

RECLAMATION

Managing Water in the West

DRAFT Environmental Assessment

Maybell Canal Water Conservation Project

Western Colorado Area Office
Upper Colorado Region



August 2019

Mission Statements

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

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

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LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
BLM	U.S. Department of the Interior Bureau of Land Management
CDA	Colorado Department of Agriculture
CDPHE	Colorado Department of Public Health and Environment
CFR	Code of Federal Regulations
cfs	cubic feet per second
Corps	US Army Corps of Engineers
CPW	Colorado Department of Natural Resources Division of Parks & Wildlife
EA	Environmental Assessment
EO	Executive Order
ERO	ERO Resources Corporation
FOAN	Funding Opportunity Announcement Number
FONSI	Finding of No Significant Impact
HUC	Hydrology Unit Code
iPaC	Environmental Conservation Online System Information for Planning and Conservation
LSFO	Little Snake River Field Office
MID	Maybell Irrigation District
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PBO	Programmatic Biological Opinion
Reclamation	U.S. Department of the Interior Bureau of Reclamation
ROW	Right-of-Way
Service	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Office
USFWS	U.S. Fish and Wildlife Service

DRAFT ENVIRONMENTAL ASSESSMENT

1 Purpose and Need for Action

1.1 Introduction

This Environmental Assessment (EA) was prepared by the U.S. Bureau of Reclamation (Reclamation) to assess the potential effects of the proposed Maybell Canal Water Conservation Project (Proposed Action) located in Moffat County approximately 3.6 miles southeast of Maybell, Colorado (Proposed Action Area; Figure 1). The Proposed Action includes lining 1,300 feet of the Maybell Canal (canal), which is operated by the Maybell Irrigation District (MID), in order to mitigate water seepage and water loss. The improvements will take place on private land owned by a canal shareholder or within the boundary of a Bureau of Land Management (BLM) easement, recorded in the official records of the Little Snake River Field Office (LSFO; Serial Number COGS—0 022987). The MID has applied for funding under the *WaterSMART* Program administered by Reclamation; therefore, this EA has been prepared in compliance with the National Environmental Policy Act (NEPA) and Reclamation’s NEPA procedures.

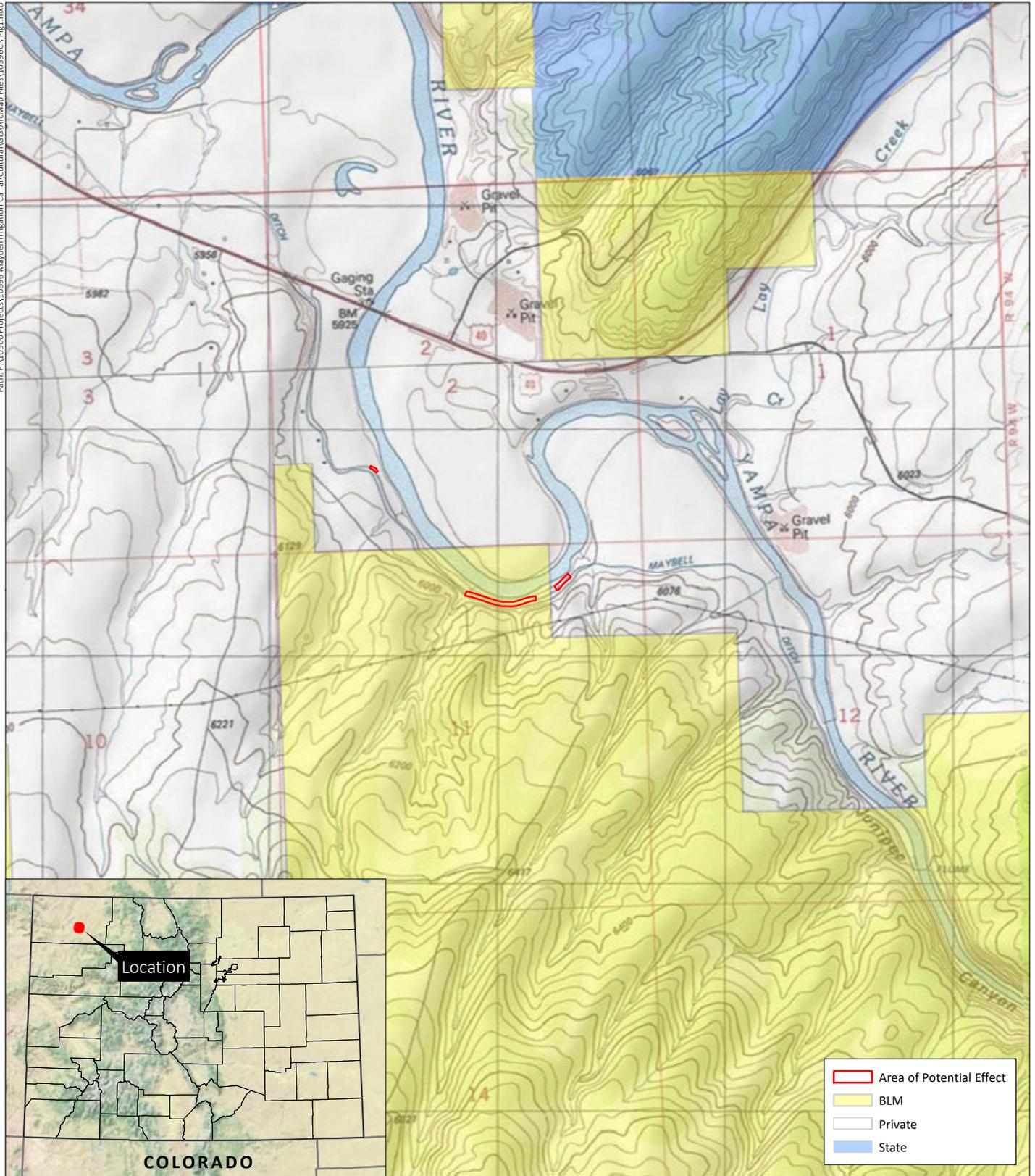
The canal was built in 1896 and diverts water from the Yampa River. The Maybell Canal water right was appropriated on October 2, 1899 and decreed on December 8, 1923, with a decreed capacity of 129 cubic feet per second (cfs) (MID 2018). In 1922, MID was formed for the purpose of operating and maintaining the canal. The canal headgate is structure number 694 in Water District 44 of the Colorado Department of Water Resources. The Maybell Canal is approximately 18 miles long with 78 laterals serving 18 users. Currently, only approximately 400 feet of the canal is lined with the remainder being an unlined, earthen open channel.

