could temporarily disrupt recreational big game hunting during construction in the fall months (quality of experience and hunting success) on BLM lands around the Middle Proposed Action Area, due to construction noise and activity. The Proposed Action would not result in permanent displacement of big game from the Proposed Action Area or its surroundings. During construction, holes or pipeline trenches left open overnight would be covered. Covers would be secured in place and strong enough to prevent people or wildlife from falling through. The Proposed Action would temporarily affect the visual appearance of BLM land in the Middle Proposed Action Area, where an approximately 5,600-foot-long segment of the mainstem Cattleman's Ditch between Highway 92 and Gould Reservoir is proposed for buried pipe installation. This area of BLM has a Visual Resource Management Class IV assignment in the Gunnison Gorge NCA RMP (BLM 2004). The area would contain construction equipment and activity during the Proposed Action implementation (for approximately 3 months during the irrigation off-season), and bare ground until final grading and revegetation are accomplished. The long-term visual change would consist of the removal of the narrow linear water feature of the ditch flowing between Highway 92 and Gould Reservoir along a slope vegetated with

sagebrush shrublands (see the cover photo of this EA). The newly buried pipe alignment would be contoured to match the surrounding area and reseeded with a seed mix compatible with sagebrush shrublands. Once the ditch is piped and the area has been reclaimed, only an access road and outlet structures will remain visible along the right-of-way. Overall, the long-term level of change to the visual characteristics of the landscape in and around the Middle 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-agricultural character of the vicinity. The visual change would not be incompatible with Class IV area management guidance, which allows for visible changes that can dominate the landscape.

3.6 Livestock Grazing

The BLM lands within the Middle Proposed Action Area (Figures 3 and 3b) encompass a portion of the 620-acre East Gould Reservoir Grazing Allotment (Allotment #05041) held by Harris & Sons Stirrup Bar Ranch, LLC. The East Gould Reservoir Grazing Allotment wraps around the north and east sides of Gould Reservoir and encompasses an approximately 1.1-mile segment of the mainstem of Cattleman's Ditch proposed for decommissioning and pipe installation. The East Gould Reservoir Allotment is permitted for grazing between May 16 and June 15.

No Action: The No Action Alternative would have no effect on grazing allotments 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 lands within the East Gould Reservoir Grazing Allotment on BLM land in the Middle Proposed Action Area would occur during construction. Grazing in the East Gould Reservoir Allotment would not be directly affected by construction, because construction activities would take place during the irrigation off-season and outside the permitted grazing period. No lands currently capable of being grazed in the East Gould Reservoir Allotment will 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 ditch prisms. The allotment permittee is a Company shareholder and is aware of the Proposed Action.

3.7 Vegetative Resources / Habitat

Figure 4 shows the general landcover types in the Proposed Action Area. These include irrigated agricultural (hayfields and/or pastures), Colorado Plateau pinyon pine-Utah juniper woodlands, and Intermountain basins big sagebrush shrublands or shrub-steppe. Other landcover types intersecting or existing near the components of the Proposed Action are minor amounts of Rocky Mountain Gambel oak-mixed montane shrublands and lower montane riparian woodlands and shrublands. Temporary, reclaimable disturbances of upland vegetation would occur along the pipeline corridor, along segments of decommissioned ditch, and in borrow and storage areas.

Within the matrix of the general landcover types (Figures 4), the existing irrigation ditches involved in the Proposed Action have created narrow corridors of riparian and wetland habitat. The ditch corridors are vegetated mostly with coyote willow, cattails, and occasional mature cottonwoods, but also support stands of pasture grasses, common ruderal weeds, and noxious weeds. Noxious weeds in the existing ditch alignments include Canada thistle, musk thistle, whitetop, jointed goat grass, and Russian knapweed.

The two proposed culverted embankment-fill pipeline crossings would span the deeply-incised, steep and sparsely vegetated (gullied) reaches of Dyer Fork Ditch (in the Upper Proposed Action Area) and a seasonal drainage tributary to Iron Creek (in the Lower Proposed Action Area), respectively. The embankment-fill areas would affect drainage bottoms supporting small amounts of emergent wetland type vegetation (cattails, sedges, rushes), mesic swale type vegetation (pasture grasses), or unvegetated channels. Embankment-fill crossings are necessary in these areas because other crossing methods (suspension span or directional boring) were determined to be infeasible (see Section 1.4).

Flowing water in the ditch system is a vector for the continued spread of weeds. Vehicles, people, livestock, and wildlife traveling on the ditch access roads can also help weeds spread along ditch alignments. Construction footprints are likely to 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 the Company would be implemented during revegetation of construction alignments. Piping the ditch alignment would remove an important vector of weed seed transport—water. In some areas, the need for maintained access roads along the buried pipe corridor would also be eliminated, lowering the potential for the continued spread of weeds. Downgradient seeps from ditches that support herbaceous noxious weeds would be dried and the ability of the environment to support these weeds would be diminished. Where ditches would be converted to enclosed pipe through irrigated farmland, the areas of invasive plants would likely decrease, because the ground over the newly buried pipe alignments could be irrigated and farmed with the surrounding area.

The Proposed Action would result in the permanent loss of riparian and wetland vegetation associated with open ditches that are to be decommissioned, and with two culverted embankment-fill spans of seasonal or ephemeral drainages. These vegetation resources 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."

A habitat evaluation was performed for the Proposed Action Area by Wildlife & Natural Resource Concepts & Solutions, LLC to quantify potential wetland and riparian habitat values that would be lost due to implementation of the Proposed Action (Attachment C). The evaluation followed methodology outlined in Reclamation's March 2013 "Basinwide Salinity Control Program: Procedures for Habitat Replacement."

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, degree of nativeness, 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 implementation of the Proposed Action is the sum of the THV units across the Proposed Action Area, or 2.906 (Attachment C).

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

Proposed Action: Construction activities would temporarily disturb vegetation and habitat in the Proposed Action Area, including irrigated meadows, sagebrush or mixed mountain shrublands, and pinyon-juniper woodlands. In all proposed pipeline alignments, topsoil would be reserved to the extent possible prior to excavation, and replaced on the ground surface following pipe installation. Following surface disturbance, appropriate reclamation procedures would be followed in order to revegetate disturbed areas and control noxious weed infestations. Irrigated areas would be returned to production immediately following construction.

Implementation of the Proposed Action would result in permanent loss of wetland and riparian habitat as ditches and ditch seepage would be eliminated and would no longer provide flowing surface water or wetland hydrology to adjacent areas. Construction of culverted embankment creek crossings would impact wetland or riparian vegetation in the drainage bottoms. A habitat evaluation performed for the Proposed Action Area by Wildlife & Natural Resource Concepts & Solutions, LLC determined that 2.906 habitat value units of wetland and riparian habitat would be lost (converted to upland habitat) due to implementation of the Proposed Action (Attachment C). During Phase I of the Cattleman's Ditches Pipeline Project, 7.66 excess habitat value units were created at the Cathedral Wetland Habitat Replacement Site on Hart Ranch (aka Hart Double D Ranch), less than 2 miles east of the Upper Proposed Action Area. The Cathedral Wetland Habitat Replacement Site was constructed in accordance with a Habitat Replacement Plan (Zeman 2015) approved by the Bureau of Reclamation during the NEPA process for Phase I of the Cattleman's Ditches Pipeline Project. The Company would apply 2.906 excess credits from the Cathedral Wetland Habitat Replacement Site to compensate for habitat lost due to the Proposed Action. As part of the current Proposed Action, a habitat water pipeline would be installed to augment water resources for the Cathedral Wetland Habitat Replacement Site (Figure 3c).

Construction of the Proposed Action, including the habitat water pipeline, would follow BMPs to minimize the construction footprint, protect water quality, and minimize soil erosion. Revegetation and weed control would be implemented according to Montrose County standards (Montrose County 2011, 2017). The Company has consulted with the U.S. Army Corps of Engineers regarding the Proposed Action and received written concurrence that the Proposed Action meets Clean Water Act agricultural exemption requirements and that no permit is required under Section 404 of the Clean Water Act for the Proposed Action (Attachment B).

3.8 Wildlife Resources

In the Proposed Action Area, ditches and associated seeps provide linear segments of riparian and wetland habitat within a matrix of native upland vegetation and irrigated hay meadows (Section 3.7). Vegetation and water resources supported by the ditches, in association with adjacent irrigated land and natural upland woodlands and shrublands, provide nesting, breeding, foraging, cover, and movement corridors for an array of wildlife.

Colorado Parks & Wildlife (CPW) describes the Lower Proposed Action Area (mostly irrigated lands) as elk severe winter range, the Middle Proposed Action Area (mostly native shrublands and woodlands) as within elk winter range and a migration corridor, and the Upper Proposed Action Area (mostly native shrublands and woodlands) as elk winter range, summer range, and a migration corridor (Figure 6). A mule deer resident population area and winter concentration area are mapped across the majority of the Lower Proposed Action Area, mule deer winter

range is mapped across the Middle Proposed Action Area, and mule deer winter range and a migration pattern are mapped in the Upper Proposed Action Area (Figure 7).

CPW also describes the entire Proposed Action Area as winter foraging range for bald eagle, and within overall range of black bear and mountain lion (CPW 2016). The entire Proposed Action Area lies within historic Gunnison sage-grouse occupied/potentially occupied critical habitat (see Figure 8 and Section 3.9 for further discussion of sage-grouse, bald eagle, and other special status species, inducing migratory birds and raptors).

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

Proposed Action: Upland wildlife habitat impacted by the Proposed Action would result in minor temporary impacts to wildlife species within the Proposed Action Area. Impacts to big game would include short-term disturbances and periodic displacement while construction is underway. At the request of CPW, work would not be conducted in the Upper Proposed Action Area during March 1 through May 15 to avoid impacts to elk migrating through the Crystal Creek drainage. The Proposed Action would remove a source of big game drinking water from the area by decommissioning the ditches that carry non-irrigation season stock water. However, other wildlife drinking water resources are readily available throughout the Proposed Action Area.

Impacts to small animals, especially burrowing amphibians, reptiles, and small mammals, could include direct mortality and displacement during construction activities. Small animal species may experience reduced populations in direct proportion to the amount of disturbed habitat. These species and habitats are relatively common throughout the area and the loss would be minor. During construction, pipeline trenches left open overnight would be kept to a minimum and covered to reduce potential entrainment of animals 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.

Bird and amphibian species dependent on wetland and riparian habitats would experience a long-term (greater than 5 years) loss of habitat as described in Section 3.7. The Total Habitat Value Units that would be lost long-term would be mitigated by applying excess Total Habitat Value Units generated at the Cathedral Wetland Habitat Replacement Site during a previous project. Development of replacement habitat would mitigate impacts to wildlife and comply with the requirement of the Colorado River Basin Salinity Control Act to replace fish and wildlife values foregone (see Section 4.6 for more detail). Improved water quality would likely benefit downstream aquatic species (amphibians and fish) by reducing salt and selenium loading in the North Fork, Gunnison, and Colorado rivers.

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.

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

Common migratory 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), bald eagle (wintering, foraging, rarely nesting, migrating), and golden eagle (foraging, wintering, migrating). These and other migratory raptors 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." Raptors nesting within or near the Proposed Action Area could be disturbed by construction activities or increased human presence to the extent that they abandon their eggs or young, and such abandonment would constitute a "take" under the MBTA or the Bald and Golden Eagle Protection Act. 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 and golden eagles nest between December 15 and July 15 (CPW 2008). There are no documented or CPW-mapped active eagle nests within several miles of the Proposed Action Area, and no other documented raptor nests within approximately ¼ mile of the Proposed Action Area. No raptor nests were observed during a biological survey of the Proposed Action Area.

Construction activities within a mile of bald eagle winter communal roosts could result in molestation or disturbance under the Bald and Golden Eagle Protection Act. There are no documented or CPW-mapped bald eagle roosts within a mile of the Proposed Action Area. Construction would occur outside the primary nesting season of migratory birds and raptors (i.e., outside the period of March through July). No long-term effects to raptors are expected as a result of the Proposed Action. During the non-nesting season, wintering, foraging, and migrating raptors have the flexibility to avoid the Proposed Action Area.

> No Action: The No Action Alternative would have no effect on migratory birds and raptors or their habitats.
>
> Proposed Action: The Proposed Action construction schedule avoids the migratory songbird primary nesting season (see the Section 2.1 for the timing of the Proposed Action components), and is, therefore, not expected to impact nesting migratory birds. During the non-nesting season, foraging, wintering, and migrating songbirds have the flexibility to avoid the Proposed Action Area during construction. No long-term effects to migratory songbirds are expected as a result of the Proposed Action. The Proposed Action schedule is protective of migratory raptor core nesting season (see Section 2.1 for the timing of the Proposed Action components). Although the golden and bald eagle courtship/nesting season overlaps with the schedule of Proposed Action activities, there are no documented eagle nests or roosts in or near the Proposed Action Area. Impacts to raptors and other bird species during the non-nesting season would include minor

short-term disturbance and displacement during construction, with no long-term impacts after construction.

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 2017) was completed for the Proposed Action Area, and used by Reclamation as a background document for a Section 7 ESA consultation with the U.S. Fish & Wildlife Service (FWS). Table 2 presents the federally-listed species that may occur within or near the Proposed Action area according to the FWS' Environmental Conservation Online System Information for Planning and Conservation (IPaC), and summarizes habitat requirements and status of each species in the Proposed Action Area. Unless otherwise specified, all information related to the species below was obtained from resources available on FWS's Environmental Conservation Online System (ecos.fws.gov/ecp/).

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 *Centrocercus minimus*	Threatened	Large contiguous patches of sagebrush (>200 acres) with an abundant/tall herbaceous understory, interspersed with wet swales. Proposed Action Area lies in historic and potentially occupied range; sagebrush habitat in the Proposed Action area is not high quality (bisected by powerlines and Highway 92, and subject to pinyon-juniper encroachment). The Upper, Middle, and Lower Proposed Action Areas lie in designated critical habitat. The habitat water pipeline lies in critical habitat but is excluded from the designation under the rule because it is on land that was encumbered by a conservation easement prior to August 28, 2013.	Historic range only	Potential suitable habitat / designated critical habitat
Mexican spotted owl *Strix occidentalis lucida*	Threatened	Generally nests in older mature conifer stands, and on walls of shady wooded canyons. Confirmed nest records in Colorado from Mesa Verde in Montezuma County and around Pikes Peak and the Wet Mountains east of the Great Divide. No documented occurrences of spotted owl have been recorded in the Black Canyon or West Elk Mountains.	Peripheral only	Peripheral only

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
Yellow-billed cuckoo *Coccyzus americanus*	Threatened	Breeds in low elevation river corridors with extensive mature cottonwood galleries; breeding birds 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.	Yes	Migratory or peripheral only
FISHES				
Greenback cutthroat trout *Oncorhynchus clarkia stomias*	Threatened	High elevation cold water streams and cold water lakes with adequate stream spawning habitat present during spring. No spawning habitat or perennial water exists in the Proposed Action Area. The nearest known populations are in the Minnesota Creek and Terror Creek drainages near Paonia (Dare et al., 2011).	Yes	No
Bonytail *Gila elegans* Colorado pikeminnow *Ptychocheilus lucius* Humpback chub *Gila cypha* Razorback sucker *Xyrauchen texanus*	Endangered	Although no habitat is present within the Proposed Action Area for these four species, downstream designated critical habitat on the Colorado and Gunnison Rivers is affected by consumptive use of water for agricultural irrigation.	No	No, but critical habitat is down-stream
MAMMALS				
Canada lynx *Lynx canadensis*	Threatened	Breeds in high elevation subalpine spruce/fir/mixed conifer/lodgepole pine forests (primary), or mixed deciduous/conifer (secondary), with stratified understory vegetation or nearby willow carrs that sustain populations of snowshoe hare, the lynx's primary prey. No suitable or potentially suitable habitat in or near the Proposed Action Area.	Peripheral only	No

Common Name	Status	Habitat Requirement Summary	Range in Project Area?	Habitat in Project Area?
North American wolverine *Gulo gulo luscus*	Proposed Threatened	Wolverines do not specialize on vegetation or geological aspects of habitat, but instead select areas that are cold enough to reliably maintain deep persistent snow during winter and late into the warm season, namely boreal, alpine, and arctic regions. Therefore, in the southern portion of the species' range (i.e., western Colorado) where ambient temperatures are warmest, wolverine distribution is restricted to high elevations. Deep, persistent, and reliable spring snow cover (April 15 to May 14) is the best overall predictor of wolverine occurrence in the contiguous United States.	Peripheral only	No
PLANTS				
Colorado hookless cactus *Sclerocactus glaucus*	Threatened	Known range limited to alluvial river terraces and Mancos Shale formation of the Gunnison River valley from near Delta, Colorado, to southern Mesa County, Colorado; and alluvial river terraces of the Colorado River and in the Plateau and Roan Creek drainages in the vicinity of DeBeque, Colorado. Plant associations include semi-desert shrublands, big sagebrush shrublands, and sagebrush-juniper woodland transition areas. None observed during inspection of Proposed Action Area. No documented occurrences in the Proposed Action Area.	No	--

Mexican spotted owl and its designated critical habitat, Greenback cutthroat trout, Canada lynx, North American wolverine, and Colorado hookless cactus have no potential to be affected by the Proposed Action and are therefore dismissed from further evaluation in this EA. There are no records of Mexican spotted owl in Montrose County and no designated critical habitat lies within the Proposed Action Area. There is no suitable habitat for greenback cutthroat trout onsite or downstream of the Proposed Action. No habitat for lynx occurs in or near the Proposed Action Area. There are no viable populations of wolverine in Colorado, and no habitat for wolverine exists in the Proposed Action Area. Colorado hookless cactus is not considered further in this EA because the Proposed Action vicinity has no documented occurrences of Colorado hookless cactus and no suitable habitat.

The Gunnison sage-grouse was listed as threatened and critical habitat was designated on November 20, 2014 (79 Federal Register (FR) 69191-69310 and 79 FR 69311-69363). The Gunnison sage-grouse is a sagebrush obligate species endemic to Colorado and Utah south of the Colorado River. Breeding grounds (leks) consist of open areas next to tall sagebrush. For nesting and rearing young, the species requires large contiguous patches of sagebrush (>200 acres) with an abundant and relatively tall herbaceous understory, interspersed with wet swales. Wintering sage-grouse feed exclusively on sagebrush leaves. Rangewide threats to Gunnison sage-grouse include habitat fragmentation and destruction due to exurban residential and oil &

gas development. In the Crawford sage-grouse population area, declines are attributed to fragmentation of habitat components, encroachment of pinyon-juniper woodlands into sagebrush, not enough grass and forbs in the sagebrush understory, and low vegetative class diversity in the area's sagebrush (1998 Gunnison Sage-Grouse Conservation Plan for the Crawford Area). The Crawford area sage-grouse population was estimated at approximately 148 birds in Spring of 2016 (Nathan Seward/CPW, pers. comm.).

Based on ongoing telemetry studies, the core occupied area of the Crawford population of Gunnison sage-grouse is on Fruitland Mesa a few miles west of the Proposed Action Area (Rare Earth 2017). A few detections of grouse translocated from the Gunnison basin population to Fruitland Mesa have been recorded in recent years near the Proposed Action Area; however, there are no known lek locations or nesting records within 3.7 miles of the Proposed Action Area. Gunnison sage-grouse make relatively large movements on a seasonal basis, between lek sites and wintering areas, and it is feasible that the birds could move into potentially suitable habitat in the Proposed Action Area, particularly during winter or brooding season. The Proposed Action would not occur in potentially suitable habitat for sage-grouse during the breeding (March through May) or nesting/brooding periods (April through July), except that smoothing and reseeding in hay meadows in the Lower Proposed Action Area may take place during brooding season (May 15 through July).

The entire Proposed Action Area lies in potentially occupied critical habitat for Gunnison sage-grouse (Figure 8). However, only the Middle Proposed Action Area on BLM land meets the Primary Constituent Elements (PCEs) of Gunnison sage-grouse critical habitat described at 79 FR 69311-69363. The Middle Proposed Action Area lies within a relatively large patch (>600 acres) of sagebrush (Figure 4). Construction in the Middle Proposed Action Area would result in temporary disturbance of approximately 6.43 acres of potentially suitable sage-grouse habitat, until the area is reclaimed and revegetation has been completed successfully. The existing condition of the sagebrush habitat in the Middle Proposed Action Area is marginal—it is traversed by State Highway 92; crossed by a regional high-voltage transmission alignment, a local overhead utility line, and fences; encroached on by pinyon-juniper; and features a poor herbaceous understory (Rare Earth 2017). The habitat water pipeline component of the Proposed Action would also temporarily affect approximately 3 acres of sagebrush shrublands where the habitat water pipeline would be installed. However, the habitat water pipeline is located on land encumbered by a conservation easement prior to August 28, 2013, and therefore excluded from the critical habitat designation under the rule (79 FR 69311-69363).

The western yellow-billed cuckoo was listed as threatened in 2014. The yellow-billed cuckoo is a migratory songbird that breeds in the United States and winters in South America. The yellow-billed cuckoo has a short nesting season—incubation to fledging can take place in as little as 17 days. Cuckoos arrive on breeding and nesting grounds in Colorado in late May or early June, and depart by early August through early September. Reasons for decline of the yellow-billed cuckoo throughout the western U.S. have been attributed to destruction of its preferred riparian habitat due to agricultural conversions, flood control projects, and urbanization. In some parts of its breeding range, pesticide use may have affected the yellow-billed cuckoo's prey base—injurious pest insects such as tent caterpillars, which tend to occur in cyclic outbreaks. The preferred breeding habitat of the yellow-billed cuckoo is low elevation old-growth cottonwood forests or woodlands with dense, scrubby understories of willows or other riparian shrubs. Studies in California indicate this species may need extensive stands of riparian forest at least 24 acres in size for nesting success. In western Colorado, the required habitat patch size might be as little as 5 acres. The nearest known nesting habitat is approximately 12 miles from the Proposed Action Area in the cottonwood forested riparian corridor of the North Fork of the

Gunnison River, where a few breeding pairs have been detected almost annually since 2003 (Jason Beason, Rocky Mountain Bird Observatory, pers. comm.). A portion of the North Fork river bottom is currently Proposed Critical Habitat for the species. Cuckoos may occur incidentally in the Proposed Action Area during foraging bouts or during migration season, but foraging or migrating habitat is not exceptional in the Proposed Action Area compared to surrounding areas. No suitable nesting habitat for this species is within the Proposed Action Area or the immediate surroundings.

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 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 occur in or near 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, approximately 20 direct miles west-by-northwest of the Proposed Action Area. 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 Crystal Creek, which drains to the Gunnison River in the greater Colorado River basin. Water depletion in these basins has the potential to diminish backwater spawning areas and other habitat in downstream designated critical habitat. The estimated average historic annual amount of water diverted from the Gunnison basin tributaries due to operation of the Cattleman's Ditches irrigation system is approximately 7,576 acre-feet for irrigation of approximately 2,800 acres of grass hay ground. The resulting water depletion from the Colorado River basin is estimated at 2,363 acre-feet per year. This estimated depletion rate is equivalent to the net annual average total crop consumptive use rate calculated using the Colorado Water Conservation Board's (CWCB's) "StateCU" consumptive use modeling software [CWCB 2010]. This average annual depletion rate is expected to remain unchanged if the Proposed Action is implemented.

No new depletions would occur as a result of the Proposed Action. The Company and FWS have entered into a Recovery Agreement incorporating the Company's historic depletions under the umbrella of the Gunnison Basin Programmatic Biological Opinion (PBO) (FWS 2009). Acknowledging the historic depletion under the PBO would avoid the likelihood of jeopardy and/or adverse modification of critical habitat for the endangered fishes, and ensure that the Company can continue to operate consistently with Section 7 of the ESA. The Recovery Agreement is included in Attachment D. Furthermore, the potential reduction in selenium loading to the Colorado and Gunnison river basins as a result of the cumulative efforts of the Colorado River Basin Salinity Control Program improves water quality within designated critical habitat for the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail throughout the Colorado River and Gunnison River basins. Additionally, potential reductions in selenium loading to the Gunnison basin as a result of the Proposed Action would contribute to the overall success of the Gunnison Basin Selenium Management Program (SMPW 2011).

> 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.

Proposed Action: A threatened and endangered species inventory (Rare Earth 2017) was completed for the Proposed Action Area, and used by Reclamation as a background document for a Section 7 ESA consultation with FWS (TAILS 06E24100-2017-I-0450; Attachment D). The determination of effects set forth in this EA on listed species and their critical habitats are based on the Section 7 ESA consultation (TAILS 06E24100-2017-I-0450; Attachment D), as follows:

- Gunnison Sage-Grouse. Given the current understanding of the distribution of sage-grouse in the area, and given that the schedule for the Proposed Action avoids sage-grouse breeding, nesting, and brooding seasons where appropriate, it is expected that the Proposed Action may affect, but is not likely to adversely affect Gunnison sage-grouse.

- Gunnison Sage-Grouse Critical Habitat. The Proposed Action lies in Gunnison sage-grouse designated critical habitat (Figure 8). In the Middle Proposed Action Area, approximately 6.43 acres of unoccupied/potentially occupied critical habitat will be temporarily disturbed by the Proposed Action where a pipeline would be buried in an existing ditch alignment. However, the existing condition of the habitat is marginal (traversed by State Highway 92; crossed by a regional high-voltage transmission alignment, a local overhead utility line, and fences; encroached by pinyon-juniper, and features a poor herbaceous understory). The buried pipeline alignment would be re-seeded with a Reclamation- and BLM-approved seed mixture (including sagebrush and other species beneficial to sage-grouse). Given the current condition of the sagebrush shrublands in the Proposed Action Area, and given that the size of impacts from construction of the Proposed Action through sagebrush shrublands would be relatively small and would be appropriately revegetated, it is expected that the Proposed Action may affect, but is not likely to adversely affect critical habitat for Gunnison sage-grouse. The habitat water pipeline site also contains approximately 3 acres of sagebrush that would be affected by the Proposed Action. The habitat water pipeline would be located on land encumbered by a conservation easement prior to August 28, 2013, and is therefore excluded from the critical habitat designation under the rule.

- Western Yellow-Billed Cuckoo. The Proposed Action Area lies within seasonal peripheral range of the threatened western yellow-billed cuckoo; however, the Proposed Action Area does not encompass suitable breeding habitat. No breeding habitat loss for this species will occur as a result of the Proposed Action. Foraging or migrating individuals could occur incidentally in the Proposed Action Area; however, foraging or migrating habitat is not exceptional in the Proposed Action Area compared to surrounding areas. Based on these findings, it is expected that the Proposed Action may affect, but is not likely to adversely affect, western yellow-billed cuckoo.

- Western Yellow-Billed Cuckoo Proposed Critical Habitat. The Proposed Action Area does not lie within proposed critical habitat (Figure 6). Therefore, it is expected that the Proposed Action would have no effect on western yellow-billed cuckoo proposed critical habitat.

- Colorado River Basin Endangered Fishes. The Proposed Action Area does not lie within the ranges of the endangered Colorado pikeminnow, razorback sucker,

humpback chub, and bonytail. Based on previously issued biological opinions that all depletions within the Upper Colorado River Basin may adversely affect the four fishes, it is expected that 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 ditches involved in the Proposed Action results in an average annual depletion of approximately 2,363 acre-feet from the upper Gunnison River watershed, which 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 2015, during an initial salinity reduction project on the system (File ES/JG-6-CO-09-F-001-GP028 TAILS 06E24100-2015-F-0178). As a result of that consultation, the Company executed a Recovery Agreement with FWS to ensure compliance with the ESA for depletions to the Gunnison River Basin (Attachment D). The annual depletion rate is not expected to change as a result of the Proposed Action. Therefore, it is expected that the Proposed Action will 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 within the Gunnison Gorge National Conservation Area (NCA) managed by the BLM's Uncompahgre Field Office (UFO). 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 consultation with BLM-UFO Biologist Kenneth Holsinger.

