United States Department of the Interior
Bureau of Land Management
and
United States Department of Agriculture
Forest Service

Draft Environmental Assessment
DOI-BLM-CO-G020-2023-0048-EA

TEP Rocky Mountain LLC and Grand River Gathering, LLC
West Mamm Creek Pipeline Project

BLM Right-of-Way Grant COC 80870 for TEP 6-inch and 8-inch Water Pipelines

BLM Right-of-Way Grant 80933 for TEP Access Road

BLM Short-term Right-of-Way Grant COC 80941 for TEP 6-inch and 8-inch Water Pipelines

Forest Service Special Use Permits

Forest Service Temporary Use Permits

December 2024

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Table of Contents

List of Maps

List of Tables

List of Appendices

1. INTRODUCTION

NUMBER: **DOI-BLM-CO-G020-2023-0048-EA**

APPLICANTS: **TEP Rocky Mountain LLC** **Grand River Gathering, LLC**

PROJECT NAME: **West Mamm Creek Pipeline Project (Project or Proposed Action)**

1.1 PROJECT BACKGROUND

TEP Rocky Mountain LLC (TEP) is requesting new Rights-of-Way (ROWs) from the Bureau of Land Management (BLM) and Special and Temporary Use permits from the U.S. Forest Service (Forest Service) to install and operate two water pipelines. Grand River Gathering, LLC (GRG), a wholly owned subsidiary of Summit Midstream Partners, LP (Summit) is requesting Special and Temporary Use permits from the Forest Service to install and operate two natural gas pipelines. The proposed pipelines would support TEP's existing natural gas production and potential future development and production in the West Mamm Creek area. TEP's existing development includes three well pads on private lands including the McClung 29-10 pad (Section 29, T. 7 S., R. 93 W.), Johnson 05-05 pad (Sections 5 and 6, T. 8 S., R. 93 W.), and Johnson 05-07 pad (Section 5, T. 8 S., R. 93 W.) Each of these three well pads has three producing wells for a total of nine producing wells in the West Mamm Creek area. TEP also operates a water transfer system at their existing RU 42-7 pad in Section 7, T. 7 S, R. 93 W. and the existing Rulison Water Management Facility in Section 20, T. 6 S, R. 94 W. An existing pipeline connects the RU 42-7 pad to the Rulison Water Management Facility (see **Map 1**). Existing water pipelines connect the Johnson well pads to the McClung 29-10 pad and produced water is trucked 24.45 miles from the McClung 29-10 pad to the Rulison Water Management Facility. With implementation of the West Mamm Creek Pipeline Project, produced water from the existing nine wells and produced water from any future wells would be transferred by pipeline to the Rulison Water Management Facility eliminating the need for trucking produced water. In addition, installation of the Project would allow for recycled produced water to be transferred from the Rulison Water Management Facility to the West Mamm Creek area to be used for completions of future wells. Installation of GRG's natural gas pipelines would allow transport of natural gas from existing and future wells in the West Mamm Creek area to national markets. All existing TEP well pads in the West Mamm Creek area are located on private lands and access both federal and private minerals (3 federal wells and 6 fee wells).