High water seepage rates and sloughing in the Proposed Action Area result in inefficient water delivery, periodic landslides directly into the Yampa River, and the threat of a canal breach. Lining the existing canal in the proposed segments is estimated to eliminate seepage by approximately 150 acre-feet per year. The lining project along the canal is expected to take approximately 6 weeks to construct and will occur in the late fall/early winter 2019, after the irrigation season.

This EA evaluates two alternatives – the Proposed Action which would partially fund improvements to 1,300 feet of earthen open ditch by installing a canal lining, and the No Action alternative with no change in the existing canal. This EA has been prepared in compliance with the National Environmental Policy Act (NEPA) to analyze the alternatives and evaluate potential issues and impacts on resources and values.

1.2 Background

The Yampa River basin is one of the last largely unregulated major river systems in the Colorado River Basin. Ongoing drought and increased competition for water supplies threaten water security for all who depend on the Colorado River and heighten the urgency of increasing water efficiencies in agricultural infrastructure.



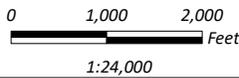
	Area of Potential Effect
	BLM
	Private
	State

Cultural Resource Survey
 Maybell Canal Water Conservation Project
 Moffat County, Colorado
 MF.R.R7 159.1.2019

Section 11, T6N, R95W; 6th PM
 USGS Jupiter Mountain, CO 7.5' Quadrangle
 Moffat County, Colorado



Figure 1
 Project Location



Prepared for: Reclamation/BLM
 File: 10596CR Fig1.mxd (IMC)
 April 22, 2019



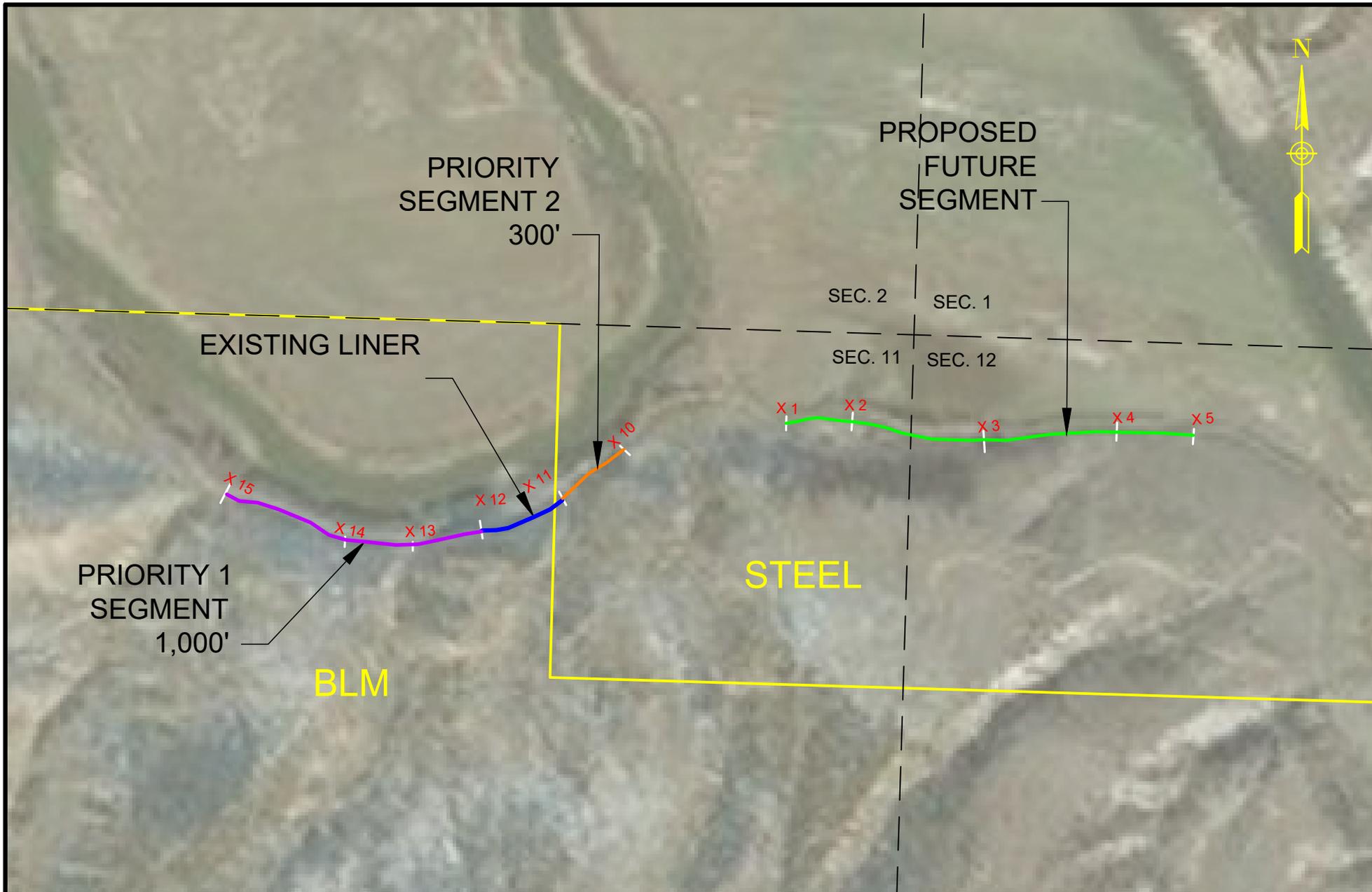
The MID applied for a small-scale water efficiency grant through Reclamation's WaterSMART Program in 2018. Canal lining falls under WaterSMART Program objectives of conserving water and using water more efficiently. The MID is the largest and oldest water diverter on the lower Yampa River and, due to the volume of water diverted by the MID, canal improvements hold a great potential to conserve water and improve flows in the Yampa River watershed. The canal typically operates from late April through the end of October. The diversion headgate is closed and the canal is dewatered during the winter. Average annual diversions through the canal are approximately 20,000 acre-feet per year (AFY) with an irrigation water requirement (IWR) of 1,800 acre-feet (AF). The canal provides water for approximately 1,100 acres of high-elevation hay fields and hay is the predominant irrigated crop in the region. The goal of stakeholders in the region to maintain irrigated agricultural land and the IWR diversion amount is not expected to decrease in the future.