Table 3. BLM Sensitive Species in Northeast Montrose County

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
BIRDS		
American peregrine falcon *Falco peregrines*	Uses open country near cliff habitat, often near water. An active peregrine falcon nest site exists on Needle Rock on BLM's Needle Rock Area of Critical Environmental Concern (ACEC) about 8 miles north-by-northeast of the Middle Proposed Action Area. Other nests may exist in the Black Canyon of the Gunnison, 6 miles southwest. Species may forage for passerine birds in the Proposed Action Area; however, more desirable foraging habitat exists closer to the nest sites.	Foraging only

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Bald eagle *Haliaeetus leucocephalus*	Nests along forested rivers and lakes (an uncommon nester in Colorado); winters in upland areas (common winter resident), often with rivers or lakes nearby. No records of recent nesting near the Proposed Action Area; no documented communal roosts within or near the Proposed Action Area (CPW 2016). CPW maps the Proposed Action Area and surroundings as winter range and winter foraging range (CPW 2016). Bald eagles likely forage across open pastures and sparse shrublands in the vicinity of the Proposed Action Area during winter for rodents and carrion.	Winter foraging habitat only
Burrowing owl *Athene cunicularia*	Prefers level to gently-sloping grasslands and semi-desert grasslands. Prairie dog colonies are commonly used for shelter and nesting. Several recent breeding records exist in the Uncompahgre River valley (Holsinger pers. comm.). BLM considers any prairie dog burrows to be potential nest sites for burrowing owl across the UFO. Nesting occurs between April and July.	No
Brewer's sparrow *Spizella breweri*	Breeds primarily in sagebrush shrublands, and less commonly in tall desert shrublands; requires relatively large shrubland patches for nesting. Migrants occur in wooded, brushy, and weedy riparian, agricultural, and urban areas, and occasionally in pinyon-juniper woodlands.	Yes
Ferruginous hawk *Buteo regalis*	Prefers open, rolling and/or rugged terrain in grasslands, shrubsteppe communities, or cultivated fields; nests on cliffs and rock outcrops. No nesting records in Montrose 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 *Aquila chrysaetos*	Hunts widely for rabbits and rodents over a variety of habitats in the region, from low-elevation shrublands to alpine tundra. Nests are constructed on cliffs and steep escarpments in shrublands and grasslands. Mated pairs return to the same nest site or nearby alternate nest sites each year. Nesting building can initiate as early as January, with occupancy usually occurring in mid-April. Young are fledged between May and early August, depending on the year (Kingery 1998). There are no known nests near the Proposed Action.	Foraging habitat only
FISHES		
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*	Cool, clear streams or lakes with well-vegetated stream banks for shading cover, along with deep pools, boulders, and logs; thrives at high elevations. Nearest population documented in the north Smith Fork of the Gunnison River, east of the Town of Crawford. No spawning habitat or consistent cold perennial water in the Proposed Action Area.	No

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Bluehead sucker *Catostomus discobolus*	Large rivers and mountain streams, rarely in lakes; variable from cold clear mountain streams to warm, turbid streams; moderate to fast-flowing water above rubble-rock substrate; young prefer quiet shallow areas near shoreline. Although no habitat is present within the Proposed Action Area for this species, downstream habitat on the Gunnison and Colorado Rivers is affected by consumptive use of water from Crystal Creek.	No, but habitat is down-stream
Flannelmouth sucker *Catostomus latipinnis*	Warm moderate- to large-sized rivers, seldom in small creeks, absent from impoundments; pools and deeper runs often near tributary mouths; also riffles and backwaters; young usually in shallower water than adults. Although no habitat is present within the Proposed Action Area for this species, downstream habitat on the Gunnison and Colorado Rivers is affected by consumptive use of water from Crystal Creek.	No, but habitat is downstream
Roundtail chub *Gila robusta*	Water- 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 from Crystal Creek.	No, but habitat is downstream
MAMMALS		
Fringed myotis *Myotis thysanodes*	Feeds in semi-desert shrublands, coniferous woodlands, and oakbrush; associated with caves, mines, and buildings as day and night roosts. No nursery colonies have been reported in Colorado. Individuals may forage in the area during summer months, especially near water. Some loss of foraging habitat will occur as a result of the Proposed Action.	Foraging only
Spotted bat *Euderma maculatum*	In Colorado, spotted bats have been observed or captured in ponderosa pine woodlands, montane forests, pinyon-juniper woodlands, semi-desert shrublands, riparian vegetation, and over open sandbars. Individuals forage alone for moths, grasshoppers, beetles, katydids, and other insects. Lactating females have been captured in Colorado, but nursery sites have not been located. Rocky cliffs and buildings are used for roosts. Some loss of foraging habitat will occur as a result of the Proposed Action.	Foraging only
Townsend's big-eared bat *Corynorhinus townsendii*	Feeds in semi-desert shrublands, pinyon-juniper woodlands, and open montane forests; frequently associated with caves and abandoned mines for day roosts, nursery colonies, and hibernacula, but will also use crevices on rock cliffs and abandoned buildings for summer roosting. Individuals may forage in the area during summer months, especially near water. Some loss of foraging habitat will occur as a result of the Proposed Action.	Foraging only

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Rocky Mountain bighorn sheep *Ovis canadensis*	Steep, mountainous, or hilly terrain dominated by rocks, grass, and low shrubs, near cliff retreats. CPW maps no overall range for Rocky Mountain bighorn within or near the Proposed Action Area (CPW 2016).	No
Kit fox *Vulpes macrotis*	Semi-desert shrublands, sagebrush shrublands, and shrubby margins of pinyon-juniper woodlands. Denning tends to occur in bottoms of steep-walled washes, and occasionally among rock outcrops and below rimrock. Historic range in Colorado is the Gunnison and Colorado River drainages below about 6,000 feet in elevation. Nearest recently documented population (prior to the year 2000) in the subwatersheds was in Peach Valley near the City of Delta. That population is considered extirpated (Holsinger pers. comm.).	No
White-tailed prairie dog *Cynomys leucurus*	Occurs in northwestern and west-central Colorado, and prefers level to gently sloping grasslands and open semi-desert shrublands from 5,000 to 10,000 feet in elevation, although most records are from below 8,500 feet (Armstrong et al. 2011). Live in loosely organized colonies and their burrows and mounds may be present in the margins of irrigated lands, and in dams and irrigation ditch banks, adjacent to and near semi-desert shrublands and grasslands. This species (including active or inactive burrows) was not observed in the Proposed Action Area during field visits in 2016.	Yes
HERPTILES		
Midget faded rattlesnake *Crotalus viridis concolor*	Prefers rocky outcrops for refuge and hibernacula, often near riparian, upper limit of 7,500 to 9,500 feet in elevation. The species may use the Proposed Action Area incidentally. There are no documented occurrences in the vicinity or eastern Montrose County (Hammerson 1999).	Potentially suitable
Northern leopard frog *Rana pipiens*	Springs, slow-moving streams, marshes, bogs, ponds, canals, floodplains, reservoirs, lakes; in summer, commonly inhabits wet meadows and fields; may forage along water's edge or in nearby meadows or fields. Leopard frogs may breed in ditch alignments, especially those with year-round sluggish water.	Yes
PLANTS		
Colorado (Adobe) desert parsley *Lomatium concinnum*	Adobe hills and plains on rocky soils derived from the Mancos Shale Formation; shrub communities dominated by sagebrush, shadscale, greasewood, or scrub oak; elevation 5,500 to 7,000 feet. A large population has been documented on BLM land between Hotchkiss and Crawford in Delta County. Not documented from the vicinity of the Proposed Action. Species has not been found in the local area during previous rare plant surveys for other projects. A rare plant survey was not required for the Proposed Action (Holsinger, pers. comm.).	Potentially suitable

Common Name	Habitat Requirement Summary	Habitat/Range on BLM Land in Project Area?
Uncompahgre bladderpod *Physaria vicina*	Mancos Shale-derived soils at the ecotone between pinyon-juniper woodland and salt desert scrub, or sandy soils derived from Jurassic sandstones with sagebrush. Endemic to east part of Montrose County and north part of Ouray County, with most documented populations occurring in the Uncompahgre Valley. Elevation 5,705 to 7,536 feet. Not documented from the vicinity of the Proposed Action.	No

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

Proposed Action: Implementation of the Proposed Action would result in temporal disturbance (construction activities) in winter foraging in irrigated fields and low shrublands for ferruginous hawk, golden eagle, and bald eagle, and in pinyon-juniper woodlands for northern goshawk. 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. Temporal disturbance (construction activities) may disrupt early breeding season peregrine falcon foraging in the vicinity; however, these birds are wide-ranging, opportunistic, and spatially flexible in their foraging patterns and can be expected to avoid the Proposed Action Area during construction. Brewer's sparrow may find nesting habitat (large sagebrush patches) in the Proposed Action Area, although the timing of nesting (April through July) would not correspond with construction timing. 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 will be lost as a result of the Proposed Action, and riparian and wetland foraging habitat loss would be mitigated at the previously-established Cathedral Habitat Replacement Site, with underwent NEPA analysis for the Cattleman's Ditches Pipeline Project Phase I. BLM Sensitive snakes potentially occurring in or near the Proposed Action Area (midget faded rattlesnake) could be affected by Project construction. Hibernating northern leopard frogs may be expected to be present during construction of the Proposed Action, and implementation of the Proposed Action will result in the loss of northern leopard frog breeding habitat. To the extent that the loss of riparian or wetland habitat would affect breeding and overwintering habitat for the northern leopard frog, these habitat losses would be mitigated by the Cathedral Habitat Replacement Site near the Proposed Action Area (see Section 4.6).

No BLM Sensitive fishes are expected to occur in the Proposed Action Area. However, water depletions from the upper Gunnison River basin occurring as a result of ditch operations have the potential to affect downstream BLM Sensitive fish habitat. No new depletions would occur as a result of the Proposed Action. 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 in Section 3.9).

3.10 Cultural Resources

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

Alpine Archaeological Consultants, Inc. conducted a Class III cultural resource inventory of the Proposed Action Area during July and August 2016 (Reed and Pfertsh 2016). All proposed buried pipe alignments in a 100-foot-wide corridor, proposed construction disturbance areas, access roads, proposed staging areas, and the habitat irrigation pipeline corridor were examined. 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 (Reed and Pfertsh 2016).

The inventory resulted in the documentation of the following cultural resources: four segments of the Cattleman's Ditch System, three historical artifact scatters, a segment of the Fruitland Mesa Ditch (in the Upper Proposed Action Area where the mainstem of the Cattleman's Ditches system runs adjacent to Fruitland Mesa Ditch), Gould Reservoir, and a previously documented segment of Highway 92 (Reed and Pfertsh 2016). The three historical artifact scatter sites included fragments of glass, earthenware, cans, nails, metal strips, and other debris dating from the late 1800s through the mid-1900s. The sites were not associated with any significant historical events or persons, and were not sufficiently intact enough to contribute any additional information to the understanding of the region's history or pre-history (Reed and Pfertsh 2016).

Of these documented resources, the Cattleman's Ditch System has been previously determined to be officially eligible for listing in the NRHP, and the inventory concluded that the newly documented segments support the significance of the ditch system. The Fruitland Mesa Ditch segment and Gould Reservoir are also both considered important in the historic development of the region, and both are recommended as eligible for inclusion in the NRHP. The inventory recommended neither Colorado Highway 92, nor the three newly documented historical artifact scatters, as eligible for listing in the NRHP.

Gould Reservoir, Fruitland Irrigation Ditch, and Colorado Highway 92 are all visible historic cultural resources in the Proposed Action Area, however none would be affected by the Proposed Action. Destruction or significant alteration of the other documented resources would occur as a result of the Proposed Action.

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

Proposed Action: As a result of a Class III cultural resources inventory of the Proposed Action Area (Reed and Pfertsh 2016), 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 parts of the Cattleman's Ditches System, which are resources that are officially eligible for listing in the NRHP. The SHPO

also concluded that Colorado State Highway 92 is officially eligible for listing, but concurred with a finding that the Proposed Action would avoid direct impacts to the highway. The inventory recommended that to mitigate these adverse effects, Level I documentation (OAHP 2013) be conducted to capture the historic landscape characteristics of the eligible features prior to implementation of the Proposed Action. Level I documentation includes archival-quality photographs, maps, and narrative descriptions of the resources, which would be publicly available at the Colorado Office of Archaeology & Historic Preservation (OAHP) and on Reclamation's Western Colorado Area Office website. A Memorandum of Agreement (MOA) has been executed between Reclamation and the SHPO, with the Company participating as an invited party, to mitigate the adverse effects of the Proposed Action (Attachment E). The MOA stipulates that Level I documentation be completed prior to any earth disturbances for the Proposed Action, and requires that any post-review discoveries trigger an Unanticipated Discovery Plan (UDP; Attachment B to the MOA). The UDP outlines procedures that would be followed in order to protect potential archaeological materials or cultural resources discovered during implementation of the Proposed Action. In addition, the MOA stipulates that the Level I documentation be made available to the public via the Reclamation Western Colorado Area Office's cultural resources webpage (https://www.usbr.gov/uc/wcao/rm/cr/index.html).

3.11 Agricultural Resources & Soils

It is the policy of the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) to "maintain and keep current an inventory of the prime farmland and unique farmland of the Nation…the objective of the inventory is to identify the extent and location of important rural lands needed to produce food, feed, fiber, forage, and oilseed crops" (7 CFR 657.2). NRCS identifies farmlands of national and statewide importance in the region, based on soil types and irrigation status.

The Proposed Action crosses four types of farmlands of national or statewide importance (Figure 9):

Prime Farmland if Irrigated. A total of approximately 0.1 mile of the proposed buried pipe alignments cross this farmland type, along with all or parts of proposed materials staging areas in the Lower Proposed Action Area. The mapped soil unit is Cerro loam, 1 to 6 percent slopes. All affected areas are in irrigated hay meadows or irrigated pasture. According to USDA, Prime Farmland has the best combination of physical and chemical characteristics for producing food, feed, forage fiber and oilseed crops.

Prime Farmland if Irrigated and Drained. Approximately 0.2 mile of a proposed buried pipe alignment cross this farmland type in the Lower Proposed Action Area and at the Option Diversion Structure Repair site in the Upper Middle Proposed Action Area (Figure 9). The mapped soil unit is Apishapa silty clay loam, 0 to 5 percent slopes. As mentioned above, USDA considers Prime Farmland to have the best combination of physical and chemical characteristics for producing food, feed, forage fiber and oilseed crops. However, none of the irrigated soils of this unit is drained within the Proposed Action Area, and therefore do not meet the definition of Prime Farmland.

Farmland of Unique Importance. A total of approximately 1.1 mile of proposed buried pipe alignment in the Middle Proposed Action Area, and a portion of a proposed materials staging area in the Upper Proposed Action Area lie within this farmland type. The mapped soil unit is

Colona silty clay loam, 6 to 12 percent slopes. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has a special combination of soil quality, location, growing season, and moisture supply required to produce sustained high quality crops when properly managed. None of the Farmland of Unique Importance crossed by the Proposed Action is irrigated.

Farmland of Statewide Importance. Approximately 1.4 mile of the proposed buried pipe alignment, all or parts of certain proposed materials staging areas in the Lower Proposed Action Area, and approximately 0.4 mile of proposed buried pipe alignment in the Upper Proposed Action Area cross this farmland type. The mapped soil units are Razor silty clay loam, 3 to 12 percent slopes, Cerro loam, 6 to 12 percent slopes, and Fluvaquents, flooded. Farmlands of statewide importance are lands that nearly meet the requirements for prime farmland and have been identified by state agencies. Parts of the proposed pipeline alignment and the staging areas in the Lower Proposed Action Area cross irrigated hay meadows in this farmland type.

Other major mapped soil units found in the immediate Proposed Action Area (Figure 10) are Midway-Gaynor silty clay loams, 10 to 40 percent slopes, Saraton-Agua Fria complex, 20 to 50 percent slopes, Gullied land, and Torriorthents-Rock outcrop, sand or shale complex. Each soil type in the Proposed Action Area has a moderate or high potential for erosion from water. All of these 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, Unique 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 alignments and backfilling of certain ditches would cause temporary disturbance to agriculturally important lands, including Prime Farmland if Irrigated, Farmland of Unique Importance, and Farmland of Statewide Importance. Some of these lands are in irrigated agricultural production (hay meadows or pastures). No farmlands will be permanently removed from production as a result of the Proposed Action.

In all proposed pipeline alignments, topsoil would be reserved prior to excavation, replaced on the ground surface following pipe installation, then reseeded with hay or pasture cultivars, or appropriate upland seed mixes in non-cultivated areas. Backfilled ditches and culverted embankment crossings of drainages would also be seeded with appropriate dryland cover species. A weed control program meeting Montrose County criteria would be implemented in all areas of surface disturbance (Montrose County 2011; 2017).

Overall, the Proposed Action would give the Company the ability to better manage its water rights 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 minimized in the irrigation system as a result of the Proposed Action, which would help reduce salinity loading in the Colorado River basin. Soil erosion

from irrigation water conveyance 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 environment which result from the incremental impact of the 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 No Action and Proposed Action Alternatives 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). 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 Issue	Spatial Limits of Analysis	Temporal Limits of Analysis
Water Rights and Use	Crystal Creek and Smith Fork River drainages	50 years
Water Quality	Colorado River Basin	50 years
Air Quality	Proposed Action Area plus 2-mile buffer	Duration of Proposed Action Construction
Access, Transportation, and Public Safety	Proposed Action Area	Duration of Proposed Action Construction
Recreation	Proposed Action Area plus 2-mile buffer	50 years
Visual Resources	Proposed Action Area plus 2-mile buffer	50 years
Livestock Grazing	Proposed Action Area	50 years
Vegetative Resources / Habitat	Crystal Creek and Smith Fork River drainages	50 years
Wildlife Resources	Crystal Creek and Smith Fork River drainages	50 years

Resource Issue	Spatial Limits of Analysis	Temporal Limits of Analysis
Threatened and Endangered Species	Crystal Creek and Smith Fork River drainages, except for Gunnison sage-grouse, where the designated critical habitat is considered the spatial limit of analysis	50 years
BLM Sensitive Species	Crystal Creek and Smith Fork River drainages	50 years
Cultural Resources	Crystal Creek and Smith Fork River drainages	50 years
Agricultural Resources and Soils	Smith Fork River drainage	50 years

Effects of past actions are reflected in the current condition described in the affected environment in each of the resource topics of Section 3. Effects of present, and reasonably foreseeable future actions (planned actions or known proposals for actions in the spatial limits of analysis that would take place within the temporal limits of analysis shown in Table 4), are summarized in Table 5.

Table 5. Cumulative Impacts Scenario

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Water Rights and Use	Irrigation water rights in the area will continue to be bought and sold in the future, and used for agricultural purposes. Due to future population growth and increasing subdivisions in the area, agricultural water rights may be converted to municipal or industrial uses. Ongoing and future projects sponsored by NRCS in the Proposed Action Area and the area of analysis can be reasonably expected to result in on-farm efficiency upgrades to sprinkler systems, which could impact irrigation wastewater rights of some downgradient users by reducing or eliminating historic irrigation wastewater runoff. The Proposed Action could indirectly affect wastewater irrigation practices downgradient of the Proposed Action Area because piping the ditch system would provide pressurized water that would likely lead to future upgrades to on-farm sprinkler system installations. Sprinkler irrigation systems tend to improve on-property irrigation efficiency and reduce the amount of wastewater returning to ditch systems for downstream users. Lands irrigated solely with irrigation wastewater make up a relatively small proportion of irrigated agricultural lands in the area of analysis. The No Action Alternative would have no impact on water rights and water use in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Water Quality	Three ongoing federal programs at a basin-wide scale are producing significant cumulative beneficial effects on water quality: the Colorado River Basin Salinity Control Program, the Upper Colorado River Endangered Fish Recovery Program, and the Gunnison Basin Selenium Management Program. Collectively and cumulatively, projects funded under the Salinity Control Program result in reduced salt loading in the Colorado River basin. The Recovery Program involves federal, state and private organizations and agencies in Colorado, Utah, and Wyoming, and is working for the benefit of four species of endangered fishes in the Colorado River and its tributaries while allowing water use and development to continue meeting human needs. Reclamation is working with entities in the Gunnison Basin to implement the Gunnison Basin Selenium Management Plan to reduce selenium levels in the Gunnison River at Whitewater, as a conservation measure required by the Gunnison Basin Programmatic Biological Opinion (FWS 2009). Under the No Action Alternative, water quality benefits (an estimated 2,183-ton salt loading reduction per year in the Colorado River basin) would not be realized by the Proposed Action.
Air Quality	Air quality in the area of analysis is affected by vehicular traffic (exhaust gases and road dust), agricultural practices (exhaust gases from farm equipment, dust and smoke from harrowing and ditch/field burning), and occasional controlled burns, wildfires or dust storm events (either local, or blown in from distant locations with the westerly prevailing winds). Dust and exhaust gases related to construction of the Proposed Action and similar salinity or selenium control projects or NRCS irrigation projects are expected to be temporarily elevated in the Proposed Action Area and near the Proposed Action Area and east of the Proposed Action Area (influenced by the prevailing winds) for the short-term duration of construction. Because salinity and selenium control projects involve piping of open ditches, and buried pipe alignments require less maintenance than open ditch systems (i.e., would not require burning, re-digging, etc.), it is expected that the long-term cumulative impact of the Proposed Action and similar projects would be to reduce contributions of dust and exhaust gases to the atmosphere. Under the No Action Alternative, there would be no contribution to the cumulative impact on air quality in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Access, Transportation, & Public Safety	Existing regional traffic in the Proposed Action Area primarily uses State Highway 92, a paved two-lane road. Local traffic in the Proposed Action Area travels on graveled county roads and private roads/tracks. Existing traffic includes local residents, regional travelers, and very few commercial vehicles. Highway 92 is used by regional travelers and locals to reach National Forest access roads to the south of the Proposed Action Area. Construction traffic related to the Proposed Action would primarily use Highway 92 to reach the Proposed Action Area. Construction traffic could include heavy vehicles, wide loads, and heavy equipment moving at slow speeds. No new roads would be constructed for access to the Proposed Action Area, and existing roads would be restored to their current condition or better following construction. Traffic control and notification of emergency authorities would be implemented for road closures or as appropriate for wide, slow-moving loads. These effects would be temporary (approximately 6 months in duration) and would not contribute significantly to cumulative impacts on access, transportation, or public safety in the Proposed Action Area. Under the No Action Alternative, there would be no contribution to the cumulative impact on access, transportation, & public safety in the area of analysis.
Recreation	The Proposed Action Area consists mostly of private lands. Public lands within the Proposed Action Area do not have designated trailheads or popular public access points from public roads. However, noise and activity during construction could affect game movements within the area and thus affect recreational hunters on both private and public lands during construction. Temporary road closures or construction traffic could impact recreationists traveling in the immediate area. These effects would be temporary and intermittent during a period of approximately 6 months and are not expected to contribute significantly to cumulative impacts on recreation in the region. Under the No Action Alternative, there would be no contribution to the cumulative impact on recreation in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Visual Resources	The area of analysis is pastoral and rural-agricultural in character, and is bisected by State Highway 92 (part of the West Elks Loop Scenic & Historic Byway) and a regional WAPA transmission corridor (highly visible from the highway). The ditch corridors involved with the Proposed Action support riparian and wetland zones that provide some visual variety within the landscape. With the exception of the WAPA corridor, and other salinity reduction and NRCS irrigation projects, no other known current or future projects are affecting or will affect the visual resources of the area of analysis. Irrigation construction projects are not out of character with the ranching heritage of the area. However, temporary linear visual disturbances (bare, unvegetated soil) would be created by construction of the Proposed Action and other similar projects until new vegetation is established, and linear ditch alignments with riparian character and associated wetlands would be replaced with upland vegetation similar to their surroundings. The visual effects of unvegetated linear features would be temporary (approximately 1 to 2 years in duration—until new vegetation is established), and linear patterns may remain visible on the landscape for several more years until the vegetation matures and blends with the surroundings. These temporary visual disturbances are not expected to contribute significantly to cumulative impacts on visual resources in the region in the long-term. The BLM land in the Proposed Action Area is assigned VRM Class IV by the Gunnison Gorge NCA RMP (BLM 2004). The BLM lands involved in the Proposed Action are visible from Highway 92 along the West Elks Scenic & Historic Byway. Class IV areas allow for visible changes that can dominate the landscape. Under the No Action Alternative, there would be no contribution to the cumulative impact on visual resources in the area of analysis.
Livestock Grazing	Within the Proposed Action Area, no other activities that would impact livestock grazing on rangelands are occurring or are anticipated to occur, other than low-density residential development. There is one BLM grazing allotment (620 acres) partially intersecting the Proposed Action Area, held by a member of the Company (the Project proponent). The balance of the Proposed Action Area is either private grazing range or irrigated hay meadow. No net loss of public or private grazing range will result from the implementation of the Proposed Action. Removal or drying of some ditch alignments will result in the removal of a stock water resource from some livestock range areas. Construction noise and activity may temporarily displace livestock grazing in the Proposed Action Area. Under the No Action Alternative, there would be no contribution to the cumulative impact on livestock grazing in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Vegetative Resources / Habitat	Present and future actions within the analysis area (Smith Fork River drainage) include infrastructure development and/or maintenance (including public and private roads, and maintenance of the WAPA transmission corridor through the Proposed Action Area), other salinity reduction and NRCS irrigation projects, timber harvest and vegetation management activities (such as sagebrush treatment projects on Fruitland Mesa by BLM), recreational hunting and outfitting, grazing, motorized recreation, firewood cutting, and subdivision and residential development (on Fruitland Mesa, within Cathedral Peak Ranch subdivision, and around Crawford Reservoir), and conversion of native shrublands and woodlands to agricultural uses. Drought and wildfire also will continue to affect the regions vegetative resources and natural habitat in the future, possibly with increasing intensity. The primary vegetation/habitat impact of the Proposed Action would be to convert approximately 0.772 acres of riparian and wetland habitat associated with the current ditch system to native upland types (shrublands and woodlands). Considering the habitat replacement site that is being implemented and maintained for 50 years to address the loss of riparian and wetland habitat on the Proposed Action's ditch alignments, the overall contribution of the Proposed Action to the cumulative effects on the vegetation and habitat in the analysis area are expected to be negligible. Other similar salinity reduction projects in the region are also required to establish habitat replacement sites to functionally replace riparian and wetland habitats affected by the projects. Under the No Action Alternative, there would be no contribution to the cumulative impact on vegetative resources in the area of analysis.
Wildlife Resources	Present and future activities in the analysis area affecting this resource are similar to those described for vegetative resources / habitat, above. The Project Area lies in the lower Smith Fork River and the Crystal Creek drainages, which constitutes elk winter range and seasonal migratory areas, and mule deer winter and year-round range. Movements and forage patterns of elk and deer would be temporarily disrupted during construction of the Proposed Action. However, deer and elk are widespread, relatively abundant, and readily disperse across the landscape in response to disturbance. The surrounding landscape is relatively open and natural, with ample opportunities for big game dispersal. Small mammals, herptiles, and migratory birds would be temporarily displaced during construction of the Proposed Action until revegetation is accomplished. Individual small burrowing mammals and herptiles could be harmed during construction. Migratory birds / overwintering birds are expected to disperse to other areas during construction. The negative effects from the Proposed Action would be of short duration and magnitude, and would not result in a substantial contribution to cumulative area-wide impacts on population trends of wildlife. Impacts would be mitigated by design features and environmental commitments described elsewhere in this EA. Under the No Action Alternative, there would be no contribution to the cumulative impact on wildlife resources in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Threatened and Endangered Species and Critical Habitat	Present and future activities in the analysis area affecting this resource are similar to those described for vegetative resources / habitat, above. None of the ongoing or foreseeable future activities in this area, when combined with the Proposed Action, are likely to contribute to substantial negative long-term cumulative impacts to threatened and endangered species. Mexican spotted owl and yellow-billed cuckoo have only peripheral or marginally suitable habitat in the Proposed Action Area. Gunnison sage-grouse critical habitat is mapped in the Proposed Action Area, but the habitat in the Proposed Acton Area is marginal in quality and is potentially not occupied by sage-grouse. Impacts to designated critical habitat for sage-grouse would be short-term and temporary (until vegetation is established following construction). The Proposed Action and similar salinity and selenium control projects occurring in the area in the future are not expected to destroy or adversely modify downstream critical habitat for the four species of Colorado River endangered fishes, because the projects will not result in an increase in average annual depletion rates of water from the system. Under the No Action Alternative, there would be no contribution to the cumulative impact on threatened and endangered species or designated critical habitat in the area of analysis.
BLM Sensitive Species	Present and future activities in the analysis area affecting this resource are similar to those described for vegetative resources / habitat, above. None of the ongoing or foreseeable future activities in this area, when combined with the Proposed Action, are likely to contribute to substantial negative long-term cumulative impacts to BLM sensitive species found in the area of analysis. BLM sensitive small mammals, herptiles, and migratory birds would be temporarily displaced during construction of the Proposed Action until revegetation is accomplished. Individual small burrowing mammals and herptiles could be harmed during construction. Migratory birds / overwintering birds are expected to disperse to other areas during construction. The negative effects from the Proposed Action would be of short duration and magnitude, and would not result in a substantial contribution to cumulative area-wide impacts on population trends of wildlife. Impacts would be mitigated by design features and environmental commitments described elsewhere in this EA. No BLM sensitive plants or fishes (other than those also found on the threatened and endangered species list) are affected by the Proposed Action. Under the No Action Alternative, there would be no contribution to the cumulative impact on BLM sensitive species in the area of analysis.