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

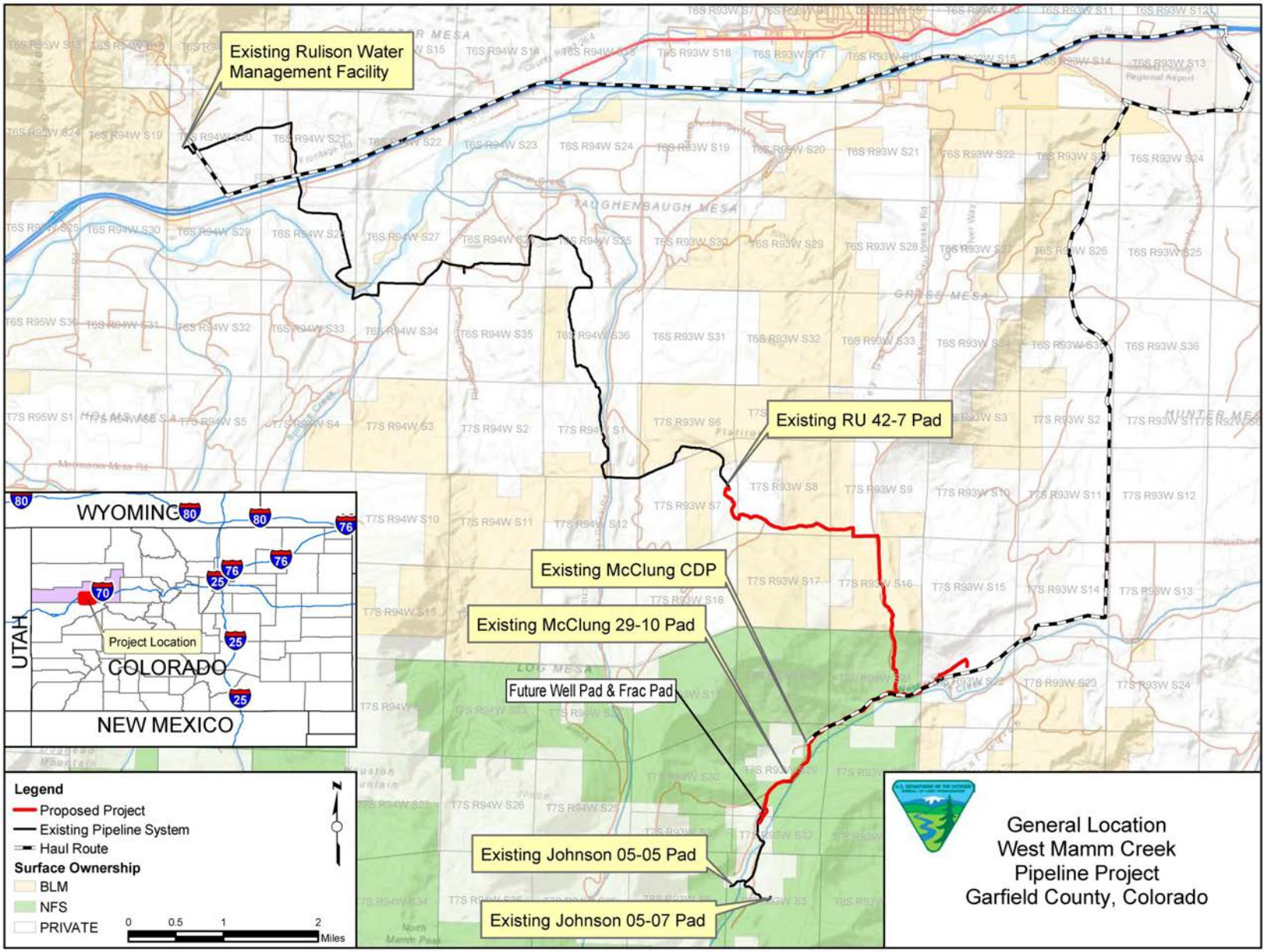
The Project would be located in Garfield County, approximately 7.5 miles due south of Rifle (see Map 1).

BLM Surface (TEP proposed 8-inch and 6-inch produced water pipelines)

Township 7 South, Range 93 West, Sixth Principal Meridian
Section 8: S½SE¼
Section 9: SW¼SW¼
Section 16: N½NW¼, W½E½

Forest Service (TEP proposed 8-inch produced water pipeline and GRG's two natural gas pipelines)

Township 7 South, Range 93 West, Sixth Principal Meridian
Section 21: W½NE¼, N½SE¼, NE¼ SW¼, SE¼SW¼, SW¼SW¼
Section 28: NW¼NW¼
Section 29: Lot 1 (NE¼NE¼), Lot 5 (SE¼NE¼ & SW¼NE¼), Lot 7 (NW¼SE¼), Lot 8 (NE¼SW¼), Lot 11 (SE¼SW¼)



Map 1. West Mamm Creek Pipeline Project General Location

1.3 PURPOSE AND NEED FOR ACTION

The purpose of the Proposed Action is to authorize the produced water pipelines and associated facilities, which would expand TEP's water transfer system to allow transfer of recycled produced water for use in well completions and to deliver produced water to existing infrastructure.

The purpose of the Proposed Action is to transfer recycled produced water for use in well completions and to deliver produced water to existing infrastructure.

This Project would be beneficial to the prudent and effective management of produced water for the existing nine natural gas wells and any future potential development. The new 8-inch and 6-inch produced water pipelines would provide for a safer and more efficient means of transporting produced water to TEP's water management facility for recycle, reuse, and/or disposal of produced water. Installation of the proposed pipeline would minimize the use of haul trucks to transport water between facilities and pads. The Proposed Action would also authorize natural gas pipelines, which would allow GRG to expand delivery of natural gas to national markets.

The need for the Proposed Action is to consider how to transfer produced water between well pads and how to transfer natural gas to national markets in order to facilitate development of oil and gas resources consistent with the management objectives in the BLM Resource Management Plan (RMP) and Forest Service Land and Resource Management Plan (LRMP). The BLM has responsibility, under the 1976 Federal Land Policy and Management Act (FLPMA), to respond to TEP's request for the ROW grants authorizing use of public land to install, operate, and maintain the produced water pipelines. The Forest Service manages lands pursuant to the LRMP prepared according to the National Forest Management Act; any special use and temporary use permits issued by the Forest Service would be in compliance with the White River National Forest (WRNF) LRMP. The Proposed Action is reviewed and processed under the National Environmental Policy Act of 1969 (NEPA) to analyze and disclose to decision makers and the public the potential impacts to public lands that may be associated with installation of the pipelines if approved.

1.4 DECISION TO BE MADE

Since the West Mamm Creek Pipeline Project proposes activities on both BLM and NFS lands, there will be two separate decisions, one for each agency. The primary decision by the BLM upon completion of this EA is whether to authorize the proposed 6-inch and 8-inch produced water pipelines on BLM-managed lands through the issuance of 30-year ROW (COC 80870), to authorize access (COC 80933), and to authorize a short-term ROW (COC 80941) for temporary use areas during construction. The primary decision by the Forest Service upon completion of this EA is whether to authorize the proposed 8-inch produced water pipelines on NFS lands and whether to authorize the proposed 8-inch natural gas pipelines on NFS lands.