The soil substrate is variable along the length of the canal, ranging from silty sand to a loose conglomerate of sand and gravel with occasional cobbles and small boulders, and seepage from these segments has resulted in substantial sloughing of the adjacent hillside, resulting in large losses of water and a heightened risk of a canal breach event. In addition, the excessive seepage has resulted in increased sediment loading to the Yampa River.

Due to its age and seepage rates, the canal is in need of modernization improvements to increase water efficiency. The canal headgate is downstream of Elkhead Reservoir which includes releases of water as part of the Upper Colorado River Endangered Fish Recovery Program (Recovery Program). Given the canal's location, any decrease in water diversion would enhance critical endangered fish habitat in the canal's reach and allow increased streamflow to remain in the Yampa River. The proposed project area was selected in part because it was identified as having the highest seepage rate along the canal's length. An engineering analysis utilizing Reclamation's Design Standard No. 3 for Canals and Related Structures estimated that total conveyance losses along the canal range from 30 to 50 percent (about 150 acre-feet per year), primarily due to seepage (MID 2018), and MID has identified 1,300 feet (Priority Segment 1 [1,000 feet] and Priority Segment 2 [300 feet]; Figure 2) of the canal as most critical for lining at this time.

1.3 Purpose and Need

The purpose of the Proposed Action is to contribute to the WaterSMART Program objectives of conserving water and using water more efficiently in an effort to contribute to a reliable water supply in the western United States. The need for the Proposed Action is to reduce unnecessary diversions from the Yampa River by eliminating water seepage in the identified segments of the Maybell Canal by approximately 150 acre-feet per year.



0 250 500

GRAPHIC SCALE (FEET)

Drawing Coordinates:
CO83-NF

Prepared By:
Headwater Engineering
696 County Road 22
Craig, CO 81625

Prepared For:



MAYBELL DITCH LINER
N/2NE OF SEC. 11 & NWNW OF SEC.12,
T 6 N - R 95 W, 6TH P.M.
MOFFAT COUNTY COLORADO

File:	Revised:
Drawn By: WAM	Checked By: WAM
Date:	Revised:

Figure 2

1.4 Decision to be Made

This EA has been prepared to evaluate adverse and beneficial effects of the Proposed Action and No Action alternatives, and to provide a basis for decision by Reclamation on whether to provide funding for the Proposed Action. Under the Proposed Action, Reclamation would contribute federal funds to MID for lining 1,300 feet of the canal through the Watersmart FY2018: Small-Scale Water Efficiency project grant. Once funded, the MID would implement improvements and continue to operate and maintain the canal. A project life of 50 years has been identified for this project. Should Reclamation choose not to fund the project, the MID will continue to operate the canal in its current state.

1.5 Relationship to Other Projects

Several priority projects were identified by MID in 2016 to improve the operational efficiency of the canal, divert less water while delivering the same volumes to users, and increase the streamflow in the Yampa River immediately downstream of the headgate. In 2017, the MID installed 400 feet of canal lining, a new headgate flow measuring device, an automated waste gate, and new check structures. Lining additional segments of canal, especially Priority Segment 3, is expected to occur as funding is available.

1.6 Scoping, Coordination, and Public Review

Reclamation coordinated with other agencies in scoping and preparing this EA, including the U.S. Fish and Wildlife Service (Service), the U.S. Army Corps of Engineers (Corps), the BLM, Colorado State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation. Coordination occurred via meetings, phone calls, and letters between April and July, 2019.