Resource Issue	Existing or Future Activities in the Limits of Analysis and their Contribution to Cumulative Impacts with the Proposed Action
Cultural Resources	Cultural resources are defined as fragile and nonrenewable remains of prehistoric and historic human activity, occupation, or endeavor, as reflected in districts, sites, structures, buildings, objects, artifacts, ruins, etc. Significant cultural resources are eligible for listing in the National Register of Historic Places, are typically at least 50 years old, and meet other requirements specified at 36 CFR Part 60. Cattleman's Ditch is a cultural resource that has been determined to be eligible for inclusion on the National Register of Historic Places. Other salinity and selenium control projects in the area of analysis also will affect or have the potential to destroy cultural resources such as irrigation ditches and appurtenant structures. These effects are mitigated by Historic Resource Documentation at an appropriate level for the significance of the resource. For the Proposed Action, a Memorandum of Agreement (MOA) has been executed between Reclamation and the State Historic Preservation Office to ensure proper documentation of Cattleman's Ditch. Similar MOAs and documentation are executed for similar projects. Under the No Action Alternative, there would be no contribution to the cumulative impact on cultural resources in the area of analysis.
Agricultural Resources and Soils	Actions with potential for cumulative effects on soils and agricultural resources in the Smith Fork River and Crystal Creek drainage include existing and future Colorado River Basin Salinity Control Program projects, Gunnison Basin Selenium Management projects, existing and future NRCS irrigation improvement projects, infrastructure development, livestock grazing, and residential development. Each of these activities can result in soil erosion or degradation of soil health; however, erosion control and reclamation are required for most of these activities to reduce direct, indirect, and cumulative soils effects. Residential development can result in conversion of irrigated agricultural or grazing rangelands. The Proposed Action would not result in the direct loss of irrigated agricultural lands or grazing rangelands. An indirect effect of the Proposed Action and similar projects in the Salinity Control Program, is the possibility that the quantity of irrigation wastewater supplies could diminish from irrigated areas that are converted to sprinkler irrigation following completion of the Proposed Action. Piping the ditch system would provide pressurized water that would likely lead to future upgrades to on-farm sprinkler system installations. Lands irrigated solely with irrigation wastewater make up a relatively small proportion of irrigated agricultural lands in the area of analysis. Under the No Action Alternative, there would be no contribution to the cumulative impact on agricultural resources and soils in the area of analysis.

3.13 Summary of Impacts

Table 6 summarizes the predicted impacts/environmental consequences of the No Action and Proposed Action Alternatives analyzed in this EA.

Table 6. Summary of Impacts of the Cattleman's Ditches Pipeline Project II

Resource Issue	Impacts	
	No Action Alternative	**Proposed Action Alternative**
Water Rights and Use	No Effect	No Effect or possible beneficial effect
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 2,183 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; however, these benefits have not been quantified. Improved water quality would likely benefit downstream aquatic species by reducing salt and selenium loading in the Smith Fork, Gunnison, and Colorado rivers. Temporary impacts to water quality may occur during construction if culverted embankment stream crossings are constructed while surface water is flowing in the drainages.
Air Quality	No Effect	Minor short-term effects due to dust and exhaust created by construction equipment.
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 hunting on BLM lands in and near the Proposed Action Area may occur during construction. The level and nature of public use of the BLM lands involved in the Proposed Action is unknown, but expected to be low, due to lack of developed public access routes directly to the Proposed Action Area.
Visual Resources	No Effect	Short-term temporary effect during construction (i.e., presence of equipment, spoil piles), with revegetation commencing following completion of the Project. Once vegetation is successfully re-established, the appearance and character of the Proposed Action Area would be similar to its appearance and character prior to construction.
Livestock Grazing	No Effect	Temporary effect. No lands capable of providing grazing will be permanently lost. The Proposed Action is proposed to take place on BLM land mostly outside the cattle allotment grazing timeframe. Project personnel will coordinate with the grazing permit holder(s) to avoid conflicts with grazing operations. A livestock water source will be lost on the allotments due to the Proposed Action.

Resource Issue	Impacts	
	No Action Alternative	**Proposed Action Alternative**
Vegetative Resources / Habitat	No Effect	Short-term impacts to vegetation where construction would occur in upland areas. Estimated long-term loss of 2.906 THV units, due to elimination of seepage from the involved ditch alignments. A Habitat Replacement Plan has been implemented to mitigate for the habitat value lost because of the Proposed Action.
Wildlife Resources	No Effect	Short-term temporary adverse effect to local wildlife during construction. A Habitat Replacement Plan has been implemented to mitigate for the long-term loss of riparian and wetland habitat due to the Proposed Action.
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 from the Crystal Creek drainage, and would adversely affect downstream designated critical habitat for the four Colorado River federally endangered fishes.	The Proposed Action Area lies within designated critical habitat for Gunnison sage-grouse, but not within currently occupied range. Short-term reclaimable impacts would occur to potentially suitable habitat / critical habitat for sage-grouse. Water depletions (irrigation water consumption) would continue at historic levels from the Crystal Creek drainage, and would adversely affect downstream designated critical habitat for the four Colorado River federally endangered fishes. However, the Upper Colorado River Endangered Fish Recovery Program and execution of a Recovery Agreement between the Company and FWS 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.
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. These habitat losses would be mitigated with Replacement Habitat. Depending on timing, the Proposed Action could affect nesting for Brewer's sparrow and other migratory bird species. The Proposed Action would improve water quality by contributing to the reduction of salt and selenium loading in the Gunnison and Colorado rivers, to the benefit of BLM Sensitive fishes downstream of the Proposed Action Area.

Resource Issue	Impacts	
	No Action Alternative	**Proposed Action Alternative**
Cultural Resources	No Effect	Adverse effect to NRHP eligible site, segments of the ditch system. The adverse effect would be mitigated through implementation of a Memorandum of Agreement between Reclamation and the Colorado SHPO (in progress).
Agricultural Resources and Soils	No Effect	Short-term temporary effect during construction, with agricultural production resuming following restoration of the ground surface, and appropriate reseeding, erosion control, and weed control on disturbed soils in non-irrigated areas.
Cumulative Impacts	No Effect	Beneficial effects related to reduction of salt and selenium loading in the Gunnison and Colorado river basins. Indirect and direct contributions to cumulative effects on other resources are temporary and/or negligible, with consideration of mitigative measures (i.e., the habitat replacement site).

4 ENVIRONMENTAL COMMITMENTS

This section discusses the environmental commitments developed to protect resources and mitigate adverse impacts to a non-significant level. The cooperative agreement between Reclamation and the Company requires that the Company 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".

An Environmental Commitment Checklist is provided at Attachment F. The checklist will serve as a tool to help Reclamation and the Company comply with the environmental commitments set forth in the EA. The Company shall return the completed checklist the Reclamation upon the Project's completion.

The environmental commitments explained in the section shall also be included in the contractor bid specifications.

Note that any construction activities proposed outside of the inventoried Proposed Action Area would first require additional review by Reclamation to determine if the existing surveys and information are adequate to evaluate additional impacts outside this corridor.

Note that construction work conducted outside the planned timeframe of the Proposed Action may also require evaluation for impacts to wildlife, including threatened, endangered, BLM-sensitive, or migratory bird species.

4.1 Construction Access

All construction activities would be confined to rights-of-way negotiated between the Company and the landowners, including a Ditch Right-of-Way Acknowledgment issued by BLM. Construction staging (for pipe and equipment) will take place in several areas, as shown on Figures 3a and 3c.

4.2 Water Quality

The following standard BMPs and environmental commitments would be implemented to minimize erosion and protect water quality of downstream resources:

- 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.

- Culverted embankment fill creek crossings shall be constructed during periods when the watercourse is not flowing or is flowing at low levels. If a small amount of flow is present, appropriate water control measures shall be employed, such as temporary impoundments or drain ditches, which allow for construction to proceed while minimizing potential for mobilization of silt or erosion. Culverts shall be appropriately sized to allow for normal and expected high flows, and bedded and stabilized to prevent erosion. Embankments shall be stabilized and appropriately vegetated.

- 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 offsite disposal.

- Fuels, lubricants, hydraulic fluids, and other petrochemicals shall be stored and dispensed in an approved staging area.

- Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.

- Construction equipment shall be parked, stored, and serviced only at an approved staging area.

- 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. All employees and workers, including those under separate contract, shall be briefed and made familiar with this plan.

- A spill response kit, which includes appropriate-sized spill blankets, shall be easily accessible and onsite at all times.

- Onsite supervisors and equipment operators shall be trained and knowledgeable in the use of spill containment equipment.

- Appropriate federal and Colorado authorities (including BLM) shall be immediately notified in the event of any contaminant spill.

4.3 Abandoned Irrigation Facilities & Structures

Pursuant to the Cooperative Agreement between the Company and Reclamation, the Company shall permanently dewater, remove from irrigation service, and render incapable of irrigation water delivery all open ditches abandoned as part of the Proposed Action.

The Company shall be responsible for removing all decommissioned irrigation structures (head gates, drops, etc.) by methods described in the construction specifications provided to the contractor.

4.4 Ground Disturbances

The following BMPs and environmental commitments would be implemented to minimize and mitigate ground disturbances:

- Ground disturbances shall be limited to only those areas necessary to safely implement the Proposed Action.
- Vegetation removal shall be confined to the smallest portion of the Proposed Action Area necessary for completion of the work.
- Construction limits shall be clearly flagged onsite to avoid unnecessary plant loss or ground disturbance.
- Prior to construction, vegetative material shall be removed by mowing or chopping, and either hauled to a proposed staging area to be burned or chipped, or chipped and mulched onsite. Stumps shall be grubbed and hauled to a proposed staging area to be burned.
- Topsoil shall be stockpiled and then redistributed after completion of construction activities.
- Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used at the edges of ground disturbance to minimize soil erosion and prevent soil erosion from entering water bodies during construction.
- Following construction, all disturbed areas shall be smoothed, shaped, contoured and reseeded to as near to their pre-project conditions as practicable.
- Seeding shall occur at appropriate times with weed-free seed mixes per Reclamation and BLM specifications. Specifically, a BLM-prescribed seed mix shall be used to reseed all disturbances on BLM lands, and on private lands in Gunnison sage-grouse habitat (these areas shall be detailed in contractor specifications and/or construction drawings). On other disturbed areas, the "Stirrup Bar Ranch Seed Mix" developed by NRCS may be used.
- Weed control shall be implemented by the Company or the Company's contractor in accordance with current Montrose County weed control standards (Montrose County 2011; 2017).

4.5 Habitat Disturbance & Loss

The Salinity Control Act requires that no net loss of wildlife values result from projects under its authorization. With the assistance of Wildlife and Natural Resource Concepts & Solutions, LLC, the Company developed a Reclamation-approved wildlife Habitat Replacement Plan to mitigate fish and wildlife values that would be foregone as a result of the Proposed Action. This Habitat Replacement Plan was approved during the NEPA process for the Cattleman's Ditches Pipeline Project Phase I. The Habitat Replacement Site location is on Hart Double H Ranch, about 2 miles east of the main activities in the Lower Proposed Action Area (Figure 3c).

The Habitat Replacement Plan meets the objectives of the Colorado River Basin Salinity Control Program because it is near the Proposed Action Area and provides compensation for directly affected wildlife to the greatest extent possible, it is an in-kind replacement (replaces particular values lost), it is contiguous with other habitats with wildlife value, it can be successfully managed by the Company, and has characteristics (a water source) that will assure its viability for at least 50 years.

Implementation of habitat replacement began with the Cattleman's Ditches Pipeline Project Phase I. The Habitat Replacement Site will provide habitat for a diversity of local wildlife, including big game, songbirds, raptors, a variety of small mammals, reptiles, and amphibians.

The Company will be responsible for maintaining the Habitat Replacement Site according to the previously approved Habitat Replacement Plan and ensuring the objectives of the Habitat Replacement Plan are met. Failure to implement concurrent habitat replacement may result in delays in obligating funding under the Cooperative Agreement.

4.6 Wildlife Resources

The following BMPs and environmental commitments would be implemented to minimize and mitigate disturbances to wildlife:

- Construction areas shall be confined to the smallest feasible area and within approved construction limits/rights-of-way to minimize disturbance to wildlife within the Proposed Action Area.

- 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.

4.7 Special Status Species

The Company previously entered into a recovery agreement (during Phase I of the Cattleman's Ditches Pipeline Project) with FWS to incorporate historic depletions from the entire Cattleman's Ditches System under the umbrella of the Gunnison Basin Biological Opinion. A copy of the fully-executed Recovery Agreement is included in Attachment D.

- Vegetation disturbing activities shall not be conducted during the primary nesting season of migratory birds protected under the Migratory Bird Treaty Act (April 1 through July 15). However, if the schedule for the Proposed Action shifts (Section 4.13), and vegetation disturbing activities would occur during the nesting season of migratory birds, further

conservation measures would be necessary to protect these species, such as pre-construction nest surveys.

- The Proposed Action Schedule is protective of the core nesting season of raptors (April 1 through July 15). If the schedule for the Proposed Action shifts, or if a nesting raptor is discovered within ¼-mile of construction activity, the activity shall cease in that area until Reclamation is consulted.

- The Proposed Action Schedule partially overlaps with the bald eagle nesting period (October 15 through July 31) and the golden eagle nesting period (December 15 through July 15). There are no documented eagle nests with 1 mile of the Proposed Action. If an active eagle nest is discovered within a half mile of the Proposed Action, the activity shall cease in that area until Reclamation is consulted.

- Since the Proposed Action would take place in critical habitat of the federally-listed Gunnison sage-grouse, Reclamation consulted with FWS regarding effects of the Proposed Action on the species and its critical habitat (Attachment D). To protect breeding and nesting Gunnison sage-grouse, the Proposed Action shall be implemented outside of breeding or nesting periods of sage-grouse (outside the period of March through July), with the following exception: in the Lower Proposed Action Area, ground smoothing and reseeding of the irrigated hay meadows may occur between the timeframe of August 1 through May 15. During construction in sagebrush areas, topsoil shall be saved and then redistributed after completion of construction activities, and disturbed areas shall be seeded with a suitable seed mix that is beneficial for grouse habitat (a BLM-prescribed mix of appropriate bunch grasses, forbs, and sagebrush).

No further ESA consultation would be required for the Proposed Action, unless other listed species are encountered during construction. In the event that other listed species are encountered during construction, the Company 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.

4.8 Cultural Resources

Reclamation and the Colorado State Historic Preservation Office (SHPO) have entered into a Memorandum of Agreement (MOA) to mitigate the Proposed Action's adverse effects to cultural resources (Attachment E). The MOA commits Reclamation to complete historic resource documentation of the existing ditch and structures prior to construction activities in accordance with the guidance for Level I documentation found in "Historic Resource Documentation, Standards for Level I, II and III Documentation" (COAHP 2013), and to post this documentation on the Reclamation Western Colorado Area Office's cultural resources webpage (https://www.usbr.gov/uc/wcao/rm/cr/index.html). The Company is an invited signatory in the MOA.

In the event that cultural and/or paleontological resources are discovered during construction, the Company must stop construction activities until Reclamation has completed consultation with the SHPO and appropriate measures are implemented to protect or mitigate the discovered resource. The MOA must be fully executed prior to initiating construction activities for the Proposed Action.

4.9 Agricultural Resources & Soils

The following BMPs and environmental commitments would be implemented to minimize and mitigate impacts to agricultural resources and soils:

- During construction, topsoil shall be saved and then redistributed after completion of construction activities.
- Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used to minimize soil erosion and prevent soil erosion from entering water bodies during construction.
- All disturbed areas shall be smoothed, shaped, contoured and reseeded to as near their pre-project conditions as practicable.
- Lands previously in agricultural production shall be returned to agricultural production following construction.

4.10 Recreation & Visual Resources

The following BMPs and environmental commitments would be implemented to minimize and mitigate impacts on recreation and visual resources:

- During construction, individuals may be recreating on BLM land involved with the Proposed Action. 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, wildlife, or the public from falling through. Where trench covers would not be practical, wildlife escape ramps shall be used.
- Following construction, the Proposed Action Area shall be graded and vegetated to match the surrounding landscape as much as possible. Overall, the level of change to the visual characteristics of the landscape in and around the Proposed Action Area during and following construction will be low to moderate, and not out of character with the surrounding landforms, or with the rural-agricultural character of the vicinity.

4.11 Livestock Grazing

The timing of grazing on the BLM cattle allotments would not largely coincide with construction of the Proposed Action; however, the following commitments shall be implemented to mitigate impacts to livestock grazing allotments:

- Notification to the grazing permit holder(s) shall be made if construction is to occur during a grazing period. Project personnel shall cooperate with the grazing permit holder(s) to avoid conflicts with grazing operations.
- Pipeline trenches left overnight shall be kept to a minimum to reduce potential entrainment of livestock.

- Construction holes or pipeline trenches left open overnight shall be covered. 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 utilized.

- Access to the grazing allotments shall not be affected by the Proposed Action.

- Temporarily disturbed BLM lands shall be revegetated with a BLM-recommended seed mix containing grasses and forbs palatable for forage and beneficial for Gunnison sage-grouse.

4.12 Hazardous Materials, Waste Management & Pollution Prevention

Environmental impacts from hazardous materials or waste related to the Proposed Action involve potential spills or leaks of motor fuels and lubricants. Fuel and lubricant spills have the potential to impact soil and water resources, but because of the relatively small amounts of such materials that would be used in the Proposed Action Area (i.e., a 55-gallon drum), impacts from accidental spills or leaks are expected to be minimal.

During construction, the use, storage and disposal of hazardous materials and wastes within the Proposed Action Area will be managed in accordance with all federal, state, and local standards, including the Toxic Substances Control Act of 1976, as amended (15 USC 2601, et seq., 40 CFR Part 702-799, and 40 CFR 761.1-761.193). Any trash or solid wastes generated during the Proposed Action will be properly disposed offsite.

The following BMPs and environmental commitments would be implemented with regard to hazardous materials, waste management, and pollution prevention:

- 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.

- 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.

- A spill response plan shall be prepared for areas of work where spilled contaminants could flow into water bodies. All employees and workers, including those under separate contract, will be briefed and made familiar with this plan. The plan will be developed prior to initiation of construction.

- A spill response kit, which includes appropriate-sized spill blankets, shall be easily accessible and onsite at all times.

- Onsite supervisors and equipment operators shall be trained and knowledgeable in the use of spill containment equipment.

- All spills, regardless of size, shall be cleaned up promptly and contaminated soil shall be disposed of at an approved facility.

- Appropriate federal and Colorado authorities shall be immediately notified in the event of any contaminant spill. Any spills on BLM lands will be reported to BLM promptly. 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 BLM concurrent with the filing of the reports to the involved Federal agency or State government.

4.13 Sequence & Timing of the Proposed Action

The following provides an approximate outline of the sequence of construction, in order of priority of activities. Note that the timing of activities is protective of special status species (Section 4.7), and Reclamation must be notified prior to working outside the prescribed timings.

- Middle Proposed Action Area: Buried pipe would be installed during the irrigation off-season, during the period of October through March. Reseeding and final mop-up would occur either during the period of October through March, or following July 15.

- Upper Proposed Action Area: Buried pipe outside the existing ditch alignment would be installed during the period of August through February. Construction in the existing ditch alignment (buried pipe and head gate repair) would be accomplished during the period of October through February. Reseeding and final mop-up would occur either during the period of October through February, or following July 15.

- Lower Proposed Action Area: Pipeline installation and ditch abandonment/backfilling activities would occur during the period of August through March. Ground smoothing and reseeding of the irrigated hay meadows in the Lower Proposed Action Area would occur during the timeframe of August 1 through May 15.

- Habitat Pipeline: The habitat pipeline would be installed any time of the year, provided vegetation clearing and grubbing are conducted outside the period of April 1 through July 15.

- Optional Existing Diversion Structure Repair: This repair would take place during the period of October through February.

4.14 Permits, Licenses and Approvals Needed to Implement the Proposal

The following permits, licenses, or approvals (and their statuses) are needed to implement the Proposed Action:

- BLM Right-of-Way Acknowledgment (obtained by the Company in December 2016).

- Right-of-Way approvals from private landowners with land involved in the Proposed Action, obtained by the Company.

- Stormwater Management Plan, to be submitted to the Colorado Department of Public Health and Environment (CDPHE) by the construction contractor prior to construction disturbance. A copy of this plan shall be provided to Reclamation.

- 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). A copy of this plan shall be provided to Reclamation.

- Utility clearance, obtained by the Company from WAPA for work near the high-voltage powerline corridor in the Proposed Action Area. Work approaching WAPA structures or overhead lines closer than 20 feet is not permitted.

- Utility clearances, to be obtained by the construction contractor prior to construction activities from Delta Montrose Electric Association, Fruitland Domestic Water Company, Fruitland Irrigation Company, and any other utility in the area.

- CWA Section 401/404: Because the Proposed Action is exempt from CWA Section 404 (Attachment B), no Clean Water Act Section 401 Water Quality Certification would be required; however, water quality BMPs (as outlined above) would be implemented to protect water resources.

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

This EA was prepared by Rare Earth Science, LLC, of Paonia, Colorado, for Reclamation and Cedar Canon Iron Springs Ditch & Reservoir Company. 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
- Colorado Department of Transportation, Grand Junction, CO
- U.S. Department of Energy, Western Area Power Administration, Montrose, CO
- Southern Ute Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe (Uintah and Ouray Reservation)

5.2 EA Comments

In compliance with NEPA, the Draft EA and Draft FONSI were released for a 30-day public review period (via Reclamation's website at http://www.usbr.gov/uc/wcao/envdocs/index.html) beginning August 7, 2017. Reclamation did not receive any comments.

5.3 Distribution

Notice of the public review period and availability of the Draft EA (Reclamation's website) was distributed to Company shareholders, private landowners adjacent to and within 0.5-mile of the Proposed Action, and the organizations and agencies listed in Attachment A, and was also announced through a press release. 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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FIGURES

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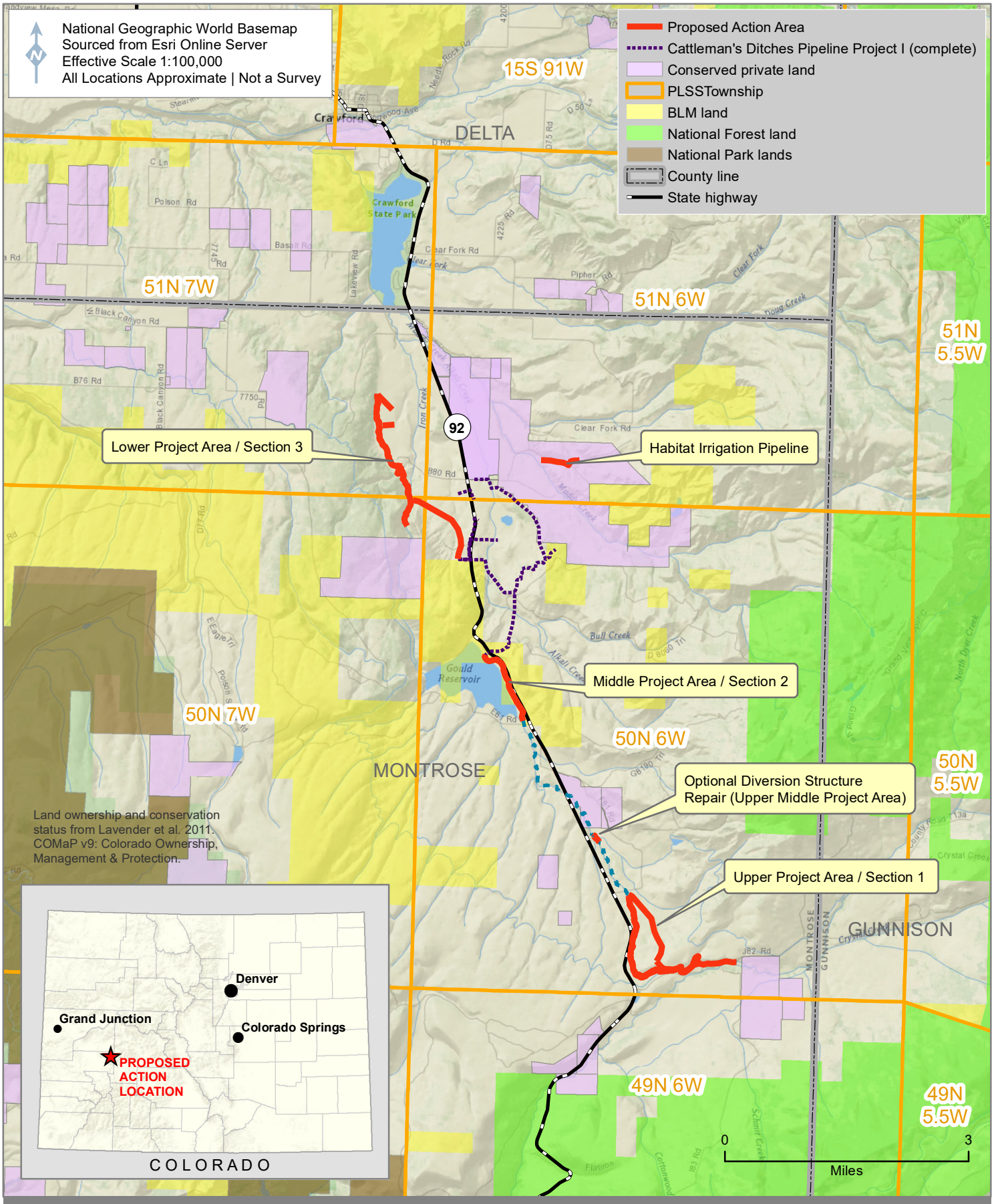
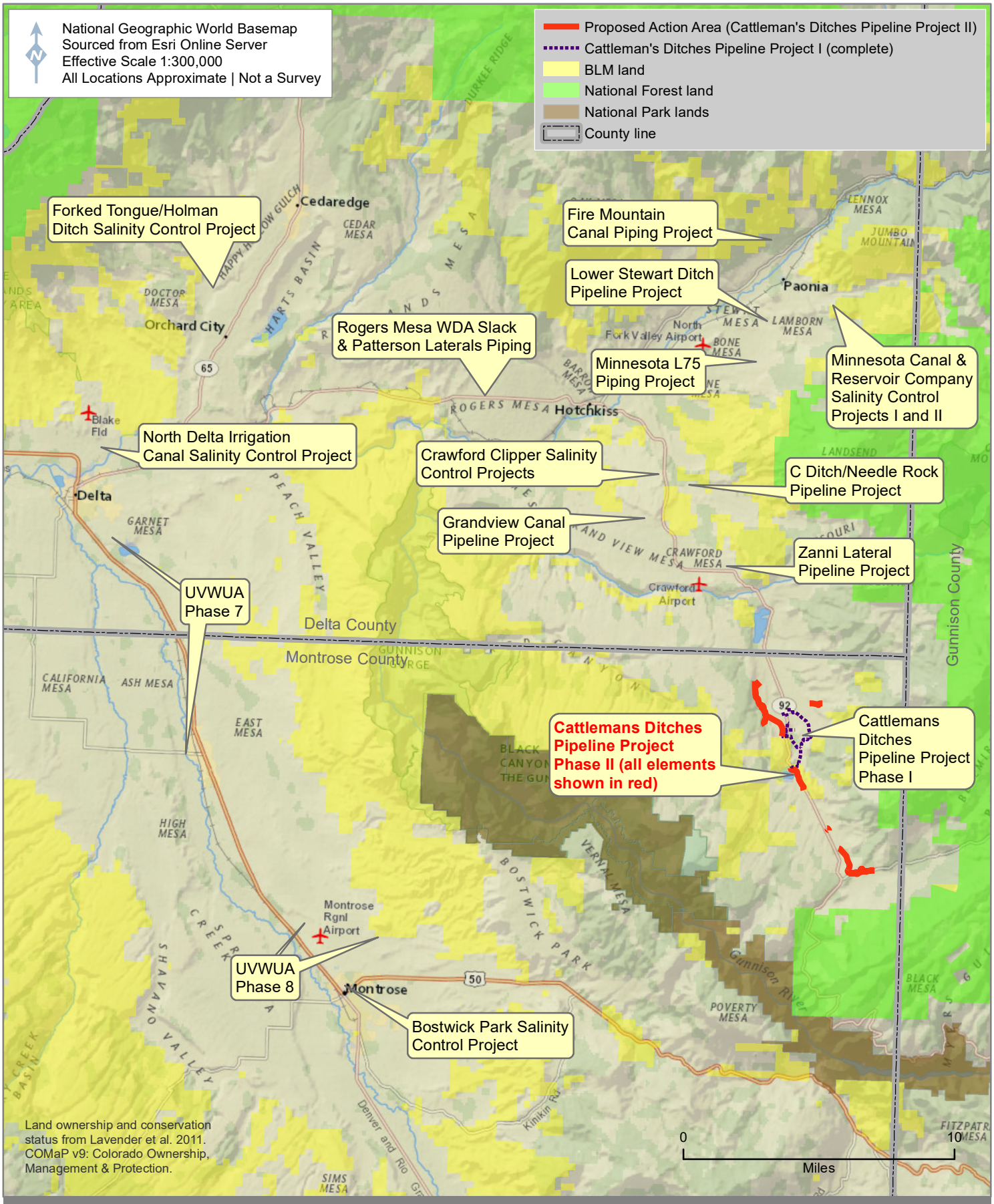