Based on the information presented and analyzed in this EA, the BLM and Forest Service may choose to (a) authorize the Proposed Action; (b) authorize the Proposed Action with modifications; or (c) not authorize the Proposed Action at this time. Options (a) and (b) would include the application of ROW stipulations as mitigation to avoid, minimize, or offset impacts. If the EA concludes there is potential for significant impacts, then an EIS would need to be prepared.

Under Forest Service policy, if it is determined there are no significant impacts, that finding, along with the EA and a draft decision notice, will be published for a 45-day objection period. If no objection is filed within the 45-day time period, implementation of the decision may begin on, but not before, the 5th business day following the close of the objection filing period (36 CFR 218.12(c)(2)). If an objection is

received, implementation may occur immediately following the close of the objection resolution period (36 CFR 218.12(a)).

The BLM would sign a separate Decision Record from the Forest Service and the decision would take effect immediately upon the date it is signed by the Authorized Officer and would remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a Notice of Appeal must be filed in the office of the Authorized Officer.

The BLM Decision Record and Forest Service Decision Notice associated with this EA may not constitute the final approval for all actions, such as individual ROW grants associated with the Proposed Action.

1.5 SCOPING

The Council on Environmental Quality (CEQ) NEPA implementation regulations (40 CFR 1500-1508) provide that the BLM and Forest Service may use a scoping process to identify potentially significant issues in preparation for an impact analysis. Each agency has separate regulations for conducting the scoping process. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis. The BLM placed information regarding the Project on its public ePlanning website (https://eplanning.blm.gov/eplanning-ui/project/2025023/510) and requested comments from the public for 30 days between August 11, 2023 and September 11, 2023.

The Forest Service scoping process for projects on National Forest System (NFS) lands is identified in 36 CFR 218.24. The West Mamm Creek Pipeline Project is an activity implementing a land management plan on a portion of NFS lands and therefore is subject to pre-decisional objections under subparts A and B of 36 CFR Part 218. The BLM, as the lead agency has combined scoping with the legal notice and opportunity to comment, as described in 36 CFR 218.24 for the activities that occur on NFS lands. Public scoping began on August 11, 2023 and a Notice of Proposed Action (NOPA) was emailed to various community residents, interested individuals, public agencies, tribal governments, and other organizations. The NOPA package provided a full description of the Proposed Action, the purpose and need for action, a preliminary resource evaluation, and an illustrative map. A legal notice for a 30-day comment period for the Project was published in the Glenwood Springs Post Independent, the newspaper of record for the WRNF on August 11, 2023. The West Mamm Creek Pipeline Project is also posted at https://www.fs.usda.gov/project/whiteriver/?project=64353. Public comments during the 30-day combined scoping and comment period were directed to be submitted to the BLM ePlanning website.

During public review of the NOPA, a total of 49 unique comment letters and emails were received, including one letter from Colorado Parks and Wildlife (CPW), one from Garfield County, six from environmental advocacy groups (a combined letter from Center for Biological Diversity, Wilderness Workshop and Western Colorado Alliance), Colorado Chapter of Sierra Club, Grand Valley Citizen's Alliance, Western Watersheds Project, and Roaring Fork Audubon, and 41 from individuals. In addition, Western Colorado Alliance sent a separate letter with text signed by 171 individuals. CPW listed concerns regarding potential impacts to elk and mule deer and keeping access open. Garfield County indicated they are in support of the Project. Concerns expressed by the environmental groups and individuals focused on potential impacts to wildlife, special status species, water quality, climate, and future development. Some of the comments from individuals were in support of the Project indicating that the pipelines are preferable to truck traffic.

The BLM and FS reviewed the scoping comments and identified the following issues for detailed analysis in the EA:

- Issue 1: How would the proposed action affect air quality and contribute to greenhouse gas emissions?
- Issue 2: How would the proposed action affect livestock grazing?
- Issue 3: How would the proposed action affect the Western Distinct Population Segment of Yellow-Billed Cuckoo?
- Issue 4: How would the proposed action affect Harrington's beardtongue?
- Issue 5: How would the proposed action affect the potential Waters of the United States (WOTUS)?
- Issue 6: How would the proposed action and proposed construction affect the resident elk, moose, and mule deer?

A summary of issues considered but not analyzed in detail is presented in Table 4. Information about the public review of the draft EA is included in Section 4.3.