2 Proposed Action

2.1 Location and Environmental Setting of the Proposed Action Area

The Proposed Action Area lies in the Lower Yampa hydrologic unit of the Yampa and White River watershed in the Colorado River Basin and is located in Section 11, Township 6 North, Range 95 West, of the 6th Principal Meridian. The elevation in the project area is approximately 5,957 feet above sea level.

2.2 No Action Alternative

Under the No Action alternative, the canal will continue to slough into the Yampa River and water delivery will continue to be inefficient due to seepage. In order to maintain the canal, MID will continue to re-shape and repair the canal (fix the sloughing) seasonally in an effort to maintain the functionality of the canal and prevent possible breaching.

2.3 Proposed Action Alternative

Under the Proposed Action Alternative, Reclamation would provide funding to the MID for the installation of a polymer liner at two discontinuous segments of canal: Priority Segment 1 (1000 feet); and Priority Segment 2 (300 feet) (Figure 2). A previously lined segment occurs between the two

segments, as shown on Figure 2, and future Priority Segment 3 is shown east of the project area and is not part of the proposed project. A temporary staging area (0.1 acre) is located 0.4 mile to the northwest of the segments in a previously disturbed area between the canal and the river.

The Proposed Action would be implemented in late fall of 2019, after the irrigation season when the canal is dewatered. Installation of the liner is expected to be completed over a period of 6 weeks, barring any unforeseen circumstances or inclement weather. The project would be completed prior to December 15, 2019. The installation would consist of preparing the canal surface (grading/smoothing the canal surface), installing and fastening the lining in place, smoothing and restoring disturbed ground, and re-contouring as needed. The existing canal maintenance road would be used for staging construction equipment and materials during installation. Figure 3 shows a typical cross-section of the canal.

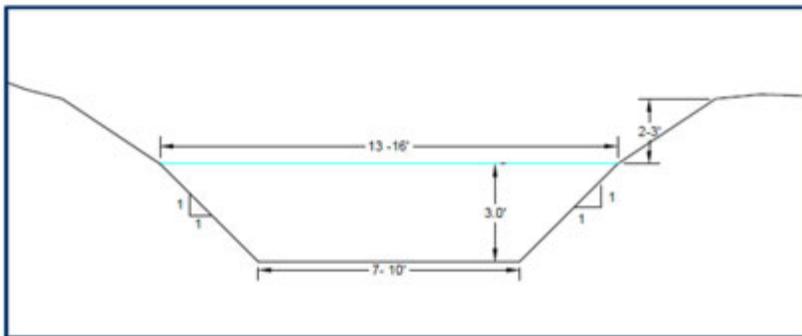


Figure 3. Typical Maybell Canal cross-section in the project area.

Construction equipment would include a truck and flatbed trailer for mobilizing lining material to the construction site, a wheeled backhoe/loader for moving material, and one or more trucks for transporting workers to and from the construction site. The site will be accessed from US Highway 40. Due to the minor amount of construction traffic (up to two trucks per day), safety issues are not anticipated. Once installed, the lining would be inspected annually and repaired as-needed. The project would commence as shown in Table 1.

Table 1. Maybell Canal Water Conservation Project timetable.

Week	Description
1	Mobilization: Stage equipment and material Clear and prepare canal segments for lining
2-5	Line Priority Segments 1 (1,000 feet), and 2 (300 feet)
6	Testing, Demobilize, and Site Cleanup

The seed mix in Table 2 was obtained from the Little Snake Field Office for sandy slopes and semidesert loam (seed mix #4) and would be used to reseed disturbed ground (Rhyne 2019).

Table 2. Recommended seed mix for reseeding disturbed ground.

Description	Pounds (pure live seed per acre)
Western wheatgrass	2
Needleandthread	2
Thickspike wheatgrass	2
Indian ricegrass	2
Sand dropseed	1
Arrowleaf balsamroot	2
Scarlet globemallow	1
Western Yarrow	0.5

3 Affected Environment

This chapter describes the current conditions for each environmental resource that may be affected by the Proposed Action and the No Action alternatives. Information regarding each resource was obtained from research including interviews, pedestrian field assessments, desktop reviews, public scoping, and agency coordination as described in Chapters 1 and 5. Chapter 3 is concluded with a summary of impacts and environmental consequences.

3.1 Environmental Resources Considered but Excluded from Analysis

In order to streamline this EA, only resources with the potential to experience more than a negligible adverse effect were retained for analysis; the remaining resources were considered but are not analyzed further. The rationale for excluding these resources from further analysis is as follows:

Agriculture Resources and Soils. Impacts to soils are negligible, as much of the project area is already disturbed. No prime or unique farmland is within the project area.

Air Quality. According to National Ambient Air Quality Standards established by the U.S. Environmental Protection Agency, Moffatt County meets the requirements for an attainment area, meaning all criteria pollutants are at safe levels and are below specific limits set under the Clean Air Act (CDPHE 2017). During the construction phase for the proposed Project, grading, contouring, and dirt work would result in particulate emissions and diesel emissions; however, releases would be minor and temporary (one loader, and one to two trucks for transportation to and from the site, for a total of 6 weeks during the construction phase), resulting in a negligible and short-term impact to air quality.

Groundwater. The proposed project would prevent seepage, which may be influencing shallow groundwater flows in the immediate vicinity of the canal. Relative to the influence of the Yampa River on groundwater flows in the vicinity, this effect would be negligible.