Environmental Assessment
Montrose County, Colorado
www.rareearthscience.com
Map by D. Reeder | April 2017

Regional & Local Locator Maps

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE 1



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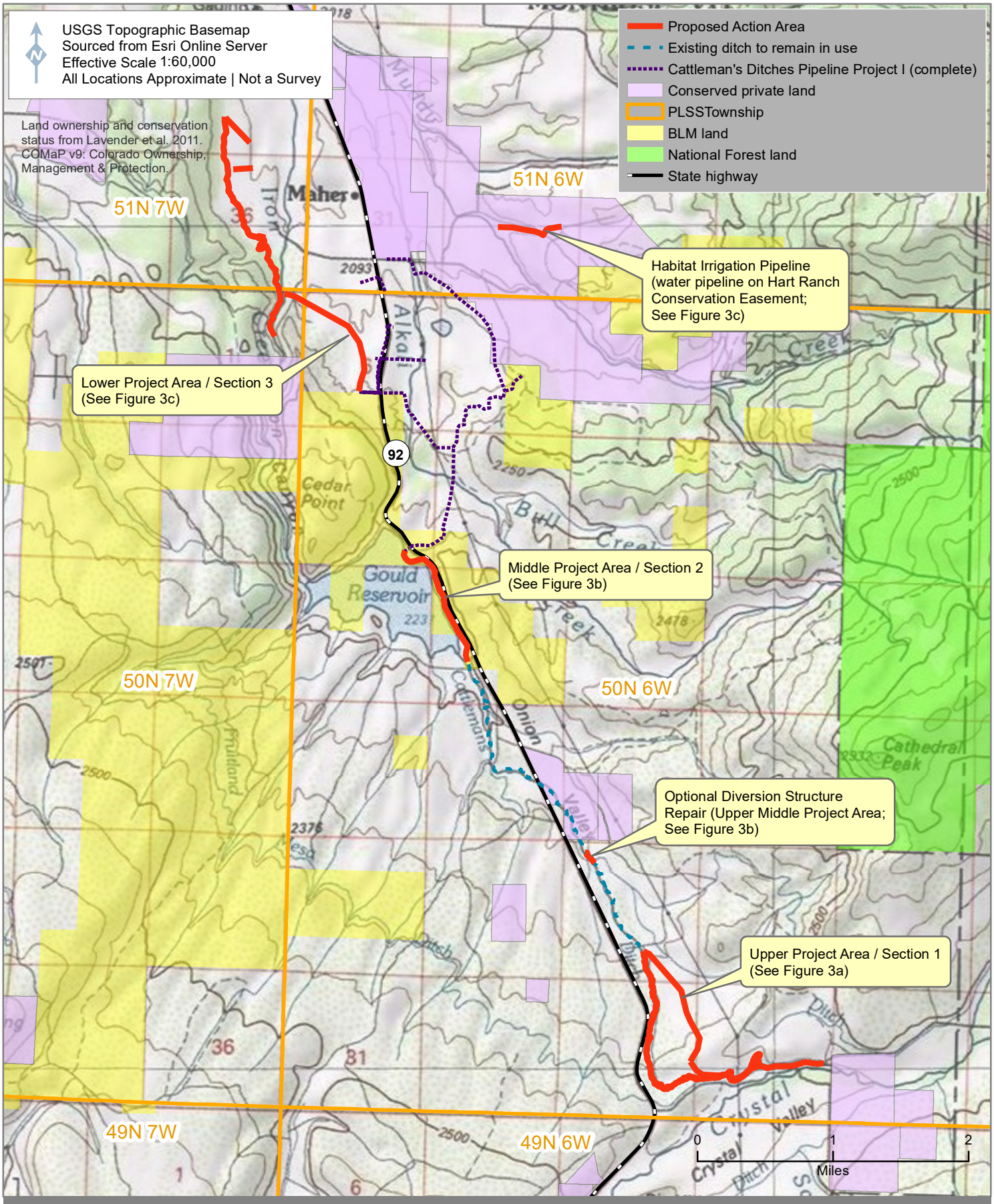
Montrose County, Colorado
www.rareearthscience.com
Map by D. Reeder | April 2017

Regional Salinity Control Projects

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
2



Environmental Assessment
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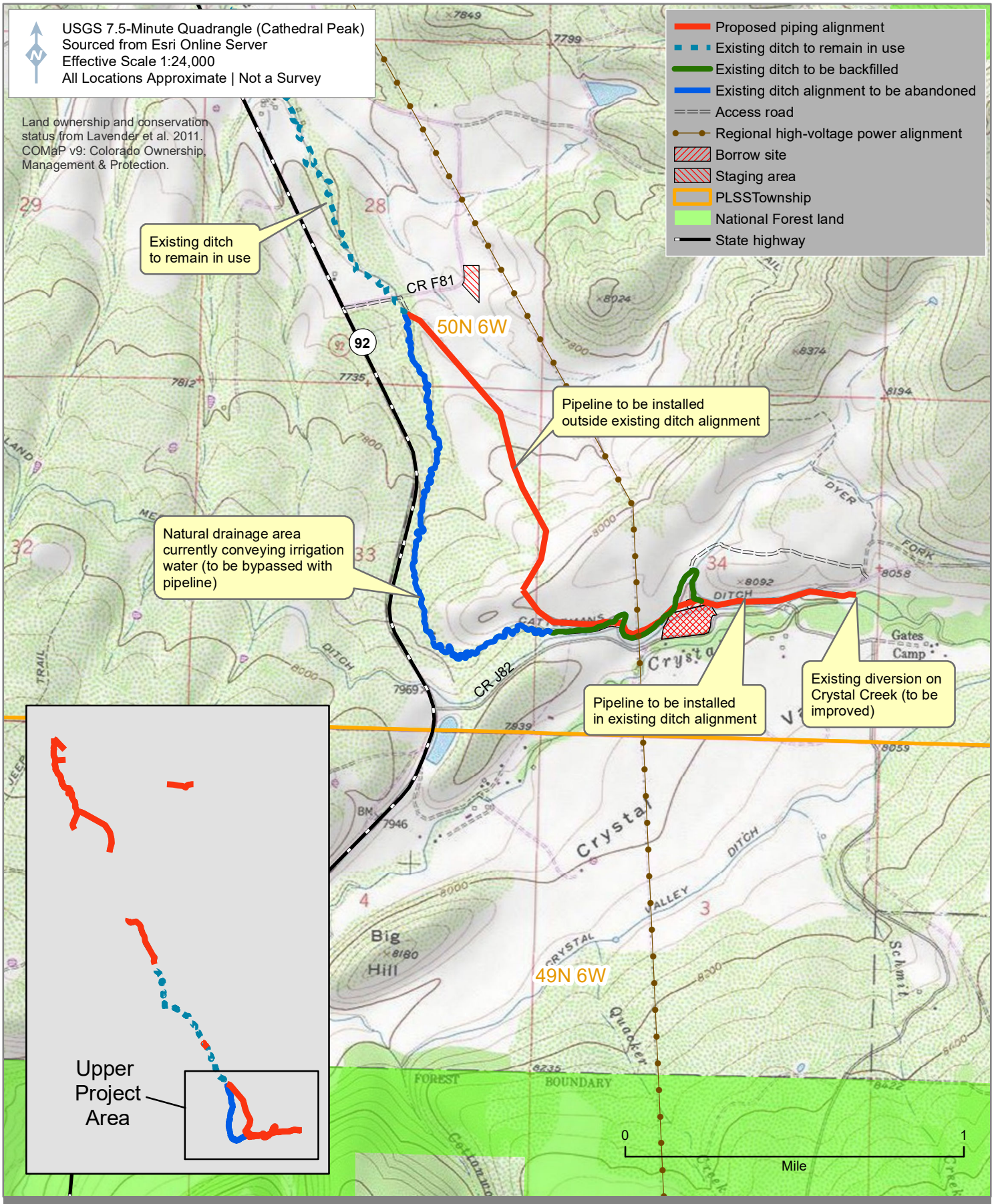
Topography & Land Status Overview

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE **3**



Environmental Assessment
Montrose County, Colorado
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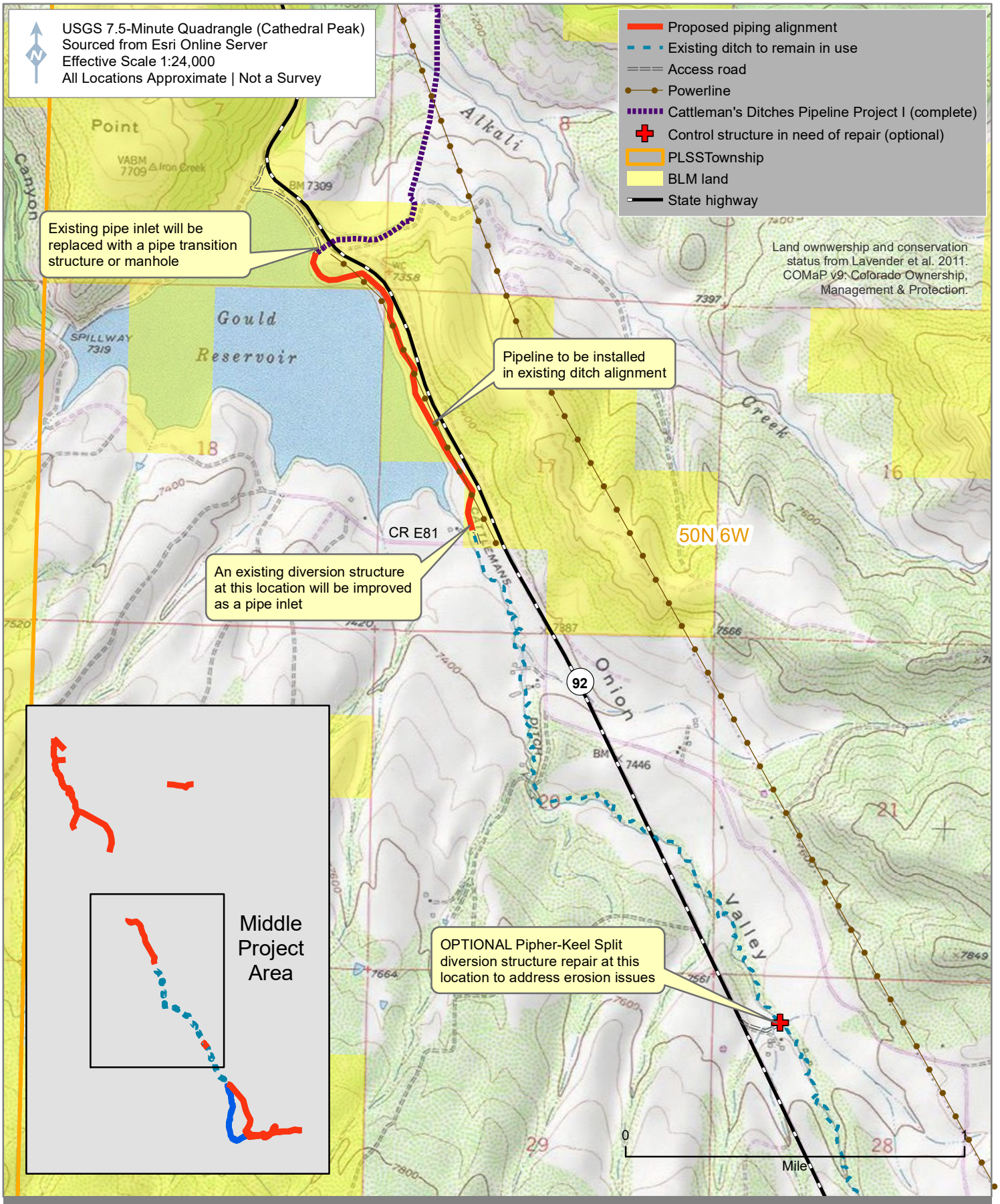
Map by D. Reeder | April 2017

Topographic Map
Upper Project Area

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
3a



Environmental Assessment
Montrose County, Colorado
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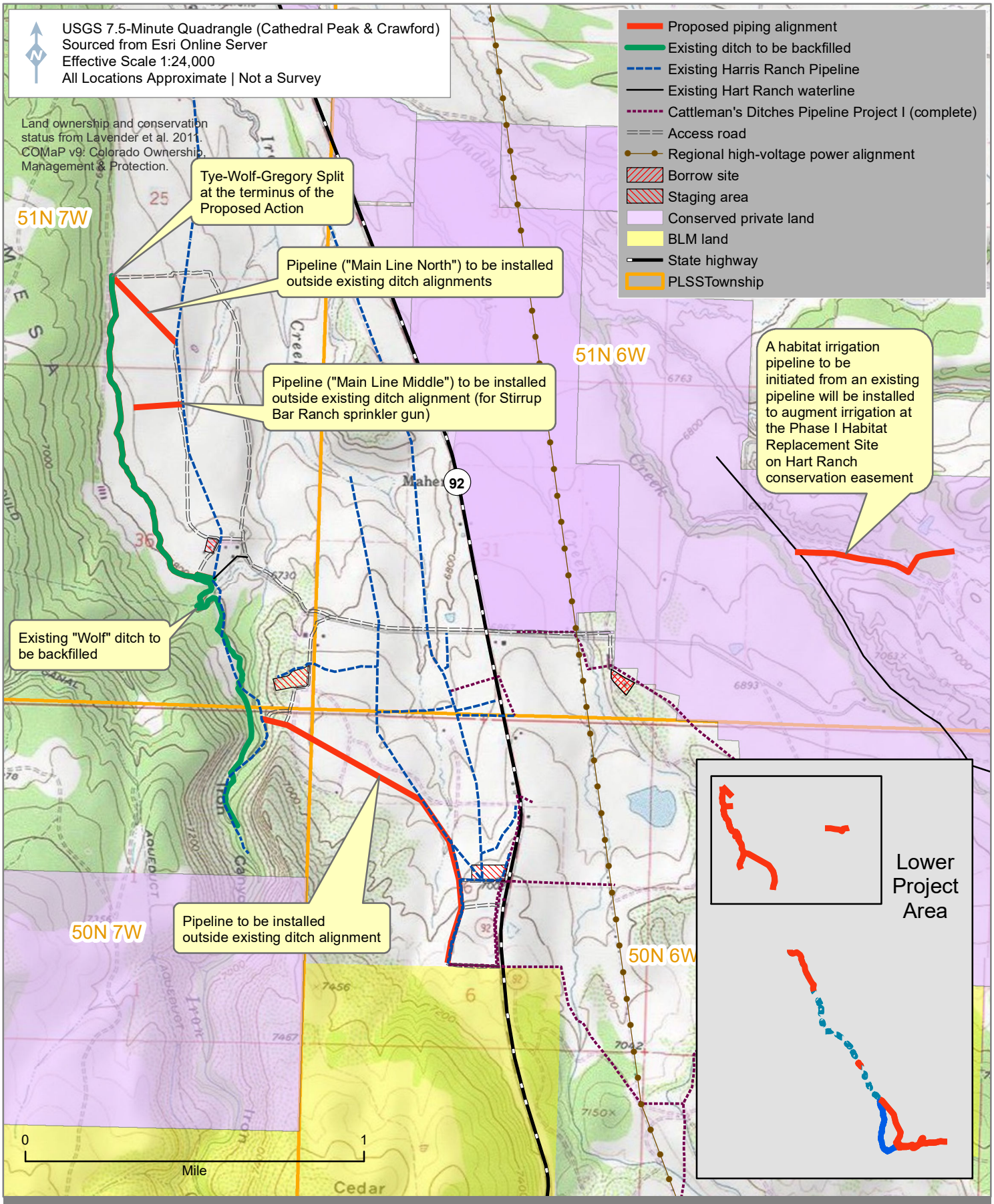
Map by D. Reeder | April 2017

Topographic Map
Middle Project Area

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
3b



Environmental Assessment
Montrose County, Colorado
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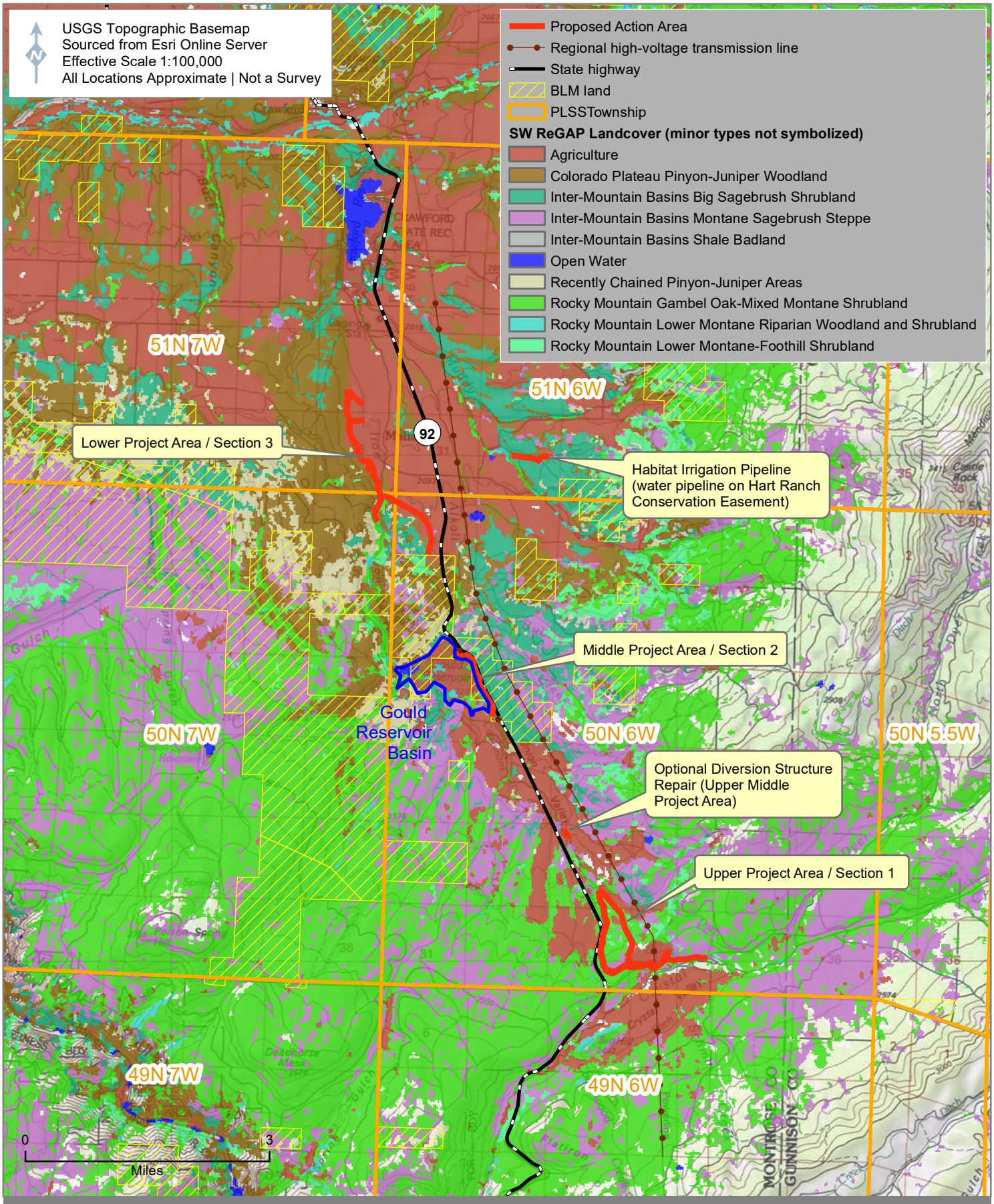
Topographic Map
Lower Project Area

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
3c



Environmental Assessment
Montrose County, Colorado
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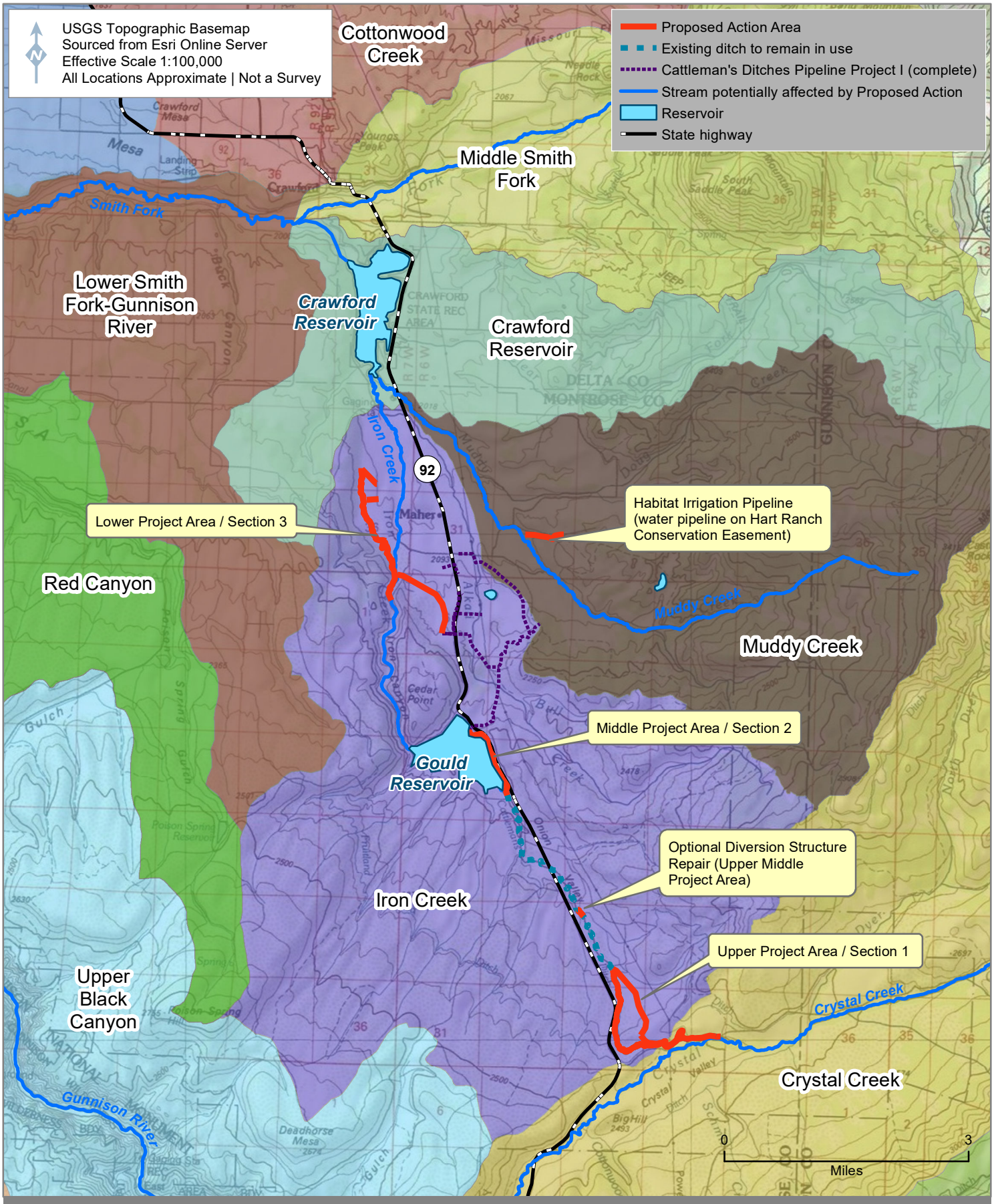
Landcover Overview

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
4



Environmental Assessment
Montrose County, Colorado
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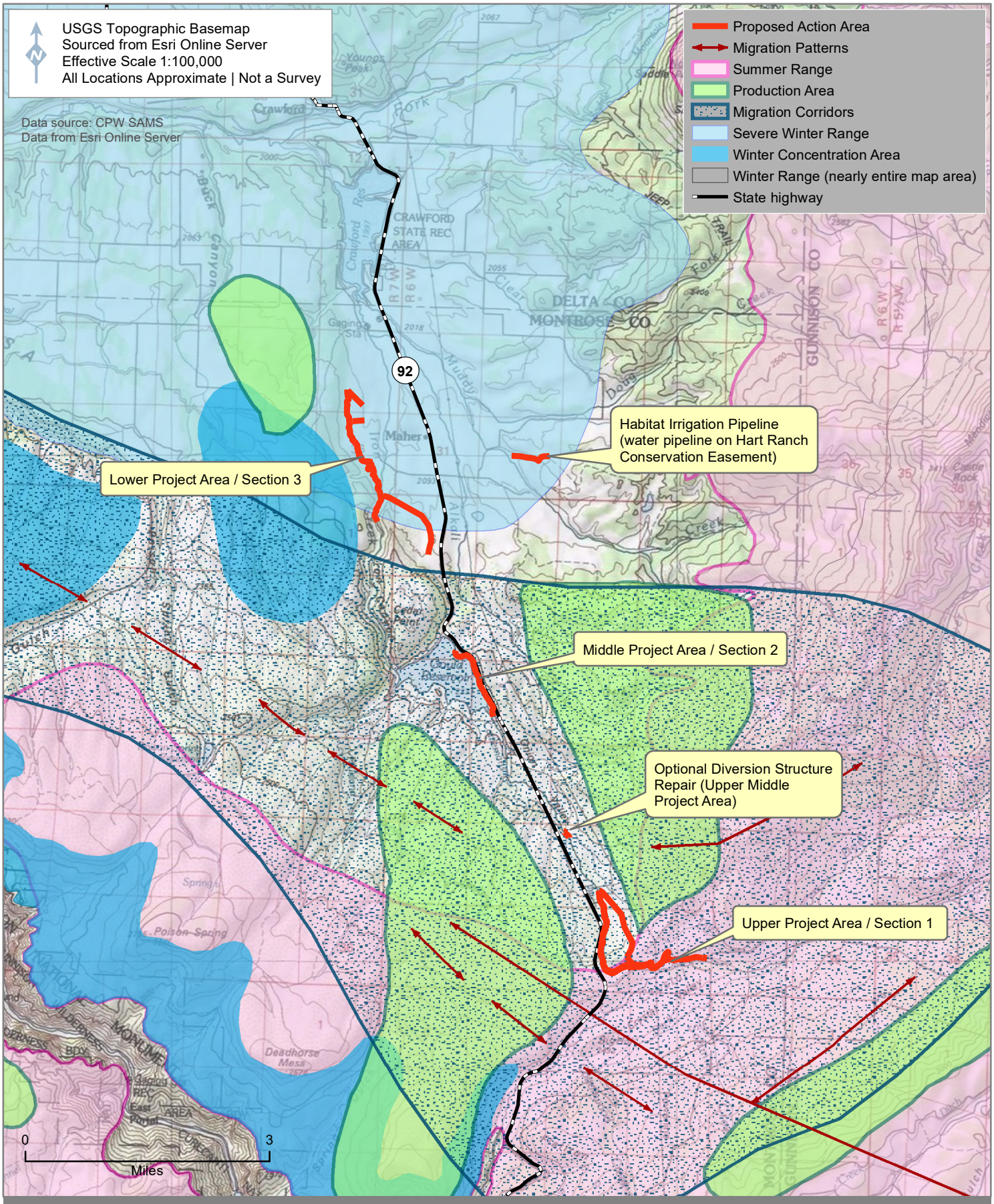
Map by D. Reeder | April 2017