2. PROPOSED ACTION AND ALTERNATIVES

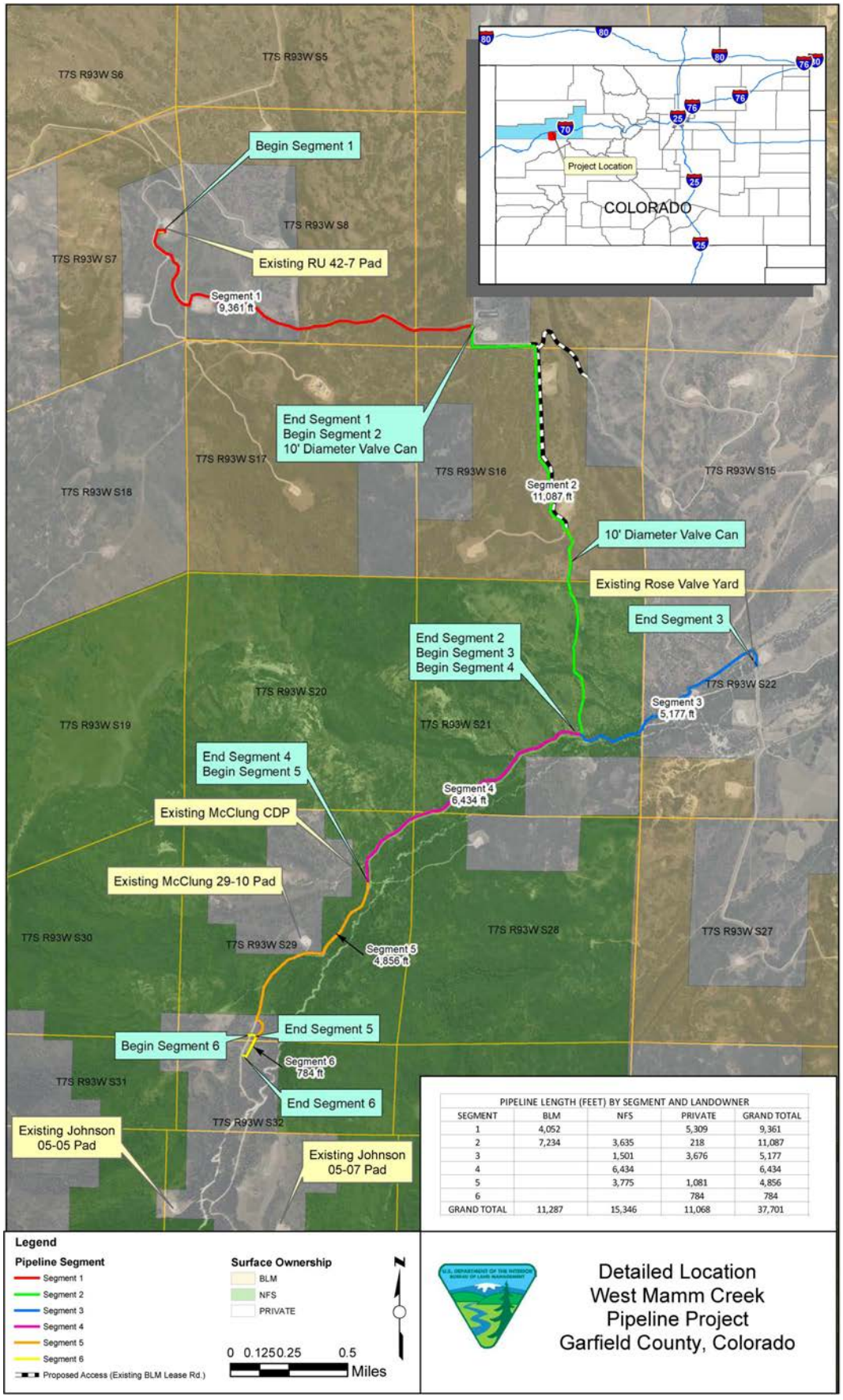
2.1 PROPOSED ACTION

The Proposed Action includes two TEP water pipelines and two GRG natural gas pipelines. TEP's 6-inch and 8-inch produced water pipelines would be co-located in the same trench and would require a 30-foot ROW (COC 80870) from the BLM. A separate ROW (COC 80933) would be required from the BLM for pipeline access on existing BLM lease roads for 7,208 feet (see **Map 2**). A short-term ROW (COC 80941) would be required for temporary use areas including 20 feet along the pipeline length and 25 feet for existing road and pipeline crossings. Installation of the water pipelines on NFS lands would require special and temporary use permits for a 30-foot permanent ROW and 20-foot temporary use areas.

GRG's two 8-inch natural gas pipelines would also be co-located in the same trench as the TEP produced water pipelines, where they parallel one another, and would require a 30-foot permanent ROW from the Forest Service. On NFS lands, special use and temporary use permits would be required from the Forest Service for TEP's 6-inch and 8-inch produced water pipelines and GRG's 8-inch natural gas pipelines.