Water Rights. The proposed project will have no effect on decreed water rights for the MID or for shareholders along the canal.

Water Quality. The high seepage rate from the canal and hillside sloughing has resulted in increased sediment loading in the Yampa River. Lining the canal as proposed is expected to

eliminate sediment loading from the proposed project segments, and minor water quality improvements are expected. No adverse effects are expected.

BLM Sensitive Plant Species. Impacts to BLM sensitive plant species are not anticipated since suitable habitat is lacking, the area is pre-disturbed, and the proposed action would not create disturbances that exceed historical and current canal repair, maintenance and operation activities. Therefore, BLM sensitive plant species are eliminated from detailed analysis.

Wildlife Resources (including BLM sensitive). The Proposed Action Area is within a previously disturbed area and minimal herbaceous vegetation removal would be needed. Therefore, no changes to wildlife habitat would occur as a result of the project. Effects to wildlife due to construction would be negligible and short-term, since construction work would be temporary, timed to avoid peak migratory bird nesting season and wintering big game, occur when the canal is dewatered, and work would be similar to current ongoing maintenance activities. The area within a mile of the project was surveyed for raptor nests by ERO staff, Marin Millen, in May 2019. No raptors nests were found. According to data from the Colorado Department of Natural Resources Division of Parks and Wildlife (CPW), an eagle roost is nearby. However, construction would occur during daylight hours, would be temporary, and would be similar to existing ongoing levels of disturbance. Therefore, impacts to roosting bald eagles would be negligible. Given the negligible impacts to wildlife, this resource is not carried forward for further analysis.

Access Transportation and Public Safety. The construction site will be accessed from US Highway 40, and the Proposed Action Area is along an existing private maintenance road. Due to the remote nature of the project site along a gated MID maintenance road, and the small scale of construction with one to three vehicles exiting and entering the project area, no effects to access, transportation, or public safety would occur as a result of this project. Visibility of the canal to the public using US Highway 40 is limited, and the Proposed Action Area is not in view.

Noise. Effects from equipment noise will be short-term and minor, due to the limited scale of the construction project. There are no residences or other potential noise receptors in the project area.

Visual Resources. Visual effects would be minimal. The project area is not visible from area roads, trails, residences, or other public viewing areas.

Recreation. The canal maintenance roads are not open for public access and use. The proposed Project would have no effect on recreation.

Tribal Concerns. Project notification, along with an invitation to present concerns, was provided in writing on July 12, 2019, to the Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and Ute Indian Tribe - Uintah and Ouray Reservation. Results of tribal consultation would be disclosed in the Final EA.

Socioeconomic Effects. Socioeconomic impact analyses are intended to analyze population-scale, measurable changes in economic assets. The economic asset associated with the Proposed Action is water. Lining the canal would result in reduced maintenance costs and a minor benefit to users, but not result in a change in the value of the canal water.

Environmental Justice. Within the Maybell area, portions of the population are a minority race and/or Hispanic or Latino. The communities, however, would not constitute Executive Order (EO) 12898 populations as the Hispanic or Latino and non-White populations do not exceed 50 percent of the total population and are not meaningfully greater than Colorado's non-White and Hispanic or Latino populations. Therefore, there would be no effect on environmental justice populations as a result of this project.

All other resources considered and analyzed are presented in the remainder of this chapter, along with a discussion regarding cumulative effects. Environmental commitments necessary to mitigate the effects of the project on the human and natural environment are discussed in Chapter 4.

3.2 Cultural Resources

On May 3, 2018, a cultural resource survey was conducted within the proposed action's Area of Potential Effect (APE) (ERO 2019). Within the APE, ERO documented one new segment of the Maybell Canal (5MF4143.7). Prior to fieldwork, ERO conducted a file and literature review for the project with the Colorado Office of Archeology and Historic Preservation online Compass database on May 2, 2019, and with the BLM-LSFO in Craig on May 3, 2019. ERO included a 1-mile buffer within the APE to include considerations for indirect effects and the regional context. Previous surveys and previously documented cultural resources within one mile of the project were evaluated, although none of the surveys conducted previously intersected the project area.

3.2.1 No Action

Under the No Action alternative, no change is expected to cultural resources.

3.2.2 Proposed Action

Under the proposed action, the newly documented segment of the Maybell Canal would be altered by placing a polymer liner on the surface of the earthen canal. The newly documented segment of the Maybell Canal is considered nonsupporting of the eligibility of the entire canal. Reclamation is in the process of consulting with the Colorado SHPO with the determination of no historic properties affected. Results of consultation would be included in the Final EA (Appendix B; pending).

3.3 Vegetation

The project area occurs on disturbed ground including an access road and maintenance corridor alongside the canal itself, and vegetation is sparse. The vegetation community in the surrounding dry landscape consists of scrub-shrub, with sparse juniper on the upward sloping river bench to the south. The surrounding landscape is dominated by sagebrush (*Artemisia* sp.), greasewood (*Sarcobatus vermiculatus*), rabbitbrush (*Chrysothamnus* spp.), mustard (*Chorispora tennalla*), willow (*Salix exigua*),

and bunch grasses; typical vegetation in the region also includes needle & thread grass (*Hesperostipa comate*), wheatgrasses (*Pascopyrum smithii*), Sandberg bluegrass (*Poa secunda*), prairie junegrass (*Koeleria macrantha*), sedges, bottlebrush squirreltail (*Carex hystericina*), dropseed (*Sporobolus* spp.), and various other grasses. A narrow intermittent fringe of grass occurs along the canal and is presumed to be a mesic/wetland grass.