Hydrologic Units Map of the Project Vicinity

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
5

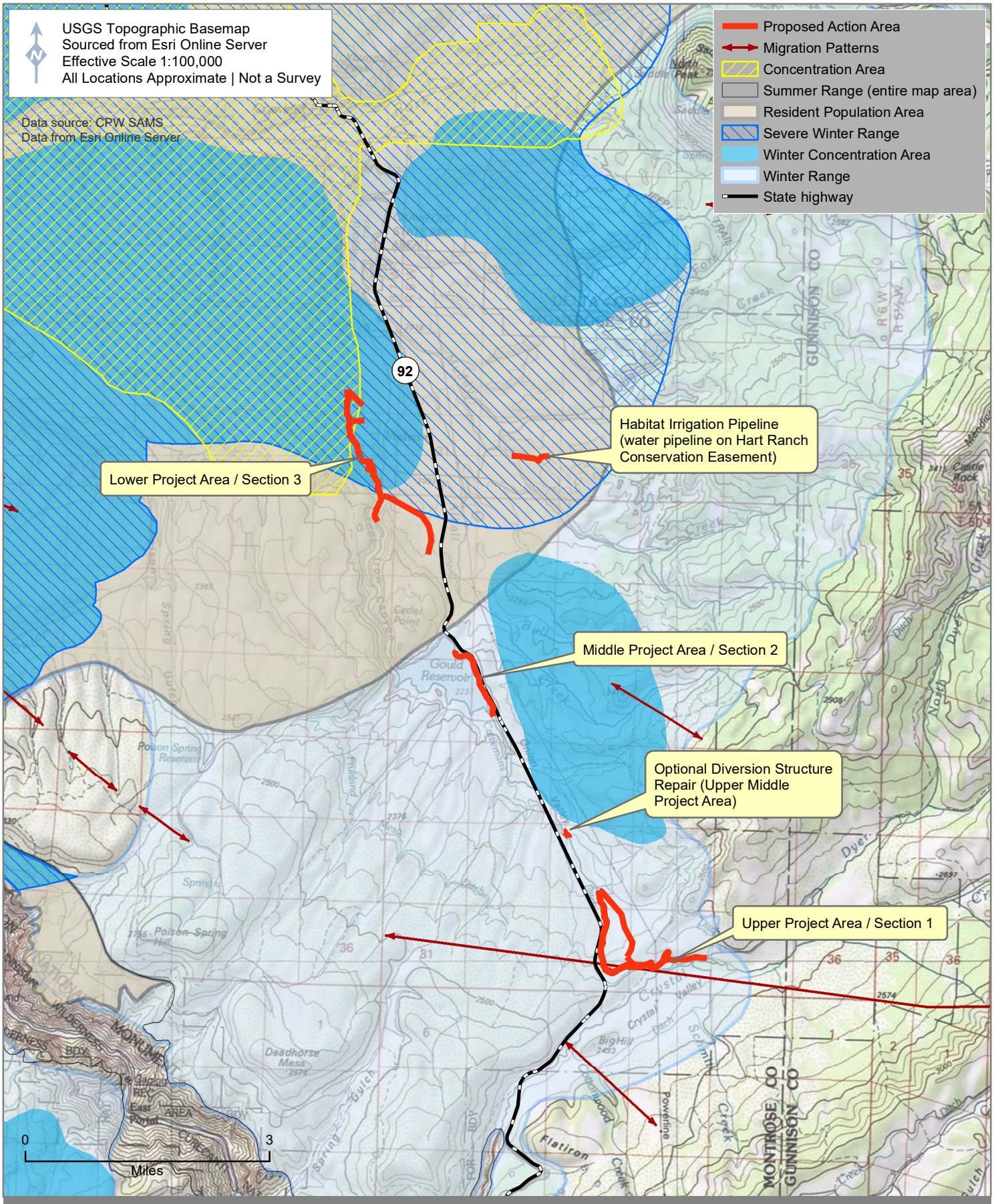


Environmental Assessment
Montrose County, Colorado
www.rareearthscience.com
Map by D. Reeder | April 2017

Elk Range Map

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE 6



Environmental Assessment
Montrose County, Colorado
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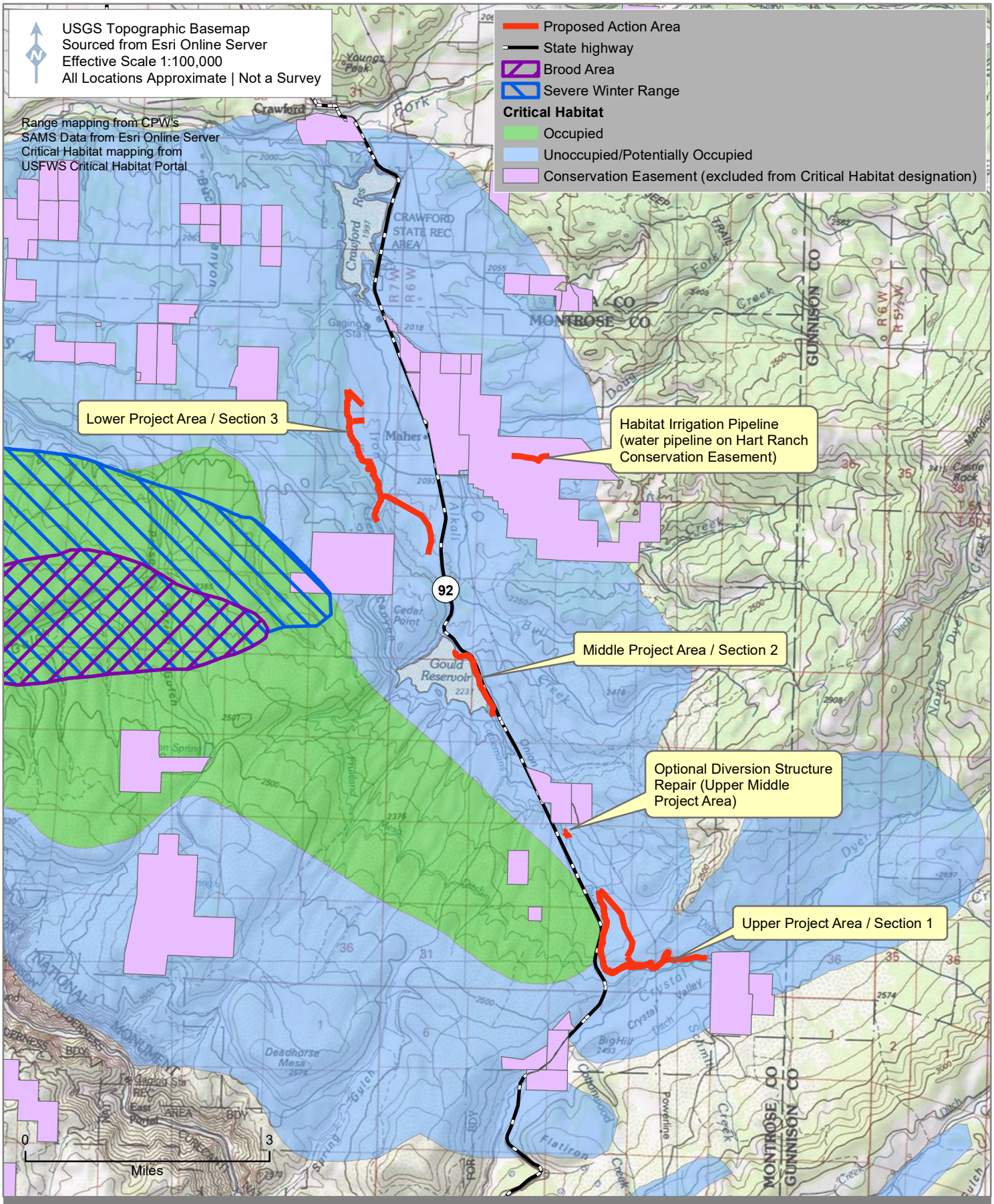
Map by D. Reeder | April 2017

Mule Deer Range Map

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
7

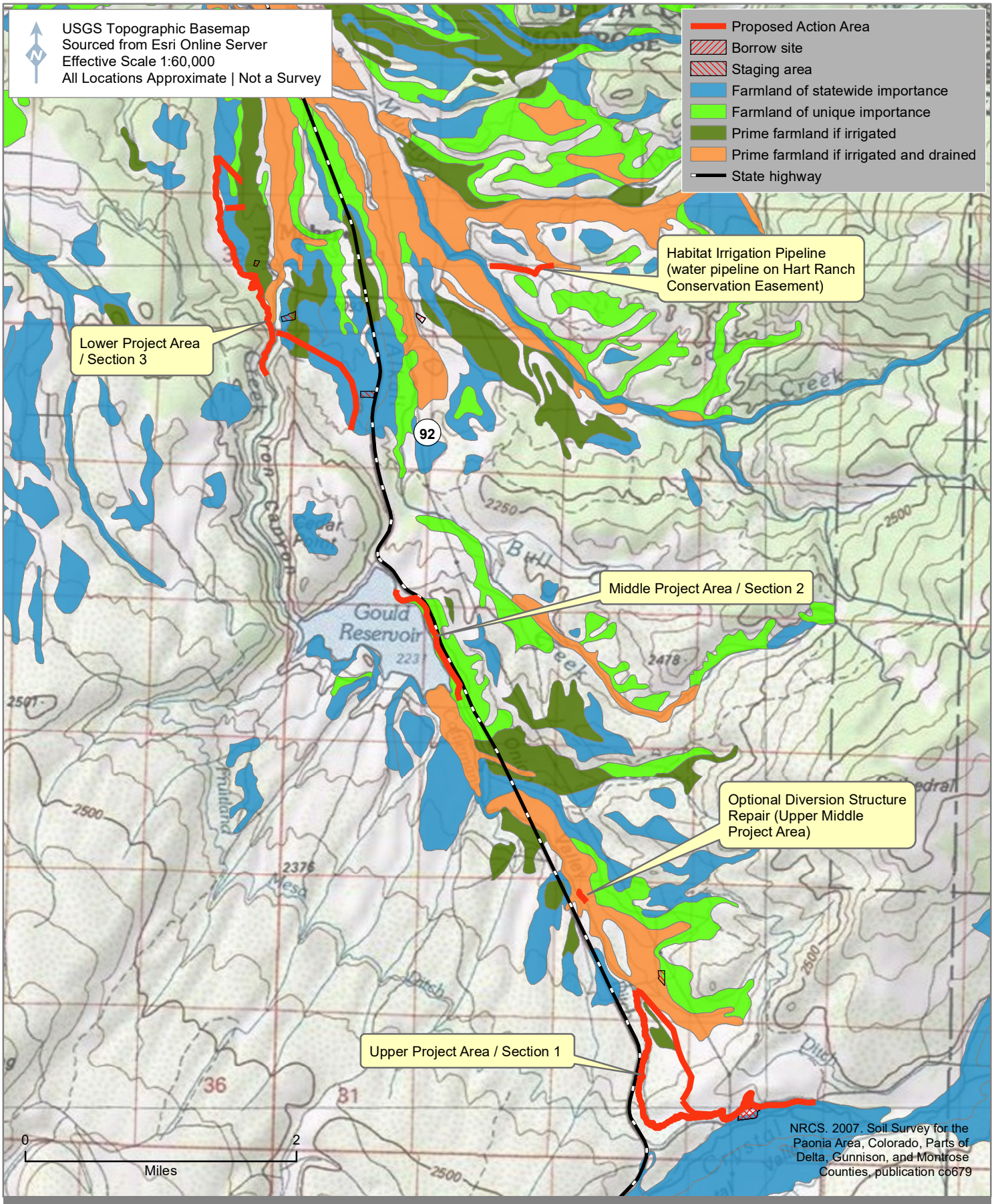


Environmental Assessment
Montrose County, Colorado
www.rareearthscience.com
Map by D. Reeder | April 2017

Gunnison Sage-Grouse Critical Habitat

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
8



Environmental Assessment
Montrose County, Colorado
www.rareearthscience.com
Map by D. Reeder | April 2017

Soils of Agricultural Significance

CATTLEMAN'S DITCHES PIPELINE PROJECT II

FIGURE
9

ATTACHMENT A

Distribution List

All shareholders of Cedar Springs Iron Canon Ditch & Reservoir Company
All landowners within an 0.5-mile radius of the Proposed Action
Cathedral Domestic Water Company
Cathedral Peak Ranch Subdivision Association
Cedar Canyon Iron Springs Irrigation Co.
Citizens for a Healthy Community
Colorado Department of Transportation
Colorado Historical Society
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
Fruitland Irrigation Company
Montrose County Planning & Development
Montrose County Road & Bridge
Montrose Daily Press
The North Fork Merchant Herald
Town of Crawford
U.S. Army Corps of Engineers
U.S. Bureau of Land Management
U.S. Department of Agriculture Natural Resources Conservation Service
U.S. Department of Energy Western Area Power Admin.
U.S. Fish and Wildlife Service
Western Slope Conservation Center

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ATTACHMENT B

Section 404 Clean Water Act Exemption Documentation

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

October 17, 2016

Regulatory Division (SPK-2015-00706)

Cedar Canon Iron Springs Ditch & Reservoir Company
Attn: Mr. Don Hart
3500 Clear Fork Road
Crawford, Colorado 81415
don@donsdirectory.com

Dear Mr. Hart:

This concerns your proposed Cattleman's Ditches Salinity Control Project which will involve the replacement of approximately 32,510 linear-feet of irrigation ditch with approximately 25,440 linear-feet of buried irrigation pipe. The project site is located within Sections 7, 17, 18, 28, 33, and 34, Township 50 North, Range 6 West, and within Sections 25 and 36, of Township 51 North, Range 7 West, New Mexico Principal Meridan, centrally located at Latitude 38.60201°, Longitude -107.57191°, south of the Town of Crawford, in northeastern Montrose County, Colorado.

Based on the information provided by Rare Earth Science, dated September 23, 2016, we have determined that the proposed work is the type of activity that is included in the Section 404(f) exemption found at 33 C.F.R. Part 323.4(a)(3) Construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches. Discharges associated with irrigation ditch construction, including conversion of ditch to pipe, with the intent of reducing seepage losses and improving conveyance efficiency, is included in this exemption. Note that the discharges associated with improvements to water control structures, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption. Therefore, a Department of the Army Permit is not required for this work. Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented onsite to achieve this end.

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

-2-

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

Please refer to identification number SPK-2015-00706 in any correspondence concerning this project. If you have any questions, please contact me at the Colorado West Regulatory Branch, 400 Rood Avenue, Room 224, Grand Junction, Colorado 81501, by email at *w.travis.morse@usace.army.mil*, or telephone at 970-243-1199 x1014. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx.*

Sincerely,

MORSE.WILLIAM.TRAVIS.1154253544

Digitally signed by MORSE.WILLIAM.TRAVIS.1154253544
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=MORSE.WILLIAM.TRAVIS.1154253544
Date: 2016.10.17 11:25:53 -06'00'

Travis Morse
Senior Project Manager
Colorado West Branch
Regulatory Division

cc:
Ms. Dawn Reeder, Rare Earth Science, LLC, P.O. Box 1245, Paonia, CO 81428, dawn@rareearthscience.com
Mr. Teddy Martinez, Applegate Group, Inc., 1499 West 120th Avenue, Suite 200, Denver, CO 80234, teddymartinez@applegategroup.com
Mr. Steve White, Montrose County Planning and Development, 317 South 2nd Street, Montrose, CO 81401, swhite@montrosecounty.net
Ms. Jennifer Ward, U.S. Department of Interior, Bureau of Reclamation, Western Colorado Area Office-Grand Junction, 445 West Gunnison, Suite 221 Grand Junction, CO 81501, jward@usbr.gov
Ms. Lesley McWhirter, U.S. Department of Interior, Bureau of Reclamation, Western Colorado Area Office-Grand Junction, 445 West Gunnison, Suite 221 Grand Junction, CO 81501, lmcwhirter@usbr.gov
Ms. Sarah Fowler, U.S. Environmental Protection Agency, Wetlands and Watershed Unit, 8 EPR-EP, 1595 Wynkoop Street, Denver, CO 80202-1129, fowler.sarah@epa.gov

Irrigation Exemption Summary

US Army Corps of Engineers

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

FARM OR STOCK POND OR IRRIGATION DITCH CONSTRUCTION OR MAINTENANCE

Pursuant to Section 404 of the Clean Water Act (33 USC 1344) and Federal Regulations (33 CFR 323.4(a)(3)), certain discharges for the construction or maintenance of farm or stock ponds or irrigation ditches have been exempted from requiring a Section 404 permit. Included in the exemption are the construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not the construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption.

A Section 404 permit is required if either of the following occurs:

(1) Any discharge of dredged or fill material resulting from the above activities which contains any toxic pollutant listed under Section 307 of the Clean Water Act shall be subject to any applicable toxic effluent standard or prohibition, and shall require a permit.

(2) Any discharge of dredged or fill material into waters of the United States incidental to the above activities must have a permit if it is part of an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. Where the proposed discharge will result in significant discernible alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration. For example, a permit will be required for the conversion of a wetland from silvicultural to agricultural use when there is a discharge of dredged or fill material into waters of the United States in conjunction with construction of dikes, drainage ditches, or other works or structures used to effect such conversion. A discharge which elevates the bottom of waters of the United States without converting it to dry land does not thereby reduce the reach of, but may alter the flow or circulation of, waters of the United States.

If the proposed discharge satisfies all of the above restrictions, it is automatically exempted and no further permit action from the Corps of Engineers is required. If any of the restrictions of this exemption will not be complied with, a permit is required and should be requested using ENG Form 4345 (Application for a Department of the Army permit). A nationwide permit authorized by the Clean Water Act may be available for the proposed work. State or local approval of the work may also be required.

For general information on the Corps' Regulatory Program please check our web site at www.spk.army.mil/regulatory. For additional information or for a written determination regarding a specific project, please contact the Corps at the following addresses:

Sacramento Main Office-1325 J Street, Room 1480, Sacramento, CA 95814	(916) 557-5250
Redding Field Office-152 Hartnell, Redding, CA 96002	(530) 223-9534
Reno Office-300 Booth Street, Room 2103, Reno, NV 89509	(775) 784-5304
Intermountain Region Main Office-533 West 2600 South, Suite 150, Bountiful, UT 84010	(801) 295-8380
Colorado West Regulatory Branch-400 Rood Ave., Room 224, Grand Junction, CO 81501	(970) 243-1199
Durango Office-1970 E 3rd Ave, #109, Durango, CO 81301	(970) 259-1604
St. George Office-196 E Tabernacle Street Room 30, St. George, UT 84770	(435) 986-3979

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ATTACHMENT C

Habitat Impact Evaluation

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FINAL

CATTLEMAN'S DITCH PIPELINE PROJECT II
PRELIMINARY HABITAT ASSESSMENT REPORT

Prepared for-
Cedar Canon Iron Springs Ditch & Reservoir Company
80050 B80 Road
Crawford, Colorado 81415
970/921-5999

Prepared by-
Wildlife and Natural Resource Concepts & Solutions, LLC
61614 Hwy 90
Montrose, Colorado 81403
970/240-1861

July 28, 2017

Contents

TABLES

LIST OF FIGURES

ATTACHMENTS

Introduction

The Cedar Canon Iron Springs Ditch and Reservoir Company has entered into an agreement with the United States Bureau of Reclamation (BOR) to fund Phase II of their piping project. Approximately 6 miles of the Cedar Canon Iron Springs Ditch (also known as Cattleman's Ditch) will be replaced with underground irrigation pipe in three separate project sections (See Figure 1). The ditch company has already completed Phase I of the piping. Wildlife habitat along the ditch is expected to be lost due to the construction of the pipeline and the drying of associated wetlands along the ditch. The BSCP stipulates that no net riparian/wetland habitat value be lost as a result of the construction of their projects. Wildlife and Natural Resource Concepts & Solutions, LLC. (WNRCS) was contracted to provide a habitat assessment for the project. A habitat replacement site was constructed on the Hart Ranch during the Phase I project to offset the 15.66 habitat units lost due to the piping of the ditch. This habitat replacement site for Phase I is expected to generate 23.32 habitat units when fully implemented, and the excess habitat units will be used to offset the Phase II habitat loss. After the habitat replacement site was built, it was determined that additional water might be needed to maintain it properly. The ditch company will install a habitat water pipeline to the site to ensure the habitat replacement remains viable. The new water line will not cross any wetland/riparian vegetation so no habitat assessment was needed for this site.

Project Description

Approximately 6 miles of the Cattleman's Ditch will be replaced with underground irrigation pipe in three separate project sections (See Figure 1). Approximately, 1.5 miles of the current ditch (and potentially an additional 599 feet at a divider structure) will be placed in underground pipe, with the ditch backfilled and reseeded with native plant species. Another 3.6 miles of pipe will be buried outside the current ditch alignment. Approximately 2.8 miles of ditch will be abandoned by backfilling with soil or slope-grading and reseeded with native plant species. Another 1.7 miles of ditch will be abandoned and left unfilled because it is located in a very deeply incised drainage. The area is impractical to backfill and provides a natural drainage for rainfall, snowmelt, and irrigation runoff in the area. See Figures 2 thru 6 for piping plans in the three project sections. The project (including the habitat water pipeline) is described in more detail and analyzed in an Environmental Assessment.

Site Description

The northern end of the Project is located approximately 3.5 miles south-by-southeast of Crawford, Colorado and near the old town of Maher (See Figure 1). The upper portion of the project (Section 1) starts at the diversion of Cattleman's Ditch from Crystal Creek, approximately 5 miles above and south of Gould Reservoir (See Figure 1). The Phase II project is located to the south and the west of Phase I piping. The average elevation of the project is approximately 7,500 feet.

Topography & Soils

The project site is located in foothills and meadows below Cathedral Peak, with the elevation ranging from 6800 feet to 8000 feet. Soils are primarily derived from Mancos Shale and seepage in such soils result in development of wetland and riparian fringe vegetation along the ditch. These soils also

contribute salt and selenium loading in the Gunnison and Colorado River basins. The soil composition is predominately Apishapa silty clay loam, with 0 to 5% slope, and Midway-Gaynor silty clay loams, with 10 to 40% slopes.

Hydrology

Water for Cattleman's Ditch is diverted from Crystal Creek and traverses the Crystal Creek, Iron Creek and Muddy Creek hydrologic units of the Gunnison River watershed. The piping project will cross many sections of irrigated hayfields, as well as, drier areas in sagebrush shrublands and pinion-juniper woodlands. Water in the ditch supports wetland/riparian fringe vegetation, but there are no significant areas of down gradient seepage outside the ditch margins. One segment of the ditch in Section 3 is being abandoned and backfilled. The water flowing to that segment is released from Gould Reservoir and carried in Iron Creek to the diversion box on the creek. Most large cottonwoods and shrubby vegetation along the ditch and near the creek are expected to survive the backfilling. A mini-excavator will be used to carefully backfill the ditch rather than blading it in with a bulldozer. Another segment of the ditch in Section 1 is being abandoned without being backfilled. This segment is not included in the habitat assessment. The portion of the ditch is in a natural drainage that will continue to carry runoff water from rainfall, snowmelt, and wastewater associated with fields irrigated by Dryer Fork Ditch located to the north. The hydrology along this segment of the ditch should persist as it will continue to receive and convey water from other water sources even when Cattleman's Ditch is piped. Most cottonwoods along the ditch are anticipated to persist water coming from nearby creeks (Crystal Creek and Iron Creek), other small natural drainages, and runoff from irrigated fields.

Vegetation

The majority of Cattleman's Ditch traverses upland habitat dominated by the pinion-juniper community. Common plant species in this environment include rocky mountain juniper (*Juniperus scopuloru*), pinion pine (*Pinus edulis*), Gambel oak (*Quercus gambelii*), sumac (*Rhus trilobata*), four-wing saltbush (*Atriplex canescens*), big sagebrush (*Artemisia tridentata*), showy milkweed (*Asclepias speciosa*), rabbitbrush (*Ericameria nauseosa*), tansy aster (Aster pattersonii), and western wheatgrass (*Pascopyrum smithii*). In the wetted fringe along the ditch and in riparian areas the ditch passes through, the vegetation includes species such as narrowleaf cottonwood (*Populus angustifolia*), coyote willow (*Salix exigua*), cattail (*Typha latifolia*), alkali bulrush (*Schoenoplectus maritimus*), sedges (*Carex Sp.), and* wild rose (*Rosa woodsii*). The area also contains non-native species such as whitetop (*Cardaria draba*), Canada thistle (*Cirsium arvense*), cheatgrass (*Bromus tectorum*), and common mullein (*Verbascum thapsus)*. (Kershaw, et. al. 1998; Mammoser Don, et. al. 2007; and Western Society of Weed Science, 1996). Table 1 summarizes prevalent plant species found in the project area.

Table 1. Summary of Vegetation Found in Project Area

Common Name	Scientific Name	Wetland Indicator
Alfalfa	*Medicago sativa*	UPL
Alkali bulrush	*Schoenoplectus maritimus*	OBL
Big sagebrush	*Artemisia tridentata*	UPL
Bluejoint	*Calamagrostis Candensis*	FACW
Burdock*	*Arctium sp*	UPL
Canada thistle*	*Cirsium arvense*	FAC

Common Name	Scientific Name	Wetland Indicator
Cattail	*Typha latifolia*	OBL
Cheatgrass*	*Bromus tectorum*	UPL
Clematis	*Clematis sp*	FAC-FACU
Coyote willow	*Salix exigua*	FACW
Dogbane	*Apocynum cannibinum*	FAC
Four-Wing saltbush	*Atriplex canescens*	UPL
Gambel oak	*Quercus gambelii*	UPL
Goldenrod	*Solidago canadensis*	FACU
Gumweed	*Grindelia squarrosa*	FACU
Houndstongue*	*Cynoglossum officinale*	FACU
Mullein, common*	*Verbascum thapsus*	FACU
Narrowleaf cottonwood	*Populus angustifolia*	FACW
Orchard grass	*Dactylis glomerata*	UPL
Pinion pine	*Pinus edulis*	UPL
Prickly lettuce	*Lactuca serriola*	FACU
Primrose	*Primula sp*	OBL-FACU
Rabbitbrush	*Ericameria nauseosa*	UPL
Ricegrass	*Achnatherum sp*	UPL
Rocky mountain juniper	*Juniperus scopulorus*	UPL
Russian knapweed*	*Acroptilon repens*	UPL
Scouring rush	*Equisetem hymale*	FACW
Showy milkweed	*Asclepias speciosa*	FAC
Silver Lupine	*Lupinus argenteus*	FACU
Smooth brome	*Bromus inermis*	UPL
Sumac, three-leaf	*Rhus trilobata*	UPL
Tall fescue	*Festuca arundinacea*	UPL
Tall Larkspur	*Delphinium occidentale*	FACU
Tansy aster	*Aster pattersonii*	UPL
Timothy grass	*Phleum pratense*	FAC
Utah juniper	*Juniperus osteosperma*	UPL
Western wheatgrass	*Pascopyrum smithii*	FACU
Whitetop*	*Lepidium draba* (L.) Desv.	FAC
Wild rose	*Rosa woodsii*	FACU
Yellow sweet clover	*Melilotis officinales*	FACU

*Colorado State listed noxious weed (CDA 2016).

Wildlife Use

Colorado Parks and Wildlife species activity habitat data for mule deer, elk, and Gunnison sage-grouse in the project area are described below and is available online. Piping Section 1 is considered summer range for elk and winter range for mule deer. Section 1A and Section 2 are considered to be in winter range for mule deer and a migration corridor for elk. Section 3 is listed as in severe winter range for elk and hosts a resident population of mule deer, as well as being a winter concentration area. Loss of the limited wetland/riparian vegetation along the wetted fringe of the ditch should have little effect on

these mammals as it makes up only a very small percentage of the habitat. Special status species with the potential to be in the area are leopard frogs (state species of concern) and Gunnison sage-grouse. The project is in mapped critical Gunnison sage-grouse habitat, but not of high quality and therefore not very likely to be occupied by sage-grouse. The simple open channel with fringe vegetation creates year-round habitat for small birds, mammals, and amphibians. The loss of open water when the ditch is piped will affect these species, but the proximity of Iron Creek, Fruitland Ditch, and Dyer Fork Ditch will minimize the impact.