TEP's proposed 8-inch produced water pipeline would connect TEP's existing and proposed West Mamm Creek development to their existing water transfer system at the existing RU 42-7 pad. The proposed 6-inch produced water pipeline would be installed from the existing RU 42-7 pad to the proposed 10-foot diameter valve can and would parallel the proposed 8-inch produced water pipeline. Installation of the produced water pipelines would support existing infrastructure in the West Mamm Creek area as well as any future development. Access to the proposed 8-inch and 6-inch produced water pipelines would be on existing fee lease roads, county roads, National Forest System Road (NFSR) 818, and existing BLM lease roads and two tracks. TEP is requesting a separate ROW for access on the existing BLM lease roads and two track. The produced water pipelines would cross BLM lands managed by the Colorado River Valley Field Office (CRVFO), NFS lands managed by the WRNF, within the Rifle Ranger District, and private lands in Garfield County, Colorado.

GRG's two proposed 8-inch pipelines would move natural gas from a future pad location in Section 32, T. 7 S., R. 93 W., with one pipeline terminating at the existing McClung Central Delivery Point (CDP) and the other terminating at the existing Summit Rose Valve Yard. The natural gas pipelines would cross NFS lands managed by the WRNF within the Rifle Ranger District as well as private lands.



Map 2. West Mamm Creek Pipeline Project Detailed Location

As shown on Map 1, produced water from TEP's 9 existing producing wells in the West Mamm Creek area is currently trucked from the existing McClung 29-10 pad to the Rulison Water Management Facility (approximately 24.45 miles – see Map 1). With installation of the produced water pipelines, 156 trucks annually would be eliminated.

For purposes of analysis, the proposed produced water and natural gas pipelines have been divided into six segments (see Map 2). **Table 1** lists the proposed length and disturbance for each pipeline by landowner for each segment.

Table 1. Begin and End Points for Pipeline Segments

Segment	Begin	End	Pipeline Type	Landowner
Segment 1	Existing RU 42-7 Pad	Proposed 10-Foot Diameter Valve Can	TEP 8-inch produced water TEP 6-inch produced water	Private BLM
Segment 2	Proposed 10-Foot Diameter Valve Can	NFSR 818 Junction	TEP 8-inch produced water	BLM NFS
Segment 3	NFSR 818 Junction	Existing Rose Valve Yard	GRG 8-inch natural gas	NFS Private
Segment 4	NFSR 818 Junction	Existing McClung CDP	TEP 8-inch produced water GRG 8-inch natural gas	NFS
Segment 5	Existing McClung CDP	Future Pad Location	TEP 8-inch produced water Two GRG 8-inch natural gas	NFS Private
Segment 6	Future Pad Location	Future Frac Pad Location	TEP 8-inch produced water	Private

Segment 1 includes the proposed TEP 6-inch and 8-inch produced water pipelines. The segment begins at the tank farm on the existing RU 42-7 pad on private surface. The proposed pipelines in Segment 1 parallel an existing Summit natural gas pipeline ROW and existing access road. The proposed pipeline route proceeds east on BLM surface to the terminus of the 6-inch produced water pipeline at the proposed 10-foot diameter valve at the BLM boundary, where Segment 1 ends (see Map 2).

Segment 2 includes continuation of the proposed TEP 8-inch produced water pipeline. The segment begins at the proposed 10-foot diameter valve can and proceeds south on BLM-managed lands, crossing into NFS lands and continuing south to NFSR 818 (see Map 2).

Segment 3 includes one GRG 8-inch natural gas pipeline. The segment begins where Segments 2, 3, and 4 meet at NFSR 818. The proposed 8-inch natural gas pipeline in Segment 3 is a continuation of the pipeline in Segment 4 and continues across NFS lands crossing into private lands and terminating at the existing Rose Valve Yard (see Map 2).

Segment 4 includes the continuation of TEP's 8-inch produced water pipeline from Segment 2 and the continuation of one of GRG's 8-inch natural gas pipelines between Segments 3 and 5 on NFS lands (see Map 2). Segment 4 begins where Segments 2, 3, and 4 meet at NFSR 818 and ends at the existing McClung CDP paralleling NFSR 818 (see Map 2).

Segment 5 includes the continuation of TEP's 8-inch produced water pipeline between segments 4 and 6 and two GRG 8-inch natural gas pipelines. The segment begins at the existing McClung CDP on NFS lands, crosses through private lands, back into NFS lands, and ends near a future pad location on private lands (see Map 2).

Segment 6 includes TEP's 8-inch produced water pipeline, which would transport water between a future pad location and its associated frac pad, all on private lands (see Map 2).

Except for approximately 4,960 feet of Segment 2 (beginning near the proposed 10-inch diameter valve can and proceeding south to the intersection with Segments 3 and 4) in Sections 16 and 21, T.7 S., R. 93 W., the six pipeline segments parallel existing pipelines or roads. The 4,960-foot portion of Segment 2 partially parallels an unmaintained, existing two-track on BLM and NFS lands. The existing two-track would be restored on BLM lands to its pre-construction state during reclamation; on NFS lands, the two-track would not be restored but would be reclaimed to match the surrounding landscape.

2.1.1 Disturbance Related to Construction

Pipeline lengths and disturbance estimates by segment are shown in **Table 2**. Total construction disturbance on BLM land would be 13.30 acres in Segments 1 and 2 (see Table 2). Total construction disturbance on NFS lands would be 17.72 acres in Segments 2 through 5. No federal land would be disturbed in Segment 6. Total surface disturbance for the project would be 44.56 acres. Surface disturbance would be entirely "short-term" because reclamation of the pipeline corridor, except at existing road crossings, would occur within 30 days after pipeline construction is completed.