The Colorado Noxious Weed Act designates undesirable plants that are considered a threat to Colorado’s natural resources (CDA 2019). State-designated noxious weeds observed in or near the project area (pers. comm. Camblin 2019) include those listed in Table 3.

Table 3. Noxious weeds observed in the project area.

Common Name	Scientific Name	Moffatt County Noxious Weed List	State of Colorado List
Cheatgrass	<i>Bromus tectorum</i>	Yes	C
Canada thistle	<i>Cirsium arvense</i>	Yes	B
Tamarisk	<i>Tamarix</i> spp.	Yes	B

Source: Colorado Department of Agriculture (CDA) 2019; Moffat County 2017.

Additional weeds including white top (*Cardaria draba*) and Russian knapweed (*Acroptilon repens*) are present along the canal, but have not been observed in the project area (pers. comm., Camblin 2019). Leafy spurge (*Tithymalus esula*) is also known to be in the area (MID 2018). The MID is responsible for complying with the Colorado Noxious Weed Act in the project area.

3.3.1 No Action

Under the No Action alternative, no change would occur to vegetation, noxious weeds, and invasive species. Annual maintenance and repair activities, including use of tracked or wheeled backhoes, loaders, and other equipment would continue to disturb the project area including the wetland fringe along the canal, and contribute to the potential for spreading noxious weeds.

3.3.2 Proposed Action

Under the Proposed Action, ground disturbance would occur that may create conditions for the spread of noxious weeds; however, this disturbance is similar to existing disturbance conditions which includes annual maintenance and repair along the canal. Environmental protection measures included in Chapter 4 are expected to mitigate the potential negative effects to vegetation. In addition, disturbed areas would be reseeded with a seed mix approved by Reclamation.

Placing a polymer liner along the canal would alter the narrow wetland fringe in Priority Segments 1 and 2; however, the effects are expected to be minor. Reclamation is seeking verification from the Corps that the project is exempt from Section 404 of the Clean Water Act. Beneficial indirect effects to the downstream wetlands along the Yampa River may occur due to the expected increase in water volumes in the river, and due to eliminating annual maintenance activities along the canal.

3.4 Surface Water

The Yampa River basin has limited reservoir storage, and therefore retains a natural hydrograph with high spring peak flows and low base flows in summer, fall and winter. The headwaters of the Yampa

River are in the Flat Tops Wilderness, southwest of Steamboat Springs, CO; the river gains flow from the northern Elk River, the Williams Fork, and the Elkhead River as it flows in a southwesterly direction towards Moffat County and the canal headgate.

More than 70 percent of the current water diversion from the Yampa River is agricultural (Friends of the Yampa 2019). The MID canal diversion in Juniper Canyon diverts water from the Yampa River into the Maybell Valley about 30 miles west of Craig; the canal was constructed in 1899, 12 years before Moffatt County was established in the western portion of Routt County (Craig Daily Press 2017).

Current low season flows on the Yampa River near Maybell drop below the streamflow target of 93 cfs identified by a local working group and the Recovery Program (MID 2018). For example, during the drought in 2012 the flow dropped below 93 cfs for 67 days and the average flow from August 1 through October 15 was only about 100 cfs (MID 2018).

3.4.1 No Action

Under the No Action alternative, no change would occur to surface water resources.

3.4.2 Proposed Action

Lining the identified segments of the Maybell Canal would eliminate up to 150 acre-feet of seepage from the canal annually. Due to the increased efficiency of the canal, that water previously lost to seepage would no longer be diverted from the Yampa River. The project would have a beneficial effect on surface water by retaining up to 150 acre-feet per year in the Yampa River. In addition, lining the canal sections would help eliminate sloughing, and would therefore help provide a more reliable water source for downstream users.

3.5 Threatened and Endangered Species

The Endangered Species Act of 1973 protects federally listed endangered, threatened, and candidate plant and animal species and their critical habitats. The following federally-listed species were determined to occur or have the potential to occur within or near or be affected by the Proposed Action. These determinations were developed by reviewing published range maps and habitat requirements of each of the species from the list of potential species provided by the U.S. Fish and Wildlife Service (USFWS 2019) and through evaluating on-site conditions documented during field investigations.

Endangered Colorado River Fishes: The upper Colorado River Basin has four fish species listed as endangered: bonytail chub (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*). Decline of these fish species 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 Service designated critical habitat for the four endangered fish species in the Federal Register (56 FR 54957-54967), including the lower portion of the Yampa River basin. There is critical habitat for the Colorado pikeminnow adjacent to and upstream of the project area (from the project area, east to the Colorado State Highway 394 bridge at Craig CO), and downstream of the project area there is critical habitat for all four fish species (Roehm 2004). In general,

endangered fish are present in the Yampa River in greater amounts than in other western rivers, due to the unrestricted flows which support valuable fish habitat (USFWS 2005; Friends of the Yampa 2019).

Previously issued biological opinions state that all depletions within the upper Colorado River Basin may adversely affect the four fishes. Water depletions in the Yampa River have the potential to diminish backwater spawning areas in downstream designated critical habitat in the Colorado River, directly affecting the four endangered fishes and the extent and quality of their designated critical habitat.