Habitat Mapping & Evaluation

Methods

Michael Zeman from Wildlife and Natural Resource Concepts & Solutions, LLC surveyed the project area for vegetation, weeds, and wildlife habitat on April 27 & 29, 2016 and May 3 & 19, 2016. The proposed project area was overlaid on a 2015 aerial photo using ArcGIS software to evaluate where wetland/riparian vegetation would be lost when the canal is piped. Photographs were taken of each habitat type (See Photo Log in Attachment 1). The piping sites were examined and habitat impacts calculated using the methodology described in *Basinwide Salinity Control Program: Procedures for Habitat Replacement* (BOR 2013) written by the U.S. Bureau of Reclamation and the U.S. Fish and Wildlife Service. Additional guidance on interpretation of these procedures was provided by BOR personnel. Wetland/Riparian vegetation impacted by the proposed piping plan was mapped and impacted segments divided into two categories with similar habitat type: willow fringe and herbaceous fringe. Habitat types received a score based on the value of 10 criteria and multiplied by the area of impact. Acreages of wetland/riparian vegetation expected to be lost during the piping of the canal were determined by field observations and detailed mapping. Field data was entered into ArcMap and acreages were calculated. Table 2 shows the habitat scoring for the two habitat types. Table 3 shows the size of the impacted habitat areas on the ditch. Table 4 contains the justification for scoring of each criterion in the two habitat types. The Photo Log in Attachment 1 contains pictures of typical willow, and herbaceous fringe habitat found throughout the three Project sections. It also contains photos of a portion of the ditch recommended for abandonment.

Results

It is estimated that 2.906 habitat units would be lost in the piping of the project. Habitat loss and other comments are noted, per habitat type, below. See Table 4 for more information.

Table 2. Habitat quality scoring summary

Criteria	Description	Willow Fringe	Herbaceous Fringe
1	Vegetation Diversity	3	3
2	Stratification	4	2
3	Native vs. Non-Native species	6	6
4	Noxious Weeds	6	6
5	Overall Vegetative Condition	4	4
6	Interspersion of open water	1	1
7	Connectivity	4	4

Criteria	Description	Willow Fringe	Herbaceous Fringe
8	Uniqueness or Abundance	3	3
9	Water Supply	5	4
10	Alteration	3	3
	THV	39	36
	Habitat Quality Score (HQS)	3.9	3.6
	Mapped Acres	0.424	0.348
Total	Habitat Units	1.654	1.253
2.906	Habitat Units Loss	1.654	1.253

Willow Fringe. Habitat loss for willow fringe should be minimal (0.424 acres) because much of the project area is in or adjacent to irrigated hay fields and pasture lands. The existing fringe is narrow or absent due to farming and livestock grazing. This component consists mostly of coyote willow, sedges, bulrush, and a small amount of cattail. The piping project will cause the loss of most of these species along the ditch. Portions of the ditch outside the irrigated hay meadows are usually surrounded by numerous species of upland trees, shrubs, forbs, and grasses and the wetted fringe is only a small component of the habitat. Most cottonwoods and larger woody species located around the ditch are expected to survive because of the water supply from irrigated fields or creeks.

Herbaceous Fringe. Construction of the pipeline in herbaceous fringe (0.348 acres) will reduce the number of wetland plant species in the very narrow wetted area around the ditch. Vegetative diversity is low in this area, and plants consist of sedge, scouring rush, and bulrush. Most of these areas are grazed by livestock and wildlife. Upland species such as rabbitbrush, yellow clover, tansy aster, and western wheatgrass are found growing to the edge of ditch banks and are expected to persist after the ditch is piped.

Table. 3. Cedar Canon Iron Springs Ditch & Reservoir Company, Habitat Impacted Acres

Habitat Segment	Habitat Type	Feet of Ditch	Width of Impact (Ft.)	Acres of Impact
S1	Willow Fringe	532	4	0.049
S2	Willow Fringe	348	1	0.008
S3	Willow Fringe	246	2	0.011
S4	Willow Fringe	143	3	0.010
S5	Willow Fringe	145	4	0.013
S6	Willow Fringe	73	3	0.005
S7	Willow Fringe	294	4	0.027
S8	Willow Fringe	96	5	0.011
S9	Willow Fringe	317	1.5	0.011
S10	Willow Fringe	179	4	0.016
S11	Willow Fringe	696	3	0.048
S12	Willow Fringe	275	2	0.013
S13	Willow Fringe	844	3	0.058
S14	Willow Fringe	503	1	0.012
S15	Willow Fringe	474	2	0.022
S16	Willow Fringe	704	4	0.065

Habitat Segment	Habitat Type	Feet of Ditch	Width of Impact (Ft.)	Acres of Impact
S17	Willow Fringe	215	4	0.020
S18	Willow Fringe	211	4	0.019
S19	Willow Fringe	144	2	0.007
			Total Acres of Impact to Willow Fringe	***0.424***
Habitat Segment	**Habitat Type**	**Feet of Ditch**	**Width of Impact (Ft.)**	**Acres of Impact**
S1	Herbaceous Fringe	1122	2	0.052
S2	Herbaceous Fringe	533	1	0.012
S3	Herbaceous Fringe	788	1	0.018
S4	Herbaceous Fringe	146	1	0.003
S5	Herbaceous Fringe	492	2	0.023
S6	Herbaceous Fringe	361	2	0.017
S7	Herbaceous Fringe	447	2	0.021
S8	Herbaceous Fringe	406	2	0.019
S9	Herbaceous Fringe	553	1	0.013
S10	Herbaceous Fringe	663	2	0.030
S11	Herbaceous Fringe	536	2	0.025
S12	Herbaceous Fringe	1672	2	0.077
S13	Herbaceous Fringe	880	2	0.040
			Total Acres of Impact to Herbaceous Fringe	***0.348***

Table 4. Habitat Loss Values, Cedar Canon Iron Springs Ditch and Reservoir Company, Phase II Piping Project, June 26, 2017.

WILLOW FRINGE

Criteria	Description	Value	Justification
1	Vegetation Diversity	3	Diversity in the willow fringe area is low. The community is comparable to a native, riverine narrow wetland fringe. Coyote willow is the most dominate species, with a few other species present in scattered locations. These plants include Western wheatgrass, cattails, scouring rush, showy milkweed, wild rose, 4-winged saltbush, rabbitbrush, and yellow sweet clover.
2	Stratification	4	There are no trees in this habitat type and shrubs species consists mostly of coyote willows with a few upland brush species growing up to the edge of the ditch. Narrow-leaved cottonwoods, Utah serviceberry, three-leaf sumac, and alder are found nearby but are outside the wetted area created by the ditch.
3	Native vs. Non-Native species	6	About 60% of the plants are native species. Coyote willow, sedges, and scouring rush, are the dominant species in these segments.
4	Noxious Weeds	6	Approximately 10% of this habitat is covered with weeds. Canada thistle, whitetop, Russian knapweed, and cheatgrass are the most prevalent weed species.
5	Overall Vegetative Condition	4	Much of the area being piped is on or near irrigated pasture land or is grazed by livestock. The grazing creates disturbances in plant growth and affects up to 40% of the vegetation.
	Disease Additional scoring	0	N/A
6	Interspersion of open water	1	The open ditch offers very little interspersion for open water.
7	Connectivity	4	This area is mostly in limited wildlife area with no habitat agreement, although a couple of properties have conservation easements on them.
8	Uniqueness or Abundance	3	The area includes aquatic plant species/habitat along the ditch, which is unique within the ecosystem. The effect it has for wildlife is minimal because it is very limited in size.

Criteria	Description	Value	Justification
9	Water Supply	5	The ditch provides a seasonal water supply for irrigation and livestock growing. There may be some stock water use during the winter months.
10	Alteration	3	The ditch flows through many active ranches and farm ground used for livestock grazing and the growing of grass hay. In these areas, the ditch conveys water and provides very little wetland/riparian habitat.
	THV	39	
	Habitat Quality Score (HQS)	3.9	
	Mapped Acres	0.424	
	Habitat Units Loss	**1.654**	

HERBACEOUS FRINGE

Criteria	Description	Value	Justification
1	Vegetation Diversity	3	Diversity in the herbaceous fringe area is low. The community is comparable to a native, riverine narrow wetland fringe; very narrow in places due to limited soil transmissivity. Sedges, scouring rush, showy milkweed, yellow clover, wild licorice, and assorted grasses are the most predominant species
2	Stratification	2	There are no trees or shrubs in this habitat type.
3	Native vs. Non-Native species	6	About 60% of the plants are native species.
4	Noxious Weeds	6	Approximately 10% of this habitat is covered with weeds. Canada thistle, whitetop, Russian knapweed, and cheatgrass are the most prevalent weed species.
5	Overall Vegetative Condition	4	Much of the area being piped is on or near irrigated pasture land or is grazed by livestock. The grazing creates disturbances in plant growth and affects up to 40% of the vegetation.
	Disease Additional scoring	0	N/A
6	Interspersion of open water	1	The open ditch offers very little interspersion for open water.
7	Connectivity	4	This area is mostly in limited wildlife area with no habitat agreement, although a couple of properties have conservation easements on them.
8	Uniqueness or Abundance	3	The area includes aquatic plant species/habitat along the ditch, which is unique within the ecosystem. The effect it has for wildlife is minimal because it is very limited in size.
9	Water Supply	4	The ditch provides a seasonal water supply for irrigation and livestock growing. There may be some stock water use during the winter months.
10	Alteration	3	The ditch flows through many active ranches and farm ground used for livestock grazing and growing grass hay. In these areas, the ditch conveys water and provides very little wetland/riparian habitat.
	THV	36	
	Habitat Quality Score (HQS)	3.6	
	Mapped Acres	0.348	
	Habitat Units Loss	**1.253**	

Total Expected Habitat Loss For Project =	***2.906***	***Habitat Units***

Conclusion

The Basinwide Salinity Control Program stipulates that no net riparian/wetland habitat value be lost as a result of the construction of their projects. Cedar Canon Iron Springs Ditch and Reservoir Company will be required to replace 2.906 habitat units as a result of their Phase II project. The habitat replacement site built for the Phase I piping project will exceed the number of habitat replacement units needed for that project by 7.66 units. The Phase II habitat losses will be offset by 2.906 of those habitat units and will leave 4.754 habitat units available for future projects.

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Western Society of Weed Science. 1996. Weeds of the West. 5th edition.

Cathedral Tank Wetland

Section 3

Staging Area

Staging Area

Staging Area

Staging Area

Habitat Pipeline

Section 2

Section 1A

Staging Area

Section 1

Staging Area

Legend

- CMII-Bfilled Ditch
- CMII-Designed_Pipe_Alignment-Sec_1-3
- Habitat_Pipeline
- CMII-Abandoned Ditch
- Staging_Area
- Cathedral_Tank_Wetland

0 0.425 0.85 1.7 Miles

Figure:

1

Date: July 6, 2017

Job #: 5 - 2016

Drawn By: MWZ

CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Location Map

Wildlife and Natural Resource Concepts & Solutions, LLC

Specializing in wildlife & wetland habitat creation & restoration.

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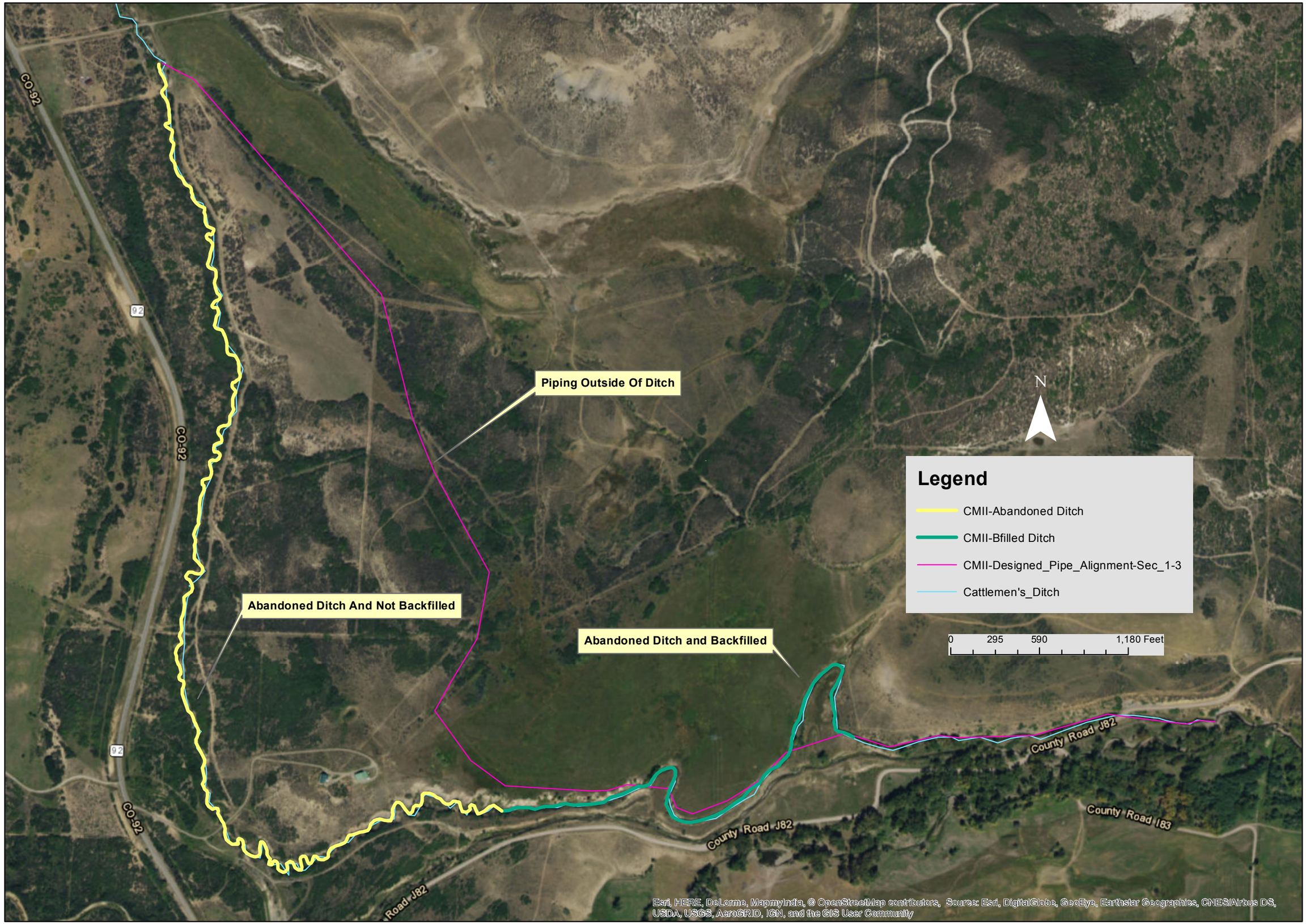

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CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Location Map

Date: July 6, 2017
Job #: 5 - 2016
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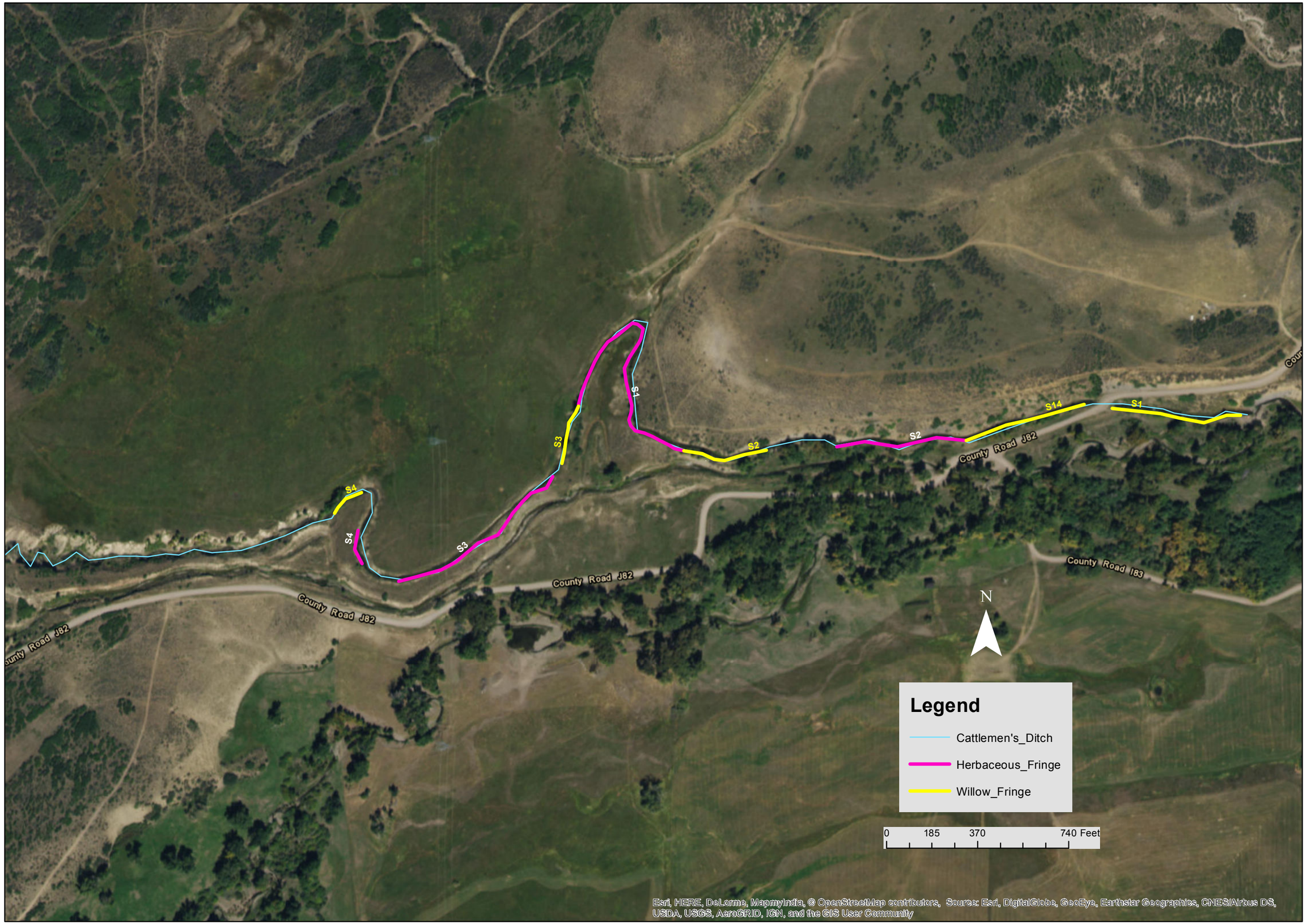
Figure:

2



CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Location Map

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Figure:

3

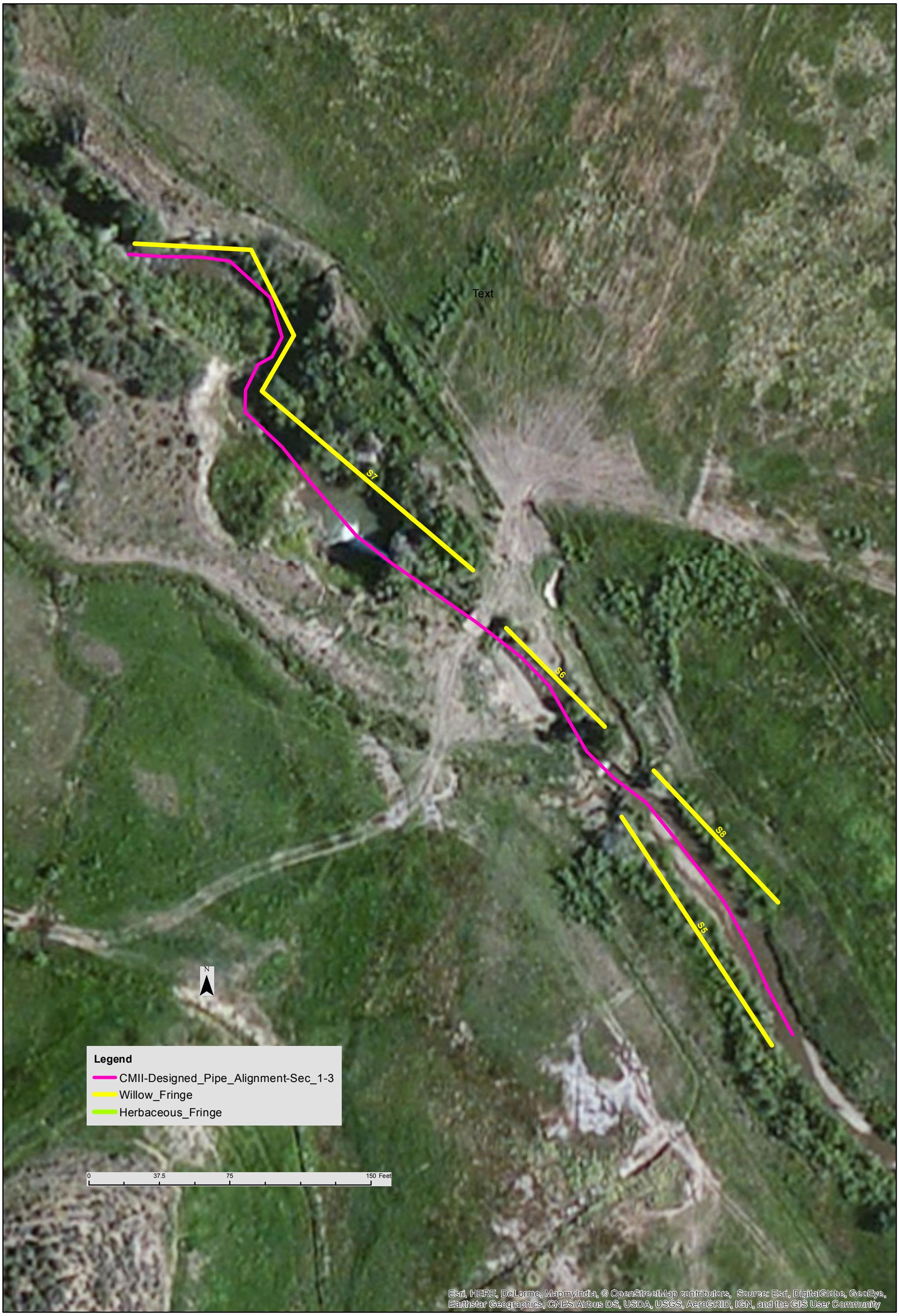

Figure: 4

Date: July 6, 2017

Job #: 5 - 2016

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CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Section 1A - Piping and Habitat Loss Segments

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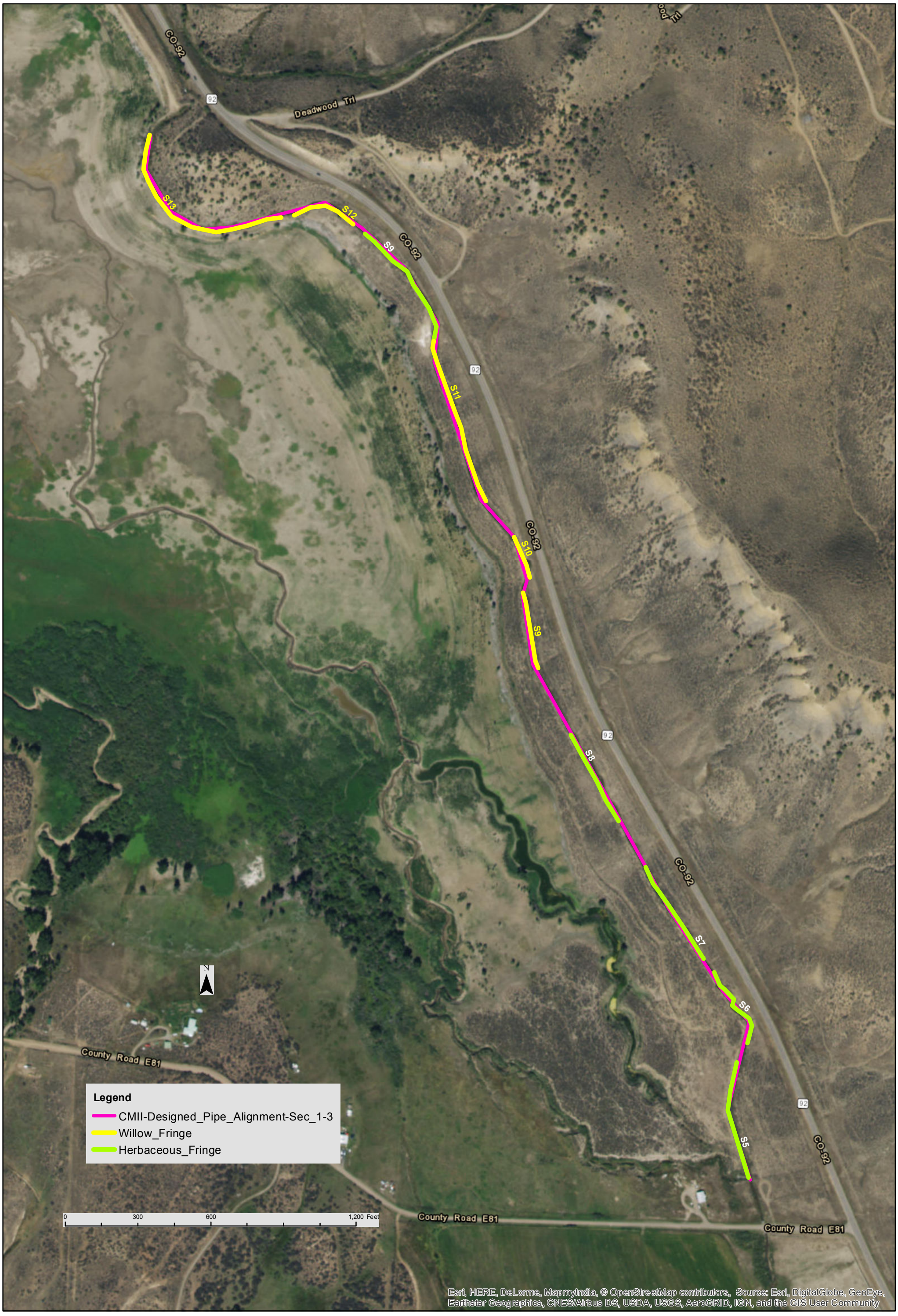

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5

Date: July 6, 2017

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CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Section 2 Piping and Habitat Loss Segments