Table 2. Proposed Surface Disturbance by Pipeline Segment

Landowner	***Length (feet)***	***Disturbance (acres)***			
		Existing [1]	***Re-Disturbance***	***New***	***Total*** [2]
Segment 1 (TEP 6-inch and 8-inch pipelines)					
BLM	4,052	1.35	3.35	0.11	4.81
Private	5,309	0.56	4.56	1.46	6.58
Subtotal	*9,361*	*1.91*	*7.91*	*1.57*	*11.39*
Segment 2 (TEP 8-inch pipeline)					
BLM	7,234	2.28	0.37	5.84	8.49
NFS	3,635	0.65	--	3.58	4.23
Private	218	0.00	--	0.16	0.16
Subtotal	*11,087*	*2.93*	*0.37*	*9.58*	*12.88*
Segment 3 (GRG 8-inch pipeline)					
NFS	1,501	0.87	--	0.73	1.60
Private	3,676	0.14	3.34	1.16	4.64
Subtotal	*5,177*	*1.01*	*3.34*	*1.89*	*6.24*
Segment 4 (TEP 8-inch and one GRG 8-inch pipelines)					
NFS	*6,434*	*0.06*	--	*7.50*	*7.56*
Segment 5 (TEP 8-inch and two GRG 8-inch pipelines)					
NFS	3,775	1.42	--	2.91	4.33
Private	1,081	0.15	--	1.09	1.24
Subtotal	*4,856*	*1.57*	--	*4.00*	*5.57*
Segment 6 (TEP 8-inch pipeline)					
Private	*784*	*0.06*	--	*0.86*	*0.92*
Total	*37,699*	*7.54*	*11.62*	*25.40*	*44.56*

[1] Existing disturbance refers to existing road crossings and rights-of-way within the construction corridor.

[2] Surface disturbance would be entirely "short-term" because reclamation of the pipeline corridor, except at existing road crossings, would occur within 30 days after pipeline construction is completed.

2.1.2 Construction Schedule

Construction of the pipelines would begin when all permits and approvals are obtained and would be dependent on weather conditions, applicable ROW stipulations, and timing limitations. It is estimated that construction would last for 4 months and would be conducted with one crew. The pipeline corridor would be seeded after construction is finished and during suitable weather and soil conditions.

2.1.3 Components of Pipeline Construction

Pipeline Specifications

The buried 8-inch produced water pipeline specifications would be as follows:

- 8-inch Nominal Pipe Size (NPS): Outside Diameter (O.D.) 8.625 inches, Steel Wall Thickness 0.219 inch
- Internal Liner: O.D. 7.52 inches and Liner Wall Thickness 0.33 inch
- External Coating: Three-Layer Fusion Bond Epoxy (FBE) with Polyethylene
- Pressure Rating: 600# rating, American National Standards Institute (ANSI), 1,480# rating @ <100°F

The buried 6-inch produced water pipeline specifications would be as follows:

- 6-inch NPS: Outside Diameter (O.D.) 6.625 inches, Steel Wall Thickness 0.188 inch
- Internal Liner: O.D. 5.74 inches and Liner Wall Thickness 0.25 inch
- External Coating: Three-Layer FBE with Polyethylene
- Pressure Rating: 600# rating ANSI, 1,480# rating @ <100°F

The buried 8-inch natural gas pipeline specifications are as follows:

- 8-inch NPS: Outside Diameter (O.D.) 8.625 inches, Steel Wall Thickness 0.250 inch, X52
- External Coating: Three-Layer Fusion Bond Epoxy (FBE) with Polyethylene
- Pressure Rating: 600# rating, American National Standards Institute (ANSI), 1,480# rating @ <100°F

Aboveground appurtenances required for the pipeline ROW would be the placement of Carsonite signs marking the approximate pipeline centerline as required by federal, state, and/or local requirements. TEP would also install two aboveground pipeline valve cans located inside the permanent ROW. Each valve can would be 10 feet in diameter and would be required for the installation and operation of the required block valves for pipeline maintenance. Both valve cans would be located on BLM surface.

Temporary Construction Workspace

TEP is requesting a 20-foot temporary workspace adjacent to the permanent ROW. TEP is also requesting an additional 25-feet of temporary workspace for a total width of 45 feet at road and existing pipeline crossings. GRG is also requesting a 20-foot temporary workspace adjacent to the permanent ROW and additional 25-feet of temporary workspace at road and existing pipeline crossings.

Construction Access

Access to the pipeline ROW would be on existing Fee lease roads, county roads, existing NFSR 818, and existing BLM lease roads and two tracks. TEP is requesting a separate ROW for access on the existing BLM lease roads and two track. The existing BLM lease roads are located in SW¼SE¼ of Section 9 and in the W½E½ of Section 16. The existing BLM two track is located in the SW¼SE¼ of Section 16 and would also be used to access the proposed valve can in the same location. All the above-mentioned Sections are in Township 7 South, Range 93 West, 6th P.M.