The Upper Colorado River Endangered Fish Recovery Program (Recovery Program) was established in 1988 as a partnership of public and private organizations working to recover the four species while allowing continued and future water development. Recovery strategies include conducting research, improving river habitat, providing adequate stream flows, managing nonnative fish, and raising endangered fish in hatcheries for stocking. Specific upgrades to the Maybell Irrigation Canal occurred, including installation of check structures and automated return flow gate in order to leave more water in the river (USFWS 2018). These upgrades were incorporated in 2017. In 2018, the Service determined that the Recovery Program had made “sufficient progress to be the reasonable and prudent alternative to avoid the likelihood of jeopardy to the endangered fishes and to avoid destruction or adverse modification of their critical habitat” for “existing depletions” (USFWS 2018).

3.5.1 No Action

Under the No Action alternative, no change is expected to threatened and endangered species.

3.5.2 Proposed Action

Under the Proposed Action, additional upgrades would be made to the Maybell Irrigation Canal, with resulting beneficial effects to Colorado River’s endangered fish habitat and other aquatic/riparian-dependent species. Beneficial effects may occur due to the reduction of canal seepage, resulting in up to 150 acre-feet of water remaining in the Yampa River. Reclamation is consulting with the USFWS to determine if the MID’s historic depletions are covered under the Yampa Programmatic Biological Opinion (PBO) (USFWS 2005). The results of consultation would be disclosed in the Final EA. No change to depletions would occur as a result of this project, and lining the canal would potentially increase water flows in the Yampa, having a net benefit to Colorado endangered fish habitat downstream of the project area.

No adverse effects to the endangered fish populations are expected as a result of this project. The construction activities would be confined and controlled away from the bank of the Yampa River, and the construction phase would occur after the irrigation season when water would not be flowing in the canal. Best management practices for storm water erosion control during construction would be implemented (see Chapter 4). No adverse effects to other threatened and endangered species are expected as a result of this project.

3.6 Cumulative Effects

Cumulative effects under NEPA are defined as “the impact on the environment which results 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 other actions” (40 CFR 1508.7).

The direct and indirect effects of past and ongoing (present) actions are included in the affected environment analyses above. The primary goal of this cumulative effects analysis is to determine the magnitude and significance of incremental environmental effects on the resources analyzed in this EA due to the implementation of reasonably foreseeable future actions. Reclamation determines the appropriate spatial boundary for the cumulative effects analysis based on several factors, such as scope of the proposed action and how far effects of the proposed action can be measured.

The spatial boundary for the cumulative effects analysis includes the reach of the Yampa River and surrounding valley between the project area, and the Canal’s return structure approximately 15 river miles downstream of the project area. The temporal boundary for the cumulative effects analysis is 50 years. Irrigation canal upgrades are occurring throughout the upper Colorado River region in order to modernize water delivery systems, mitigate salt loading, and conserve water (Reclamation 2017); MID has previously lined a different segment of the Maybell Canal (2017) and has identified an additional segment that is prioritized for lining in the future. The Proposed Action would have an overall beneficial cumulative effect to regional agricultural resources (farm land and hay production), along with past, current, and future projects that enhance and maintain water delivery to farmland in the region.

Due to the limited scale and scope of this project, measurable adverse effects are not anticipated for any resources; therefore, there would be no effects to contribute to potential adverse effects of reasonably foreseeable future actions.

3.7 Summary

The proposed project would create ground disturbance that may create conditions for the introduction of noxious weeds; however, this disturbance is similar to existing disturbance conditions, and any new disturbances within the 1.6-acre project area are expected to be minor and negligible. No adverse effects are expected to any other resources. Beneficial effects to water quality are expected from stabilizing the canal and preventing sloughing and sediment loading into the Yampa River. The reduced seepage and water loss will benefit flows in the Yampa River and benefit downstream habitat for the Colorado River’s endangered fish. No cumulative effects are expected as a result of this project.

4 Environmental Commitment Plan

Table 4 describes the environmental commitments and related mitigation measures developed to protect resources and mitigate adverse impacts to a nonsignificant level. The cooperative agreement (#R18AP00221) between Reclamation and the MID requires that MID be responsible for “...implementing and/or complying with environmental commitments contained in National Environmental Policy Act (NEPA) compliance documents to be prepared by the Recipient and approved by Reclamation for the project.” The MID will use this table to document compliance with each commitment and will submit it to Reclamation as a record of compliance once construction is complete.

The following environmental commitments will be implemented by MID as an integral part of the Proposed Action.

Table 4. Maybell Canal Water Conservation Project environmental commitments.