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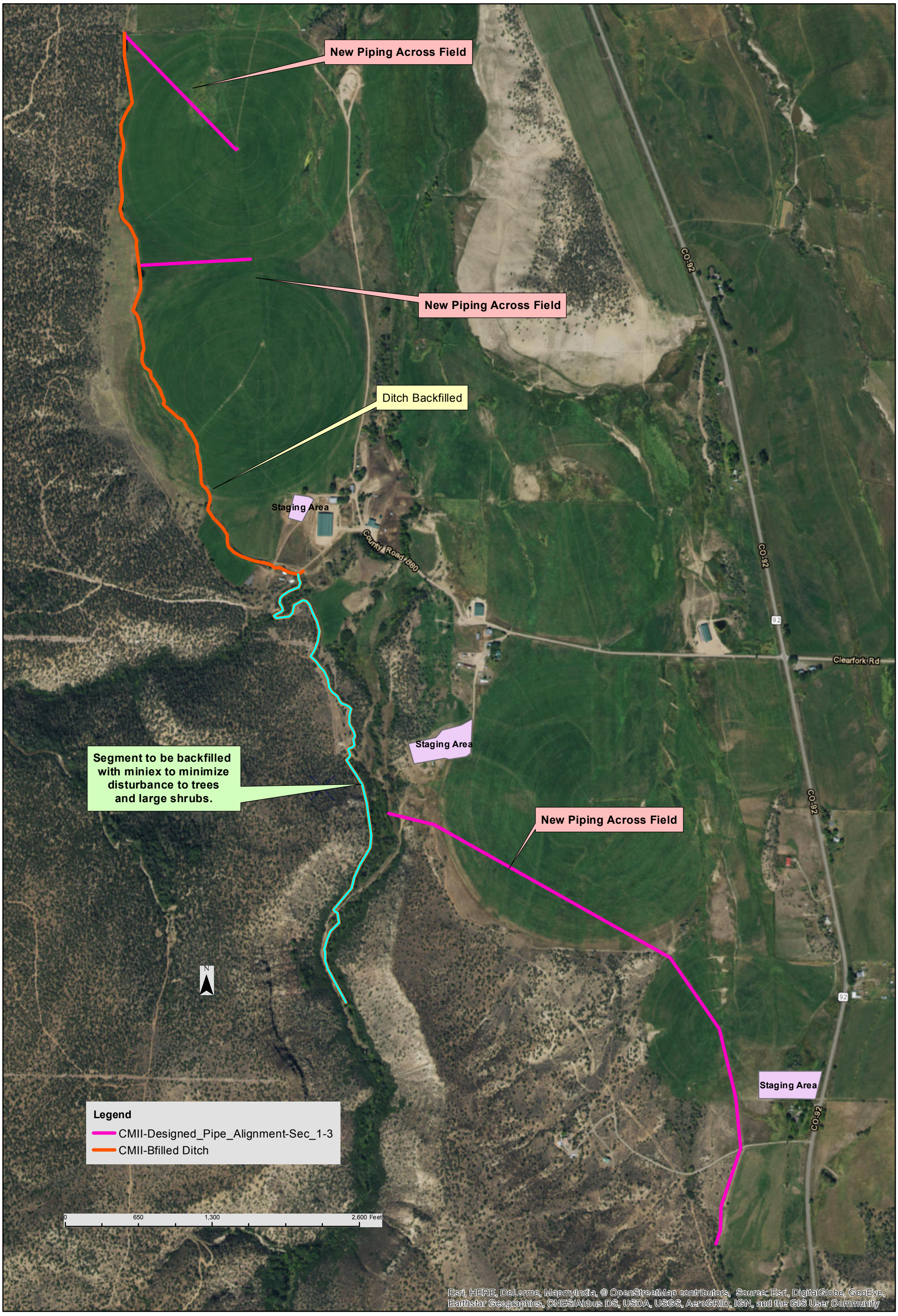

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6

Date: July 6, 2017

Job #: 5 - 2016

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CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Section 3 Piping

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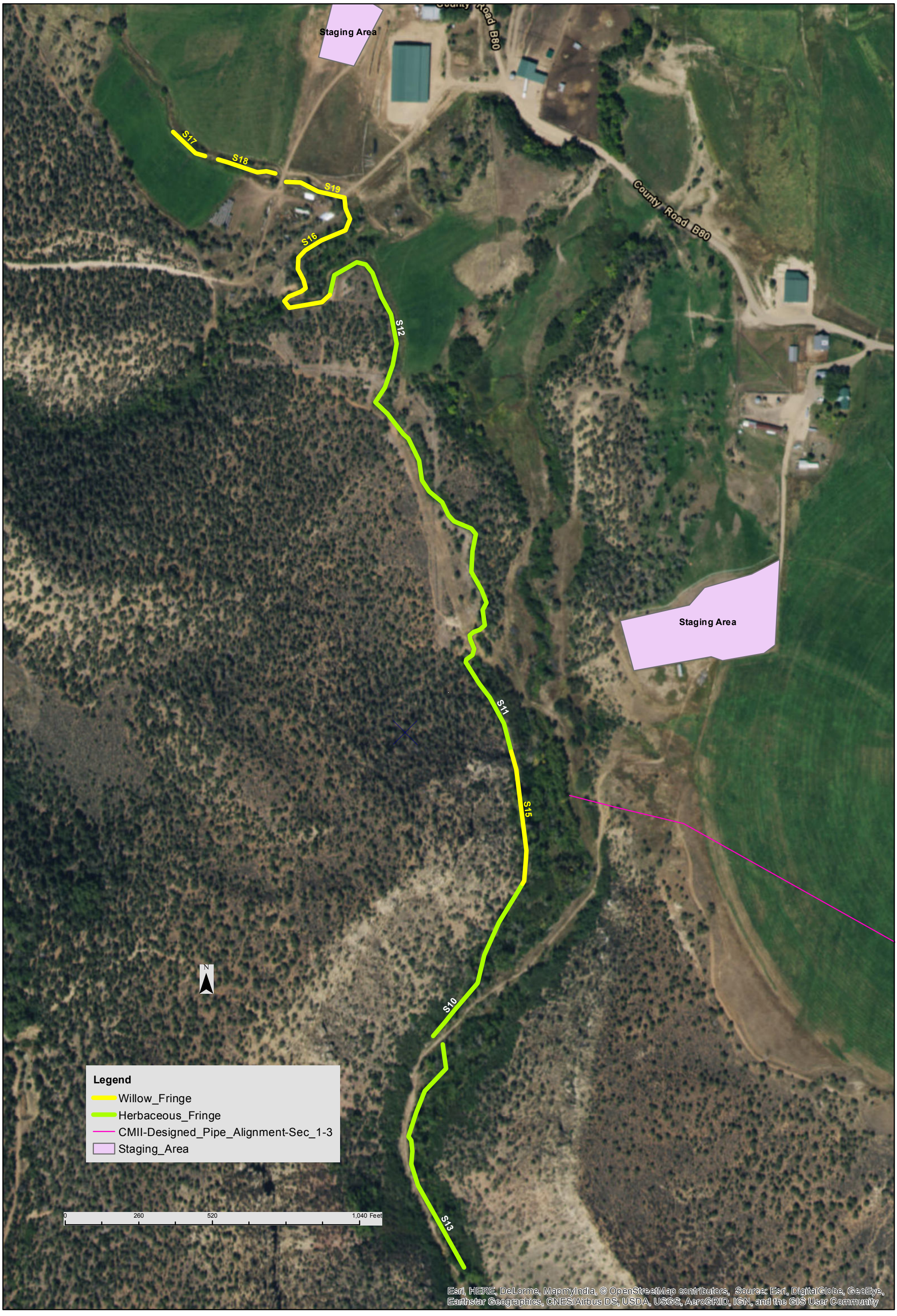

Figure:

7

Date: July 6, 2017

Job #: 5 - 2016

Drawn By: MWZ

CATTLEMAN'S DITCH PIPING PROJECT II
USBR Salinity Control Project 2016
Section 3 - Habitat Loss Segments

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ATTACHMENT 1: CATTLEMAN'S DITCH PIPELINE PROJECT II - PHOTO LOG - June 2017

Photo 1. Herbaceous Fringe in Section 3.

Photo 2. Herbaceous Fringe in Section 3.

Photo 3. Willow Fringe in Section 1A.

Photo 4. Willow Fringe in Section 1.

Photo 5. Ditch below field in Section 1.

Photo 6. Ditch in Section 2.

Photo 7. Portion of ditch to be abandoned Section 1.

Photo 8. Above area to be abandoned.

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ATTACHMENT D

Endangered Species Act Compliance Documents

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Colorado Ecological Services

IN REPLY REFER TO:
FWS/R6/ES CO

Front Range:
Post Office Box 25486
Mail Stop 65412
Denver, Colorado 80225-0486

Western Slope:
445 W. Gunnison Avenue
Suite 240
Grand Junction, Colorado 81501-5711

ES/CO: BOR/Salinity
TAILS 06E24100-2017-I-0450

September 7, 2017

Memorandum

To: Area Manager, Bureau of Reclamation, Grand Junction, Colorado

From: Western Slope Supervisor, U.S. Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado

Subject: Consultation for the Cattleman's Ditch Phase II Pipeline Project

The U.S. Fish and Wildlife Service (Service) received your memo on August 18, 2017, regarding the proposed Cattleman's Ditch Phase II pipeline project. Your memo and the accompanying Threatened and Endangered Species Inventory letter by Rare Earth Science provided information on the proposal by the Bureau of Reclamation to provide funding to the Iron Springs Ditch & Reservoir Company to pipe additional portions of the Cattleman's Ditch in order to reduce salt loading into the Colorado River. Section 7 consultation under the Endangered Species Act was completed for Phase I of this project on August 26, 2015 (TAILS 2015-F-0178). You are now requesting our concurrence with your determination that Phase II of this project may affect, but is not likely to adversely affect the Gunnison sage-grouse (*Centrocercus minimus*) (GUSG), GUSG critical habitat, and the western yellow-billed cuckoo (*Coccyzus americanus*) (YBC).

You also have determined that the project would have no effect on YBC proposed critical habitat, the Canada lynx (*Lynx canadensis*), Mexican spotted owl (*Strix occidentalis lucida*), and greenback cutthroat trout (*Oncorhynchus clarkii stomias*). We acknowledge your determinations of no effect, but neither 7(a)(3) of the Act, nor implementing regulations under section 7(a)(2) of the Act require the Service to review or concur with this determination; therefore the Service will not address these species further. However, we do appreciate you informing us of your analyses for these species.

The proposed Cattleman Ditch Phase II Pipeline Project is located about 3.5 miles south of the Town of Crawford in northeastern Montrose County, Colorado. The proposed action will replace the existing system of unlined irrigation ditches with a buried pipe delivery system, which will eliminate ditch seepage and reduce salinity in the Colorado River Basin by an estimated 2,183 tons of salt per year. An additional benefit of the proposed action is the potential reduction of selenium into the Gunnison River. The project will replace approximately 6 miles of open irrigation ditches of the Cattleman's irrigation system with approximately 5

miles of buried irrigation pipe. In addition, an existing nearby habitat replacement project will be enhanced by providing a reliable water supply.

Phase I of the project involved 2,363 acre-feet of historic water depletions—the water that has been diverted into the Cattleman's Ditch for decades. As mentioned above, Section 7 consultation involving these water depletions was completed for Phase I (TAILS 2015-F-0178). No additional water depletions are involved with Phase II and the project area is outside of habitat occupied by the endangered fishes of the Colorado River. Thus, no additional section 7 consultation is necessary for new water depletions or other effects to the endangered fish.

We concur with your determination that the proposed action associated with the Cattleman's Ditch Phase II Pipeline Project may affect but is not likely to adversely affect the GUSG and its critical habitat. The project occurs outside of habitat occupied by the GUSG. In the unoccupied critical habitat for the GUSG where the project will occur, the new pipelines will largely be placed in or near old ditches and in habitats that do not currently provide high-quality GUSG habitat due to pinyon-juniper encroachment, physical disturbance, and fragmentation due to gullies, fences, residences, and transmission lines. Impacts to critical habitats will be temporary during construction and will occur within a relatively small area. Upon completion of construction, disturbed areas within critical habitat will be revegetated with seed mix that will include plant species appropriate for GUSG habitat.

We also concur with your determination that the proposed action associated with the project may affect but is not likely to adversely affect the YBC. The project is located outside of any proposed critical habitat for, and any habitats known to be occupied by, the YBC. Additionally, the project area does not contain any suitable breeding habitat for the YBC.

If you have any questions regarding this consultation or would like to discuss it in more detail, please contact Creed Clayton of our Grand Junction Ecological Services Field Office at (970) 628-7187.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
445 West Gunnison, Suite 240
Grand Junction, Colorado 81501-5711

IN REPLY REFER TO:
ES/GJ-6-CO-09-F-001-GP028
TAILS 06E24100-2015-F-0178

August 26, 2015

Memorandum

To: Area Manager, Bureau of Reclamation, Grand Junction, Colorado

From: Western Colorado Supervisor, US Fish and Wildlife Service, Ecological Services, Grand Junction, Colorado

Subject: Consultation for the Cattleman's Ditches Pipeline Project and Historic Depletions for Gunnison Basin Programmatic Biological Opinion (PBO)

In accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA), and the Interagency Cooperation Regulations (50 CFR 402), the Fish and Wildlife Service (Service) transmits this correspondence to serve as the final biological opinion (BO) for the Cattleman's Ditches Pipeline Project and associated Historic Depletions for Gunnison Basin Programmatic Biological Opinion (PBO).

The Bureau of Reclamation (Reclamation) under the Colorado River Salinity Control Program has entered into a contract with the Cedar Canon Iron Springs Ditch & Reservoir Company (Company) to pipe portions of the Cattleman's Ditches in order to reduce salt loading into the Colorado River by about 1,855 tons of salt per year. An additional benefit of the proposed action is the potential reduction of selenium into the Gunnison River. The project will replace approximately 8.5 miles of open irrigation ditches of the Cattleman's irrigation system with approximately 6.4 miles of buried irrigation pipe. The proposed Cattleman's Ditches Pipeline Project is located about 12 miles south of the Town of Crawford in northeastern Montrose County, Colorado. In addition, a habitat replacement project will be implemented. The Company has an estimated average annual depletion of 2,363 acre-feet per year (AF/yr), and there are no new depletions.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated on January 22, 1988. The Recovery Program was intended to be the reasonable and prudent alternative for individual projects to avoid the likelihood of jeopardy to the endangered fishes from impacts of depletions to the Upper Colorado River Basin. In order to further define and clarify the process in the Recovery Program, a section 7 agreement was implemented on October 15, 1993, by the Recovery Program participants. Incorporated into this

agreement is a Recovery Implementation Program Recovery Action Plan (RIPRAP) which identifies actions currently believed to be required to recover the endangered fishes in the most expeditious manner.

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

1. A Recovery Agreement must be offered and signed prior to conclusion of section 7 consultation.

2. A fee to fund recovery actions will be submitted as described in the proposed action for new depletion projects greater than 100 AF/yr. The 2015 fee is $20.54 per AF and is adjusted each year for inflation.

3. Reinitiation stipulations will be included in all individual consultations under the umbrella of this programmatic.

4. The Service and project proponents will request that discretionary Federal control be retained for all consultations under this programmatic.

The Recovery Agreement was signed by the Service and the Water User. The depletions associated with this project are historic depletions which do not make contributions to fund recovery actions. Reclamation has agreed to condition its approval documents to retain jurisdiction should section 7 consultation need to be reinitiated. Therefore, the Service concludes that the subject project meets the criteria to rely on the Gunnison PBO to offset depletion impacts and is not likely to jeopardize the continued existence of the species and is not likely to destroy or adversely modify designated critical habitat.

The reinitiation criteria for the Gunnison PBO apply to all projects under the umbrella of the PBO. For your information the reinitiation notice from the Gunnison River PBO is presented below.

REINITIATION NOTICE

This concludes formal consultation on the subject action. The proposed action includes adaptive management because additional information, changing priorities, and the development of the States' entitlement may require modification of the Recovery Action Plan. Therefore, the Recovery Action Plan is reviewed annually and updated and changed when necessary and the required time frames include changes in timing approved by means of the normal procedures of the Recovery Program, as explained in the description of the proposed action. Every 2 years, for the life of the Recovery Program, the Service and Recovery Program will review implementation

of the Recovery Action Plan actions that are included in this BO to determine timely compliance with applicable schedules. As provided in 50 CFR sec. 402.16, reinitiation of formal consultation is required for new projects where discretionary Federal Agency involvement or control over the action has been retained (or is authorized by law) and under the following conditions:

1. **The amount or extent of take specified in the incidental take statement for this opinion is exceeded**. The terms and conditions outlined in the incidental take statement are not implemented. The implementation of the proposed reoperation of Aspinall and the Selenium Management Program will further decrease the likelihood of take caused by water depletion impacts.

2. **New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion**, such as impacts due to climate change. In preparing this opinion, the Service describes the positive and negative effects of the action it anticipates and considered in the section of the opinion entitled "EFFECTS OF THE ACTION."

3. **The identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the BO.** It would be considered a change in the action subject to consultation if the reoperation of Aspinall and the Selenium Management Program described in this opinion are not implemented within the required timeframes. If a draft Selenium Management Program document is not completed within 18 months of the final PBO and a final document within 24 months, reinitiation of consultation will be required. Reinitiating consultation could consist of an exchange of memoranda examining the progress made on the plan and evaluating the consequences of extending the timeframe. Also, at any time, if funding is not available to implement the Selenium Management Program reinitiation of consultation will be required.

   The analysis for this BO assumed implementation of the Colorado River Mainstem Action Plan of the RIPRAP because the Colorado pikeminnow (*Ptychocheilus lucius)* and razorback sucker *(Xyrauchen texanus*) that occur in the Gunnison River use the Colorado River and are considered one population. The essential elements of the Colorado River Plan are as follows: 1) provide and protect instream flows; 2) restore floodplain habitat; 3) reduce impacts of nonnative fishes; 4) augment or restore populations; and 5) monitor populations and conduct research to support recovery actions. The analysis for the non-jeopardy determination of the proposed action that includes about 37,900 AF/yr of new water depletions from the Gunnison River Basin relies on the Recovery Program to provide and protect flows on the Gunnison and Colorado Rivers.

4. **The Service lists new species or designates new or additional critical habitat, where the level or pattern of depletions covered under this opinion may have an adverse impact on the newly listed species or habitat.** If the species or habitat may be adversely affected by depletions, the Service will reinitiate consultation on the PBO as required by its section 7 regulations. The Service will first determine whether the Recovery Program can avoid such impact or can be amended to avoid the likelihood of jeopardy and/or adverse modification of critical habitat for such depletion impacts. If the Recovery Program can avoid the likelihood of jeopardy and/or adverse modification of critical habitat no additional recovery actions for individual projects would be required, if the avoidance actions are included in the Recovery Action Plan. If the Recovery Program can't avoid the likelihood of jeopardy and/or adverse modification of critical habitat then the Service will reinitiate consultation and develop reasonable and prudent alternatives.

If the annual assessment from Reclamation's reports indicates that the operation of the Aspinall Unit to meet flow targets or that the Selenium Management Program, as specified in this opinion has not been implemented as proposed, Reclamation will be required to reinitiate consultation to specify additional measures to be taken by Reclamation or the Recovery Program to avoid the likelihood of jeopardy and/or adverse modification of critical habitat for depletions and water quality. Also, if the status of all four fish species has not sufficiently improved, as determined by the Service in a formal sufficient progress finding under provisions of the Recovery Program, Reclamation will be required to reinitiate consultation. If other measures are determined by the Service or the Recovery Program to be needed for recovery prior to the review, they can be added to the Recovery Action Plan according to standard procedures. If the Recovery Program is unable to complete those actions which the Service has determined to be required, Reclamation will be required to reinitiate consultation in accordance with ESA regulations and this opinion's reinitiation requirements.

All individual consultations conducted under this programmatic opinion will contain language requesting the applicable Federal agency to retain sufficient authority to reinitiate consultation should reinitiation become necessary. The recovery agreements to be signed by non-Federal entities who rely on the Recovery Program to avoid the likelihood of jeopardy and/or adverse modification of critical habitat for depletion impacts related to their projects will provide that such non-Federal entities also must request the Federal agency to retain such authority. Non-Federal entities will agree by means of recovery agreements to participate during reinitiated consultations in finding solutions to the problem which triggered the reinitiation of consultation.

We concur that the proposed action associated with the Cattleman's Ditches Pipeline Project may affect but is not likely to adversely affect the Yellow-billed cuckoo (*Coccyzus americanus*). For the Gunnison sage-grouse (*Centrocercus minimus*) and it's critical habitat, we acknowledge your determination of no effect, but neither 7(a)(3) of the ESA, nor implementing regulations under section 7(a)(2) of the ESA require the Service to review or concur with this determination; therefore the Service will not address this species further. However, we do appreciate you informing us of your analysis for this species even if not required to do so under the ESA.

If you have any questions regarding this consultation or would like to discuss it in more detail, please contact Barb Osmundson of our Grand Junction Ecological Services Field Office at (970) 628-7189.

Attachment

cc: FWS/UCREFRP, Denver

BOsmundson:BRCattlemansDitchesPipelinePBOGP028.docx:082615:KM

GUNNISON RIVER RECOVERY AGREEMENT

This RECOVERY AGREEMENT is entered into this 26 day of August, 2015, by and between the United States Fish and Wildlife Service (Service) and **Cedar Canon Iron Springs Ditch & Reservoir 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 **Cedar Canon Iron Springs Ditch & Reservoir Company's Ditches Pipeline Project, aka Cattlemans Ditches Pipeline Project** (Water Project), which causes or will cause depletions to the Gunnison River subbasin; and

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

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

NOW THEREFORE, Water User and the Service agree as follows[1]:

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

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

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

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

[1]Individual Recovery Agreement may be changed to fit specific circumstances.

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

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

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

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

Donald Hart President — July 15, 2015

Cedar Canon Iron Springs Ditch & Reservoir Company — Date
Water User Representative

Matt Trujillo — 8/24/15

Western Colorado Supervisor — Date
U.S. Fish and Wildlife Service

ATTACHMENT E

Cultural Resource Compliance Documents

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MEMORANDUM OF AGREEMENT
BETWEEN
THE WESTERN COLORADO AREA OFFICE, BUREAU OF RECLAMATION,
CEDAR CANON IRON SPRINGS DITCH AND RESERVOIR COMPANY,
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING PHASE II OF THE CATTLEMAN'S DITCH PIPING PROJECT,
SALINITY CONTROL PROGRAM,
MONTROSE COUNTY, COLORADO

WHEREAS, the Bureau of Reclamation (Reclamation) and the Cedar Canon Iron Springs Ditch and Reservoir Company (CCISDRC) plan to pipe 4.7 miles of the Cattleman's Ditch system (Project); and

WHEREAS, Reclamation plans to fund CCISDRC to pipe and partially reroute 4.7 miles Cattleman's Ditch system, as allowed for by the Basinwide Salinity Control Program, thereby making the Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, and its implementing regulations, 36 CFR Part 800; and

WHEREAS, Reclamation has defined the undertaking's area of potential effect (APE) as contained within a 100-foot-wide corridor centered on 4.7 miles of the existing Cattleman's Ditch, proposed access roads, and staging areas, totaling 16.84 acres on BLM-managed land and 164.52 acres on private land, as described in Attachment A; and

WHEREAS, Reclamation as lead Federal agency has determined that the Project will have an adverse effect on the Cattleman's Ditch System/5MN9867, including segments 5MN9867.6 through 5MN9867.9. This cultural resource has been determined by Reclamation, in consultation with the Colorado State Historic Preservation Officer (SHPO), to be eligible for inclusion on the National Register of Historic Places under Criteria A; and

WHEREAS, the Bureau of Land Management has participated in the consultation and has declined an invitation to sign the Memorandum of Agreement (MOA); and

WHEREAS, the CCISDRC is the sponsor of the Project, has participated in the consultation, and has been invited to sign the MOA; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), Reclamation has notified the Advisory Council on Historic Preservation (Council) 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);

WHEREAS, Reclamation has notified Tribes about the proposed undertaking, and the Tribes have chosen not to participate in the consultation; and

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. Prior to any modification of the recorded segments of the Cattleman's Ditch (5MN9867.6 through 5MN9867.9), Reclamation will ensure that these properties will be recorded in accordance with the guidance for Level I Documentation found in "Historic Resource Documentation, Standards for Level I, II, and III Documentation" (Office of Archaeology and Historic Preservation Publication 1595, March 2013). The documentation will be of archival quality, and will include a detailed narrative history, mapping of the properties and photographic documentation of the portions of the historic properties 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.

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

III. Reclamation will submit a copy of the Level I Documentation to the SHPO within one (1) year of the execution of this MOA. The SHPO shall review and provide comments within thirty (30) calendar days of receipt. Once accepted by SHPO, SHPO shall receive a minimum of one archivally stable copy of the final recordation for its files and provide documentation of acceptance. The activities prescribed by the stipulations of this MOA shall be carried out by or under the direct supervision of a person or persons meeting, at minimum, the Secretary of the Interior Profession Qualification 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.

IV. A copy of the Level I Documentation will be placed on Reclamation's Western Colorado Area Office's cultural resources webpage. Availability of the documentation will be announced through a press release. The SHPO shall receive notification once the document is placed on the webpage.

V. DURATION

This MOA will be null and void if its terms are not carried out within one (1) year from the date of its execution. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the agreement. Unless terminated pursuant to Stipulation X, below, this MOA will be in effect through Reclamation's implementation of the stipulations of this MOA, and will terminate and have no further force or effect when Reclamation, in consultation with the SHPO, determines that the terms of the MOA have been fulfilled in a satisfactory manner.

VI. POST-REVIEW DISCOVERIES

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

VII. MONITORING AND REPORTING

Each year following the execution of this MOA until its stipulations are carried out, it expires, or is terminated, CCISDRC 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 CCISDRC'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.