Construction activities associated with pipeline installation typically follow this general order of operation:

1) Installation of perimeter sediment control measures;
2) Clearing and grubbing of site vegetation;
3) Preservation of topsoil by stripping and windrowing topsoil;
4) Excavation and grading of ROW;
5) Trench and blasting (if needed);
6) Installation of pipeline (welding, placement, padding);
7) Backfilling trench excavation;
8) Pressure testing; and
9) Reclamation of ROW (contouring, ripping, seeding, etc.).

Clearing, Grading, and Topsoiling for the Pipeline Installation

Vegetation would be cleared, and the construction workspace graded to provide for a safe and efficient operation of construction equipment and vehicles, and to provide space for storage of subsoil and topsoil. Construction activity and ground disturbance would be limited to approved, staked areas.

Trees would be cut with a chain saw and/or mechanical shears and brush would be generally cut with a hydro-axe or similar equipment. Trees and brush would be cut as close to the ground as possible. Vegetative material would typically be chipped or shredded and incorporated into the topsoil. Stumps that are not shredded or chipped and incorporated into the topsoil would be removed and disposed of at an approved disposal facility. Conditions of Approval (COAs), provided in Appendix A, include visual blending, which would require stockpiling a portion of the removed vegetation and rocks to minimize contrast caused by the pipeline disturbance.

In areas with heavy concentrations of trees, slash, or aspen downfall and/or designated hazard trees, chainsaws and/or trackhoe would be used to clear the ROW corridor footprint of trees. Prior to construction, to create a safe working area for pipeline construction crews, experienced chainsaw operators may be employed to fall and buck standing trees along the pipeline corridor. Where necessary, given the large number of trees, trees would be decked alongside the ROW in locations approved by the BLM and Forest Service representatives and later removed from public lands. TEP would purchase a firewood cutting permit to compensate the BLM for the removal of timber if two cords or greater of firewood sized pinyon and juniper trees of are removed. If trees with 5-inch diameter at breast height (dbh) or greater are to be cut, a Forest Service fuel wood or timber sale contract would be required.

All topsoil would be stripped following removal of vegetation from the trench line and working side of the workspace (except for approximately 10 feet, where topsoil would be stored) and salvaged for replacement during reclamation following completion of pipeline construction. Topsoil would be windrowed along the outer edge of the pipeline corridor and segregated from subsurface materials. The BLM best management practice (BMP) for the windrowing of topsoil would be implemented where topography allows.

Topsoil would be stockpiled separate from subsoil and would not be used to pad the trench or construct trench breakers. Dry drainages or washes that cross the construction workspace would not be blocked with topsoil or subsoil piles. Topsoil and subsoil would be placed on the banks of the drainage. Gaps would be left periodically in the topsoil and subsoil windrows to avoid ponding and excess diversion of natural runoff during storm events.

Excavating and Trenching the Alignment

Existing roads and the existing pipeline corridor would provide for landowners and grazing permittees to move vehicles, equipment, and livestock across the trench where necessary.

Excavated subsoil would be stored separately from windrowed topsoil piles. Subsoil would not be stored in flowing water bodies and dry drainages or washes that cross the construction workspace would not be blocked with subsoil. Subsoil would be placed on the banks of the drainage, outside of the ordinary high water mark (OHWM).

Blasting is not anticipated.

Connecting the Pipeline Joints

For TEP's water pipelines, the joints of pipe would be strung along the trench and mechanically joined utilizing a proprietary ClickWeld process. When necessary, pipe would be bent to accommodate horizontal and vertical changes in direction. Pipe joints would be aligned end-to-end, clamped into position, and mechanically joined in accordance with manufacturer recommendations and applicable regulations. All joints would be visually inspected by a qualified inspector. Non-destructive radiographic inspection would be conducted on fabricated components such as valve sets and risers. A specialized contractor would be employed to perform this work. Any defects would be repaired or cut out as required under the specified regulations and standards.

For GRG's gas pipelines, the joints of pipe would be strung along the trench line and welded together. When necessary, pipe would be bent to accommodate horizontal and vertical changes in direction. Pipe joints would be lined up end-to-end and clamped into position and welded in accordance with regulations and standards currently required for natural gas pipelines, as applicable. All welds would be visually inspected by a qualified inspector. Non-destructive radiographic inspection methods would be conducted in accordance with current requirements. A specialized contractor would be employed to perform this work. Any defects would be repaired or cut out as required under the specified regulations and standards. To prevent corrosion, the pipe would be externally coated with fusion bonded epoxy coating prior to delivery. After welding, field joints would be coated with a tape wrap, shrinkable sleeve wrap, or field applied fusion bond epoxy. Before the pipe is lowered into the ditch, the pipeline coating would be visually inspected and tested with an electronic detector, and any faults or scratches would be repaired.