Environmental Commitment	Timing	Date of Compliance	MID Initials
Water Quality and Water Resources			
1. A Storm Water Discharge application will be submitted for General Permit No. COR-030000 as provided by the Colorado Department of Public Health and Environment at least ten (10) days prior to the commencement of construction activities.	Pre-construction		
2. A Storm Water Management Plan will be developed and filed with the Colorado Department of Public Health and Environment. In accordance with the Storm Water Management Plan, Best Management Practices, including storm water drainage, erosion control, and sediment control will be implemented to prevent or reduce point source pollution during and following construction. A copy of this plan will be provided to Reclamation.	Pre-construction		
3. A Spill Response Plan will be prepared. As part of this plan, fuel storage, equipment, maintenance, and fueling procedures will be developed to minimize the risk of spills and impacts from these incidents. A copy of this plan will be provided to Reclamation.	Pre-construction		
4. Equipment will be inspected daily and repaired as necessary to ensure equipment is free of petrochemical leaks.	During construction		
5. The lining will be installed and maintained in a manner that does not interfere with the allocation of water shares.	During construction, post construction		
Access and Transportation			
6. All construction activities will be confined to rights-of-way (ROW) negotiated between the MID and landowners, including the 50-foot ROW across BLM land. Staging will take place along the existing access road.	During construction		
Noxious Weeds and Invasive Species			
7. All construction equipment will be power-washed and free of soil and debris prior to entering the construction site to reduce the spread of noxious and invasive weeds.	During construction		
8. Tamarisk present on site will be cut and removed from the project area during clearing and grubbing to prevent the spread of seed.	During construction		
9. MID will continue to be responsible for complying with the Colorado Noxious Weed Act and will obtain appropriate pesticide use permits in accordance with Section 402 of the Clean Water Act.	Post-construction		
Wildlife, including Federally Listed Species, and Vegetation			
10. 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.	During construction		
11. Construction would occur during the daylight hours and scheduled for completion prior to December 15, to avoid wintering big game and nesting migratory birds (April 1-July 15).			
12. Monitoring and continued revegetation would occur as needed for two to three years following project construction.			

Environmental Commitment	Timing	Date of Compliance	MID Initials
Cultural Resources			
13. 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.	During construction		
14. If additional areas of impact (for example: access roads, borrow pits, or waste areas) are identified during the course of the undertaking, they will be inventoried for cultural resources and consulted on with the SHPO. No construction work will occur at or near the additional impact areas until this consultation is completed.	During construction		
Agricultural Resources and Soils; Ground Disturbance			
15. Ground disturbance and vegetation removal will be limited to the smallest portion of the Proposed Action Area necessary to safely implement the project. Construction limits will be shown on plans provided to the contractors.	Pre-construction and during construction		
16. Existing access roads will be used to access construction, staging and stockpile areas. No new roads will be constructed.	During construction		
17. Topsoil will be stockpiled and re-distributed after construction, to facilitate revegetation success.	During construction		
18. Soil erosion will be minimized by using erosion control measures at the edges of ground disturbances.	During construction		
19. All disturbed areas will be smoothed and shaped, contoured, and reseeded to as near their pre-project conditions as practicable.	During construction		
20. A noninvasive, drought-tolerant seed mix will be used to revegetate areas disturbed by the project.	During construction and Post-construction		
Other			
21. Dust abatement measures will be implemented during construction of the facilities. Water for dust suppression will not be obtained from the canal or Yampa River.	During construction		

5 Consultation and Coordination

5.1 Public Involvement

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

5.2 Government Agencies

5.2.1 Western Colorado Area Office, Upper Colorado Region, Bureau of Reclamation

Lesley McWhirter, Environmental & Planning Group Chief
Jennifer Ward, Environmental Protection Specialist
Justyn Liff, Public Relations Specialist
Amanda Ewing, Biologist

5.2.2 U.S. Fish and Wildlife Service

Terry Ireland, Fish and Wildlife Biologist

5.3 Proponent

5.3.1 The Nature Conservancy

Jennifer Wellman, Program Director

5.3.2 Maybell Irrigation District

Mike Camblin, President

5.3.3 ERO Resources Corporation

Cassandra Shenk, NEPA Specialist/Environmental Planner
Aleta Powers, Principal, Biologist
Kathy Croll, Cultural Resources Specialist

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Appendix A Photo Log

Maybell Canal Water Conservation Project
Appendix A: Photo log, May 3, 2019



Photo 1. Maybell Canal overview, view to the west.



Photo 2. Maybell Canal overview, view to the west.

Maybell Canal Water Conservation Project
Appendix A: Photo log, May 3, 2019



Photo 3. Maybell Canal overview, view to the east.



Photo 4. Maybell Canal overview, view to the west.

Maybell Canal Water Conservation Project
Appendix A: Photo log, May 3, 2019



Photo 5. Maybell Canal overview, previously lined portion, view to the east. Note the erosion above the ditch.



Photo 6. Maybell Canal overview, view to the west-southwest from the western extent of the previously lined portion.

Maybell Canal Water Conservation Project
Appendix A: Photo log, May 3, 2019



Photo 7. Dirt pile near lined portion of Maybell Canal, with the Yampa River on the right, view to the west.



Photo 8. Maybell Canal overview, easternmost extent of previously lined portion, view to the southwest.

Maybell Canal Water Conservation Project
Appendix A: Photo log, May 3, 2019



Photo 9. Maybell Canal overview, view to the southwest.

Appendix B Concurrence from the SHPO regarding the NHPA [Pending]

Appendix C Concurrence from the Corps regarding the CWA [Pending]

Appendix D Concurrence from the USFWS regarding the ESA [Pending]

Appendix E Public Distribution List

Adjacent Landowners

Colorado Department of Transportation

Colorado Office of Archaeology & Historic Preservation

Colorado River Water Conservation District

Colorado Water Conservation Board

Trout Unlimited

U.S. Army Corps of Engineers

U.S. Bureau of Land Management

U.S. Department of Agriculture Natural Resources Conservation Service

U.S. Fish and Wildlife Service

Colorado Parks and Wildlife

Friends of the Yampa

Craig Daily Press

The Nature Conservancy

City of Craig

Town of Maybell

Colorado First Conservation District

Craig Chamber of Commerce

Moffat County Planning & Development Dept.

Moffat County Road & Bridge Department