VIII. DISPUTE RESOLUTION

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

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

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

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

IX. 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.

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

SIGNATORIES:

Colorado State Historic Preservation Officer

By: _____ Date: 1/9/17
for Steve Turner, AIA, SHPO

Bureau of Reclamation, Western Colorado Area Office

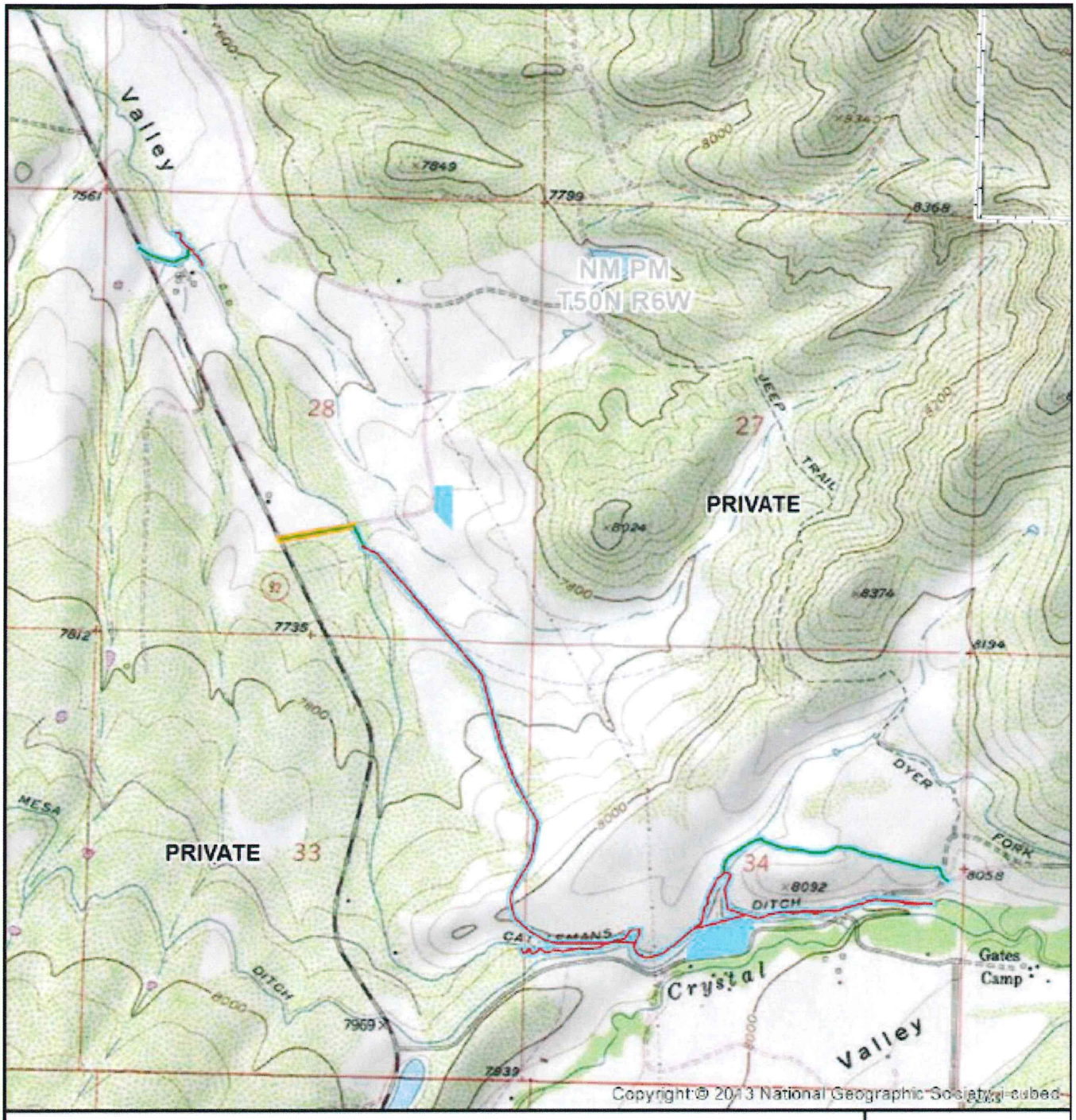
By: _____ Date: 12-9-16
Ed Warner, Area Manager

INVITED SIGNATORIES:

Cedar Canon Iron Springs Ditch and Reservoir Company

By: _____ Date: Dec. 7, 2016
Don Hart, President

ATTACHMENT A – AREA OF POTENTIAL EFFECT



Legend

Project Centerline
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No Inventory Required, Improved Road
Inventoried Area
Land Status

Colorado

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USGS Quadrangle:
Cathedral Peak
Montrose County

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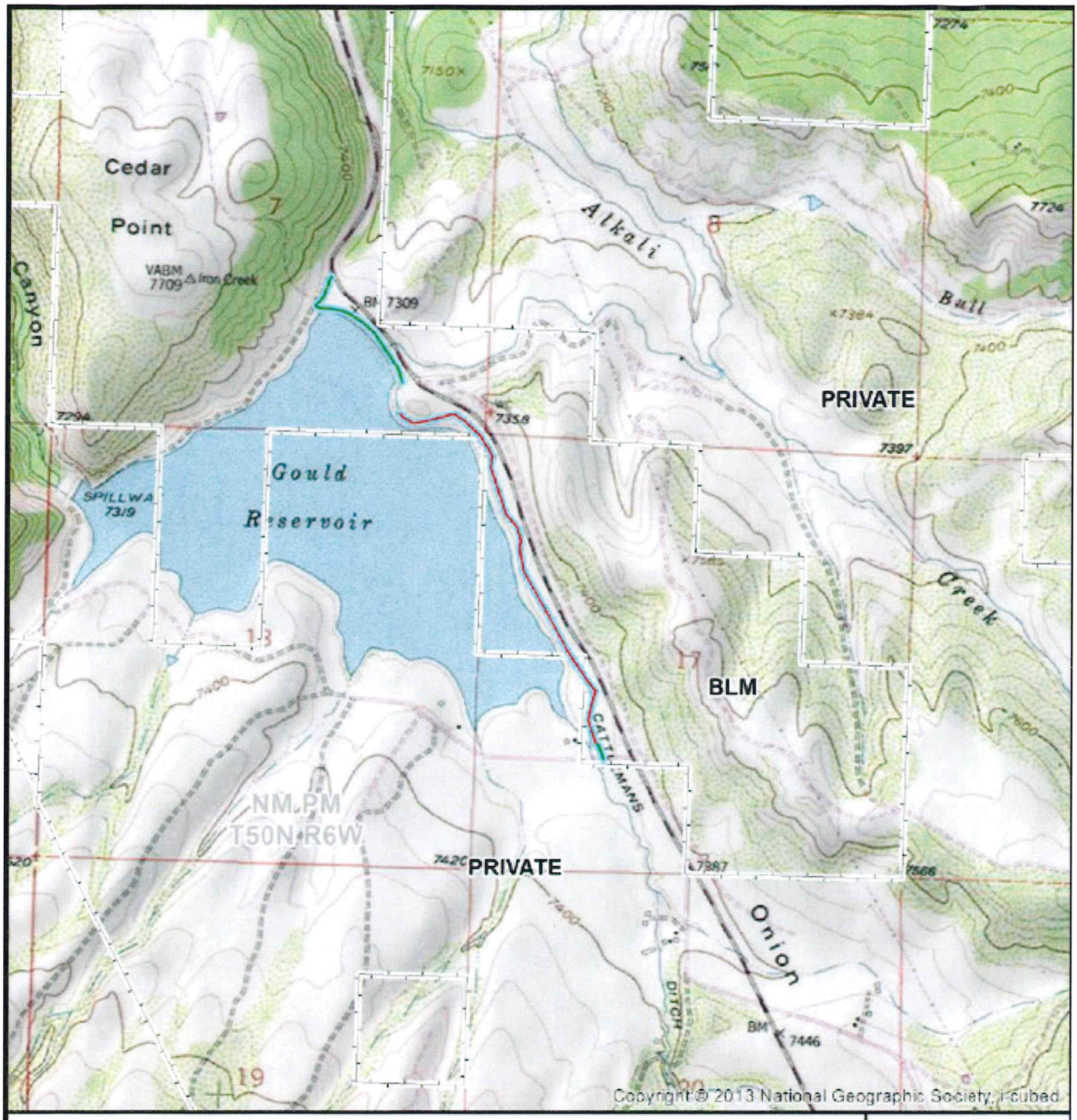

Legend

- Project Centerline
- Access Road
- No Inventory Required, Improved Road
- Inventoried Area
- Land Status

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Cathedral Peak
Montrose County

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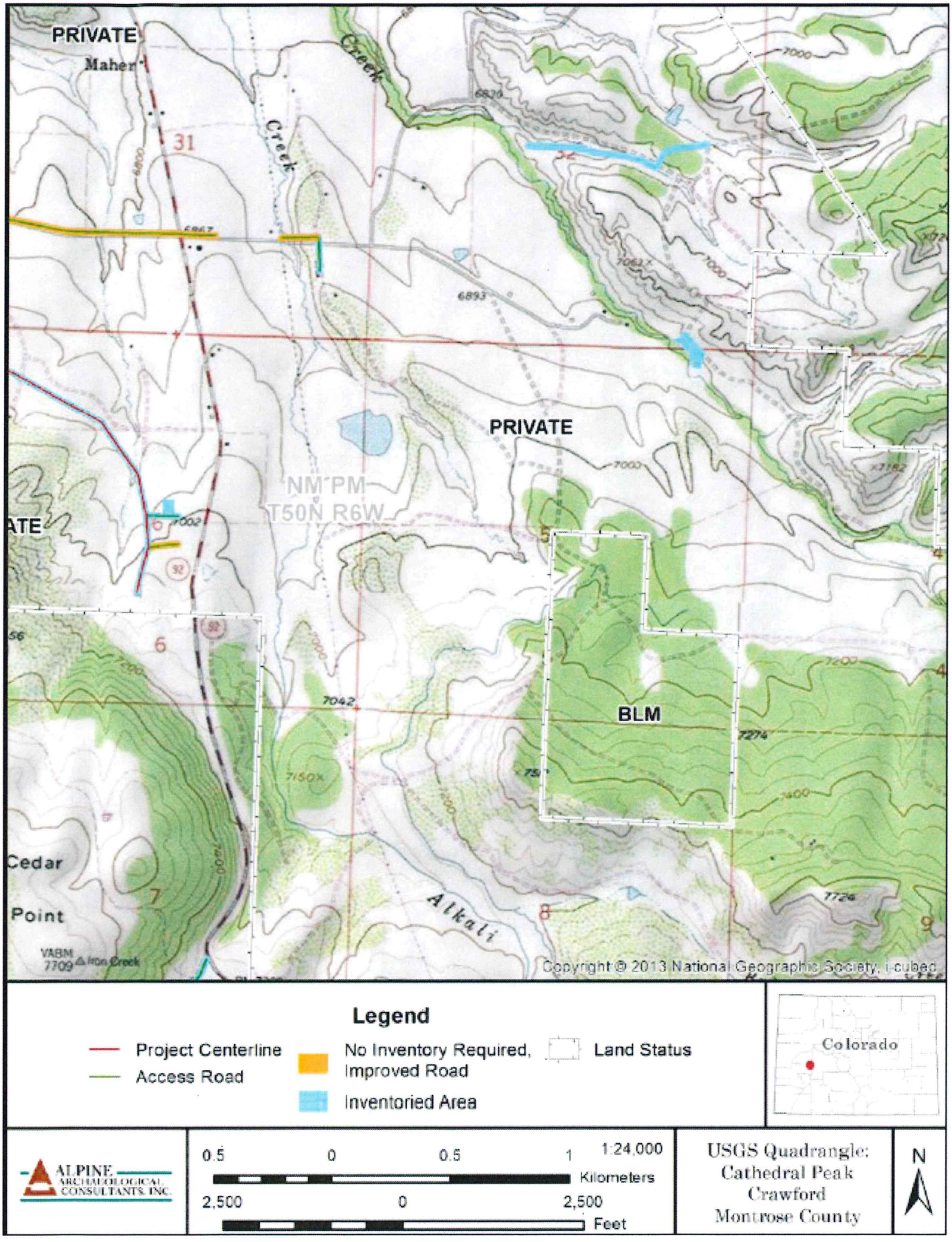
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Point
Alkali
Iron Creek
Copyright © 2013 National Geographic Society, i-cubed
Legend
Project Centerline
Access Road
No Inventory Required, Improved Road
Inventoried Area
Land Status
Colorado
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USGS Quadrangle:
Cathedral Peak
Crawford
Montrose County
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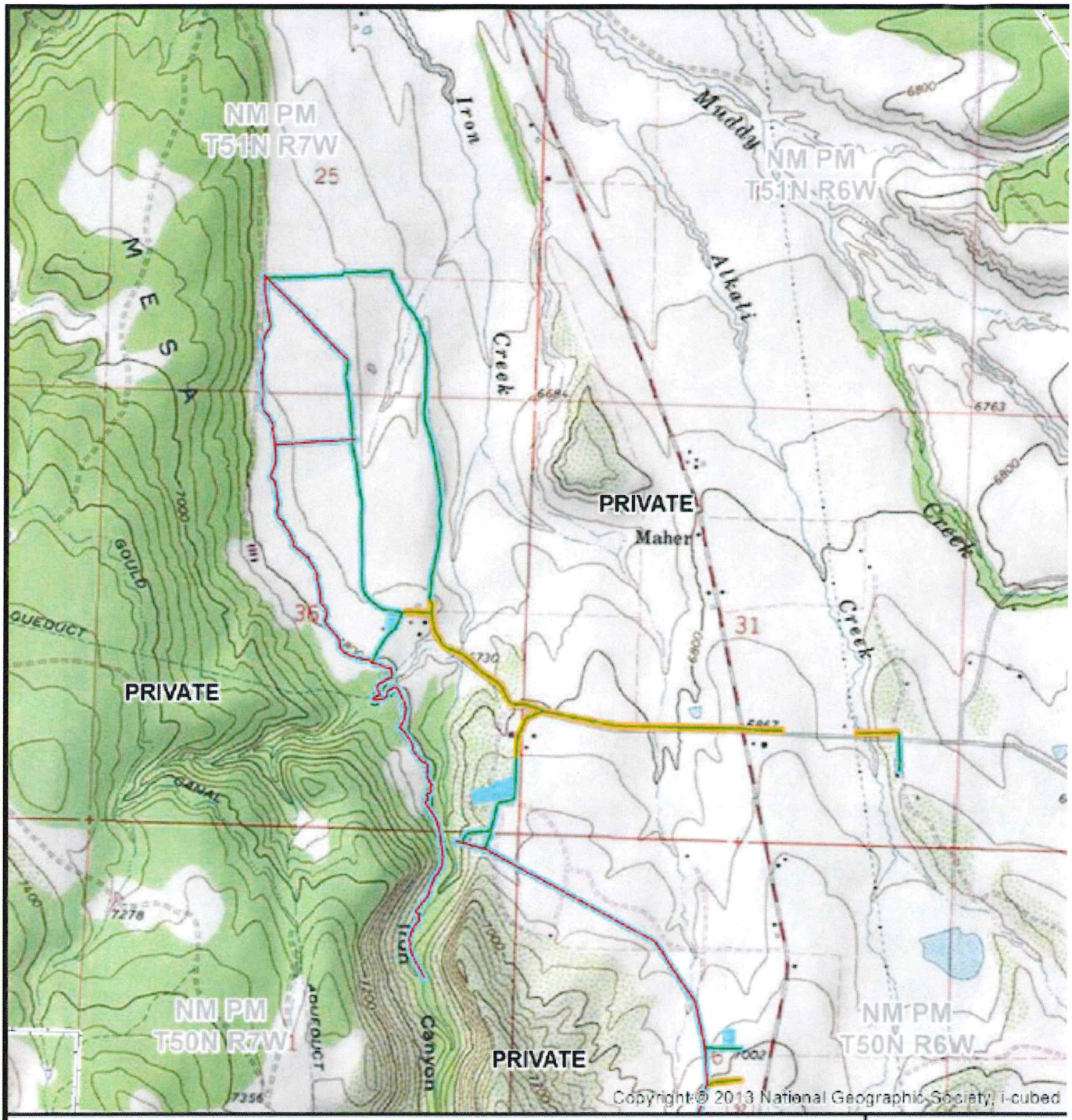

Legend

- Project Centerline
- Access Road
- No Inventory Required, Improved Road
- Inventoried Area
- Land Status

ALPINE ARCHAEOLOGICAL CONSULTANTS, INC.

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Feet

USGS Quadrangle:
Crawford
Montrose County

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ATTACHMENT B – UNANTICIPATED DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

PHASE II OF THE CATTLEMAN'S DITCH PIPING PROJECT
SALINITY CONTROL PROGRAM,
MONTROSE COUNTY, COLORADO

1. INTRODUCTION

The Cedar Canon Iron Springs Ditch and Reservoir Company (CCISDRC) plans to pipe and partially reroute approximately 4.7 miles of the Cattleman's Ditch. 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,
- 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 CCISDRC 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:
Mr. Don Hart
(970)-921-5299
don@donsdirectory.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 CCISDRC 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 CCISDRC Project Manager may direct construction away from cultural resources to work in other areas prior to contacting the concerned parties.

- Contact CR Manager: If there is a CR Program Manager, and that person has not yet been contacted, the Project Manager will do so.

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

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

    - If it is determined not archaeological, work may proceed with no further delay.

    - If it is determined to be archaeological, the Project Manager will continue with notification.

    - If the find may be human remains or funerary objects, the Project Manager will ensure that a qualified physical anthropologist examines

the find. If it is determined to be human remains, the procedure described in Section 5 will be followed.

B. Project Overseer's Responsibilities

- Notify SHPO: The Project Overseer will notify the Colorado State Historic Preservation Office (SHPO).

Colorado State Historic Preservation Office:
Mr. Steve Turner, AIA
State Historic Preservation Officer
Colorado Historical Society
1200 Broadway
Denver CO, 80203
(303)-866-2776

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.

Because the project is a Federal undertaking, the provisions of the Native American Graves Protection and Repatriation Act of 1990 apply, and the Project Overseer will follow their provisions. In areas where the project extends off of Federal lands, the requirements under State Law Colorado Revised Statute (CRS) 24-80 part 13 apply. If the remains are not modern, NAGPRA and ARPA apply if they are found to be Native American. ARPA and the Unmarked Human Graves Colorado Statute (CRS 24-80-1301-1305) apply if the human remains are Native American and/or determined to be of archaeological interest.

In the event possible human skeletal remains are discovered, CCISDRC will comply with applicable state and federal laws, and the following procedure:

A. Notify Law Enforcement Agency or Coroner's Office:

In addition to the actions described in Sections 3 and 4, the Project Manager will immediately notify the local law enforcement agency or coroner's office.

The coroner (with assistance of law enforcement personnel) will determine if the remains are human, whether the discovery site constitutes a crime scene, and will notify SHPO.

Montrose County Coroner
(970) 249-7755

B. Further Activities:

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

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

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

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

7. PROCEEDING WITH CONSTRUCTION

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

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

ATTACHMENT F

Environmental Commitment Checklist

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Cattleman's Ditches Pipeline Project II
Environmental Checklist

This Environmental Checklist (Checklist) has been prepared to ensure that the environmental commitments are met, as set forth in the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) completed for the Cattleman's Ditches Pipeline Project II ("Project") pursuant to the National Environmental Policy Act (NEPA). The Bureau of Reclamation is the lead federal agency with primary responsibility for complying with the NEPA on the Project, and the Cedar Canon Iron Springs Ditch & Reservoir Company ("Company") is responsible for implementing the environmental commitments contained in the EA and FONSI for the Project. The environmental commitments represent mitigation measures to avoid, minimize, rectify, reduce, eliminate or compensate for impacts caused by implementation of the Project. The Company shall utilize this Checklist to document compliance with each commitment, and 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.

Environmental Commitments: <u>Pre-Construction</u>		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
A.01	Habitat loss shall be mitigated in accordance with the Habitat Replacement Plan prepared for the Cattleman's Ditches Pipeline Project Phase I to mitigate fish and wildlife values that will be foregone as a result of the Proposed Action. Implementation of habitat replacement began with the Cattleman's Ditches Pipeline Project Phase I. A habitat water pipeline shall be installed prior to or concurrently with construction of the pipeline project to augment the wetland hydrology at the Cathedral site. The habitat water pipeline will extend from an existing irrigation line approximately 0.4 mile across uplands adjacent to the Hart's residential driveway to the Cathedral site. The Company is responsible for maintaining the Habitat Replacement Site according to the previously approved Habitat Replacement Plan and ensuring the plan's objectives are met. Failure to implement concurrent habitat replacement may result in delays in obligating funding under the Cooperative Agreement.	
A.02	Onsite supervisors and equipment operators shall be trained and knowledgeable in the use of spill containment equipment.	

Environmental Commitments: Pre-Construction		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
A.03	Construction limits shall be clearly flagged onsite to avoid unnecessary plant loss or ground disturbance.	
A.04	Prior to construction, vegetative material shall be removed by mowing or chopping, and either hauled to a proposed staging area to be burned or chipped, or chipped and mulched onsite. Stumps shall be grubbed and hauled to a proposed staging area to be burned.	
A.05	Topsoil shall be stockpiled and then redistributed after completion of construction activities.	
A.06	Construction areas shall be confined to the smallest feasible area and within approved construction limits/rights-of-way to minimize disturbance to wildlife within the Proposed Action Area.	
A.07	Vegetation disturbing activities shall not be conducted during the primary nesting season of migratory birds protected under the Migratory Bird Treaty Act (April 1 through July 15). However, if the schedule for the Proposed Action shifts (Section 4.13), and vegetation disturbing activities would occur during the nesting season of migratory birds, further conservation measures would be necessary to protect these species, such as pre-construction nest surveys.	
A.08	Since the Proposed Action would take place in critical habitat of the federally-listed Gunnison sage-grouse, Reclamation consulted with FWS regarding effects of the Proposed Action on the species and its critical habitat. To protect breeding and nesting Gunnison sage-grouse, the Proposed Action shall be implemented outside of breeding or nesting periods of sage-grouse (outside the months of March through July).	
A.09	The MOA with the SHPO must be fully executed prior to initiating construction activities for the Proposed Action, in accordance with Section 106 of the National Historic Preservation Act.	
A.10	Notification to the grazing permit holder(s) shall be made if construction is to occur during a grazing period. Project personnel shall cooperate with the grazing permit holder(s) to avoid conflicts with grazing operations.	
A.11	Access to the grazing allotments shall not be affected by the Proposed Action.	

Environmental Commitments: Pre-Construction		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
A.12	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.	
A.13	A spill response plan shall be prepared for areas of work where spilled contaminants could flow into water bodies. All employees and workers, including those under separate contract, will be briefed and made familiar with this plan. The plan will be developed prior to initiation of construction.	
A.14	A BLM Right-of-Way Acknowledgment (obtained by the Company in December 2016) is required to implement the Proposed Action.	
A.15	The Company must obtain Right-of-Way approvals from private landowners with land involved in the Proposed Action, in order to implement the Proposed Action.	
A.16	A Stormwater Management Plan must be submitted to the Colorado Department of Public Health and Environment (CDPHE) by the construction contractor prior to construction disturbance. A copy of this plan must be provided to Reclamation.	
A.17	The construction contractor must obtain a CWA Section 402 Storm Water Discharge Permit compliant with the National Pollutant Discharge Elimination System (NPDES) from CDPHE prior to construction disturbance (regardless of whether dewatering would take place during construction). A copy of this plan must be provided to Reclamation.	
A.18	The Company must obtain utility clearance from WAPA for work near the high-voltage powerline corridor in the Proposed Action Area. Work approaching WAPA structures or overhead lines closer than 20 feet is not permitted.	
A.19	The construction contractor must obtain utility clearances, prior to construction activities, from Delta Montrose Electric Association, Fruitland Domestic Water Company, Fruitland Irrigation Company, and any other utility in the area.	

Environmental Commitments: Pre-Construction		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
A.20	Because the Proposed Action is exempt from CWA Section 404 (Attachment C), no Clean Water Act Section 401 Water Quality Certification would be required; however, water quality BMPs (as outlined in the EA) would be implemented to protect water resources.	

Environmental Commitments: <u>During Construction</u>		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
B.01	Habitat loss shall be mitigated in accordance with the Habitat Replacement Plan prepared for the Cattleman's Ditches Pipeline Project I to mitigate fish and wildlife values that will be foregone as a result of the Proposed Action. A habitat water pipeline shall be installed prior to or concurrently with construction of the pipeline project to augment the wetland hydrology at the Cathedral site. The habitat water pipeline will extend from an existing irrigation line approximately 0.4 mile across uplands adjacent to the Hart's residential driveway to the Cathedral site. The Company is responsible for maintaining the Habitat Replacement Site according to the previously approved Habitat Replacement Plan and ensuring the plan's objectives are met.	
B.02	All construction activities shall be confined to rights-of-way negotiated between the Company and the landowners, including a Ditch Right-of-Way Acknowledgment issued by BLM.	
B.03	Construction staging (for pipe and equipment) shall take place in several areas, as shown on Figures 3a and 3c in the Final EA.	
B.04	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.	
B.05	Culverted embankment fill creek crossings shall be constructed during periods when the watercourse is not flowing or is flowing at low levels. If a small amount of flow is present, appropriate water control measures shall be employed, such as temporary impoundments or drain ditches, which allow for construction to proceed while minimizing potential for mobilization of silt or erosion. Culverts shall be appropriately sized to allow for normal and expected high flows, and bedded and stabilized to prevent erosion. Embankments shall be stabilized and appropriately vegetated.	
B.06	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 offsite disposal.	
B.07	Fuels, lubricants, hydraulic fluids, and other petrochemicals shall be stored and dispensed in an approved staging area.	

Environmental Commitments: <u>During Construction</u>		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
B.08	Equipment shall be inspected daily and immediately repaired as necessary to ensure equipment is free of petrochemical leaks.	
B.09	Construction equipment shall be parked, stored, and serviced only at an approved staging area.	
B.10	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. All employees and workers, including those under separate contract, shall be briefed and made familiar with this plan.	
B.11	A spill response kit, which includes appropriate-sized spill blankets, shall be easily accessible and onsite at all times.	
B.12	Appropriate federal and Colorado authorities (including BLM) shall be immediately notified in the event of any contaminant spill.	
B.13	Pursuant to the Cooperative Agreement between the Company and Reclamation, the Company shall permanently dewater, remove from irrigation service, and render incapable of irrigation water delivery all open ditches abandoned as part of the Proposed Action.	
B.14	The Company shall be responsible for removing all decommissioned irrigation structures (head gates, drops, etc.) by methods described in the construction specifications provided to the contractor.	
B.15	Ground disturbances shall be limited to only those areas necessary to safely implement the Proposed Action.	
B.16	Vegetation removal shall be confined to the smallest portion of the Proposed Action Area necessary for completion of the work.	
B.17	Straw wattles, silt curtains, cofferdams, dikes, straw bales, or other suitable erosion control measures shall be used at the edges of ground disturbance and wherever applicable to minimize soil erosion and prevent soil erosion from entering water bodies during construction.	
B.18	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.	

Environmental Commitments: <u>During Construction</u>		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
B.19	The Proposed Action Schedule is protective of the core nesting season of raptors (April 1 through July 15). If the schedule for the Proposed Action shifts, or if a nesting raptor is discovered within ¼-mile of construction activity, the activity shall cease in that area until Reclamation is consulted.	
B.20	The Proposed Action Schedule partially overlaps with the bald eagle nesting period (October 15 through July 31) and the golden eagle nesting period (December 15 through July 15). There are no documented eagle nests with 1 mile of the Proposed Action. If an active eagle nest is discovered within a half mile of the Proposed Action, the activity shall cease in that area until Reclamation is consulted.	
B.21	During construction, topsoil (especially in sagebrush areas to protect Gunnison sage-grouse habitat) shall be saved for post-construction redistribution.	
B.22	In the event that other listed species are encountered during construction, the Company 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.	
B.23	In the event that cultural and/or paleontological resources are discovered during construction, the Company must stop construction activities until Reclamation has completed consultation with the SHPO and appropriate measures are implemented to protect or mitigate the discovered resource.	
B.24	During construction, individuals may be recreating on BLM land involved with the Proposed Action. 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, wildlife, or the public from falling through. Where trench covers would not be practical, wildlife escape ramps shall be used.	
B.25	Pipeline trenches left overnight shall be kept to a minimum to reduce potential entrainment of livestock.	
B.26	Construction holes or pipeline trenches left open overnight shall be covered. 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 utilized.	

Environmental Commitments: <u>During Construction</u>		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
B.27	During construction, the use, storage and disposal of hazardous materials and wastes within the Proposed Action Area will be managed in accordance with all federal, state, and local standards, including the Toxic Substances Control Act of 1976, as amended (15 USC 2601, et seq., 40 CFR Part 702-799, and 40 CFR 761.1-761.193). Any trash or solid wastes generated during the Proposed Action will be properly disposed offsite.	
B.28	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.	
B.29	A spill response kit, which includes appropriate-sized spill blankets, shall be easily accessible and onsite at all times.	
B.30	All spills, regardless of size, shall be cleaned up promptly and contaminated soil shall be disposed of at an approved facility.	
B.31	Appropriate federal and Colorado authorities shall be immediately notified in the event of any contaminant spill. Any spills on BLM lands will be reported to BLM promptly. 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 BLM concurrent with the filing of the reports to the involved Federal agency or State government.	
B.32	Timing of all construction activities shall comply with the timing constraints set forth in Section 4 the Final EA (as summarized in Table 1 at the end of this checklist).	

Environmental Commitments: Post-Construction		
#	**MITIGATION MEASURE or PROJECT DESIGN FEATURE**	**DATE OF COMPLIANCE**
C.01	Following construction, all disturbed areas shall be smoothed, shaped, contoured and reseeded to as near to their pre-project conditions as practicable.	
C.02	Temporarily disturbed BLM lands shall be revegetated with a BLM-recommended seed mix containing grasses and forbs palatable for forage and beneficial for Gunnison sage-grouse. Seeding shall occur at appropriate times with weed-free seed mixes per Reclamation and BLM specifications. Specifically, a BLM-prescribed seed mix shall be used to reseed all disturbances on BLM lands, and on private lands in Gunnison sage-grouse habitat (these areas shall be detailed in contractor specifications and/or construction drawings). On other disturbed areas, the "Stirrup Bar Ranch Seed Mix" developed by NRCS may be used.	
C.03	Weed control shall be implemented by the Company or the Company's contractor in accordance with current Montrose County weed control standards (Montrose County 2011; 2017).	
C.04	Topsoil saved during construction shall be redistributed after completion of construction activities, and disturbed areas shall be seeded with a suitable seed mix that is beneficial for grouse habitat (a BLM-prescribed mix of appropriate bunch grasses, forbs, and sagebrush).	
C.05	Lands previously in agricultural production shall be returned to agricultural production following construction.	
C.06	Following construction, the Proposed Action Area shall be graded and vegetated to match the surrounding landscape as much as possible. Overall, the level of change to the visual characteristics of the landscape in and around the Proposed Action Area during and following construction will be low to moderate, and not out of character with the surrounding landforms, or with the rural-agricultural character of the vicinity.	
C.07	Timing of post-construction activities (mop-up, reseeding) shall comply with the timing constraints set forth in Section 4 the Final EA (as summarized in Table 1 at the end of this checklist).	

Table 1: Summary of Sequence & Authorized Timing of the Proposed Action

	Jan	Feb	Mar	Apr	May		Jun	Jul		Aug	Sep	Oct	Nov	Dec
Middle Proposed Action Area														
Vegetation clearing and grubbing														
Construction in existing ditch alignment														
Riprap highway stormwater culvert outlets														
Mop-up and reseeding														
Optional Existing Diversion Structure Repair														
Upper Proposed Action Area														
Buried pipe and structures in existing ditch alignment														
Buried pipe outside existing ditch alignment														
Decommissioning / abandoning existing ditch														
Mop-up and reseeding														
Lower Proposed Action Area														
Buried pipe and structures outside existing ditch alignment														
Decommissioning / abandoning existing ditch														
Mop-up and reseeding														
Habitat Pipeline														
Pipeline installation														
Vegetation clearing and grubbing														
Mop-up and reseeding														