Lowering in and Padding the Pipeline

Before the pipe section is lowered into the trench, an inspection would be conducted to verify that the pipe is properly fitted and installed in the trench, minimum cover is provided, and the trench bottom is free of rocks and other debris that could damage the external pipe coating. The pipe sections would be simultaneously lifted into position over the trench and lowered into place. Sifted soil fines from the excavated subsoils would provide rock-free pipeline padding and bedding. Sandbags may be used to pad the bottom of the trench instead of, or in combination with, padding with soil fines. In rocky areas, padding material or a rock shield would be used to protect the pipe. No topsoil would be used as padding.

Dewatering may be necessary where water has accumulated in the trench; TEP and GRG would acquire a Colorado Department of Health and Environment (CDPHE) construction dewatering permit prior to construction. Pipe sections would be simultaneously lifted in position over the trench and lowered in place. Sifted soil fines from the excavated subsoils would provide rock-free pipeline padding and bedding. Sandbags may be used to pad the bottom of the trench instead of, or in combination with, padding with soil fines. In rocky areas, padding material or a rock shield would be used to protect the pipe.

Backfilling the Pipeline Trench

Backfilling would begin after a section of pipe has been successfully placed in the trench. Backfilling would be conducted using an excavator, bulldozer or other suitable equipment. Backfilling the trench would generally use the subsoil previously excavated from the trench, except in rocky areas where imported, appropriate fill material may be needed. Backfill would be graded and compacted (where necessary for ground stability) by tamping or walking with a wheeled or tracked vehicle. Compaction would be performed to the extent that there are no voids in the trench. Any excavated material or materials unfit for backfill would either be utilized elsewhere, shallowly mounded on the trench (to help avoid trenchline settling issues), or properly disposed of in conformance with applicable laws or regulations.

Pressure Testing the Pipeline

The pipeline would be tested in compliance with regulations. Prior to filling the pipeline for a hydrostatic or pneumatic test, each section of the pipeline would be cleaned by passing reinforced poly pigs through the interior of the line. Incremental segments of the pipeline would then be filled with water, compressed air, or nitrogen, pressurized, and held for the duration of the test. The length of each segment tested would depend on topography. Water used for hydrostatic testing would not be discharged to the surface; it would be transferred to TEP's Rulison Water Management Facility.

Reclaiming the Pipeline

For BLM and Forest Service lands, reclamation, including seeding, of temporarily disturbed areas along roads and pipelines, and of topsoil piles and berms, would be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 would be seeded during the remainder of the early winter season instead of during the following spring, unless BLM and/or Forest Service approves otherwise based on weather. If pipeline construction occurs discontinuously (e.g., new segments installed as new pads are built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, would be phased such that no portion of the temporarily disturbed area remains in an unreclaimed condition for longer than 30 days. The BLM and/or Forest Service may authorize deviation from this requirement based on the season and the amount of work remaining on the entirety of the pipeline when the 30-day period has expired.

Cleanup and reclamation would occur after the pipeline is installed and would begin after backfilling is complete. Cleanup of the surface along the construction workspace and any temporary use areas would be performed by removing any construction debris and by performing final grading to the original contour. For compacted areas, initial seedbed preparation would include ripping to a minimum depth of 18 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping would be conducted in two passes at perpendicular directions. Following final contouring, the backfilled or ripped surfaces would be covered evenly with topsoil. If directed by the BLM and/or the Forest Service, the operator would implement measures following seedbed preparation (when broadcast-seeding or hydroseeding is to be used) to create small depressions to enhance capture of moisture and establishment of seeded species. Depressions (pocking) would be no deeper than 1 to 2 inches and would not result in piles or mounds of displaced soil. Excavated depressions would not be used unless approved by the BLM and/or the Forest Service for the purpose of erosion control on slopes. Where excavated depressions are approved by the BLM and/or the Forest Service, the excavated soil would be placed only on the downslope side of the depression. Waterbars and other methods to prevent erosion would be installed, and seeding would be performed in accordance with BLM, Forest Service and private landowner requirements.

Visual blending COAs in Appendix A would require spreading of vegetation and rocks removed during construction to minimize contrast with pipeline disturbance.

Drill, broadcast, or hydroseed methods would be employed as appropriate to ensure proper seed placement. Drill seeding is the preferred seeding method and would be used wherever soil characteristics and slope allow for effective operation of a rangeland seed drill. Drill seeding would be performed perpendicular to the slope. Seed would be placed in direct contact with the soil at a depth of 0.25 to 0.5 inch, covered with soil, and firmed to eliminate air pockets around the seeds.

Broadcast seeding would be employed only in areas where drill seeding is unsafe or physically impossible. Seed would be applied uniformly over disturbed areas with manually operated cyclone-bucket spreaders, mechanical spreaders, or blowers. Broadcast application rates would be twice that of drill rates. The seed would be uniformly raked or dragged to incorporate seed to a sufficient seeding depth to provide 0.25 to 0.5 inch of soil cover or by hydroseeding and hydromulching. Hydroseeding and hydromulching would be conducted in two separate applications to ensure adequate contact of seeds with the soil.

The seed mix used would be a BLM, Forest Service, and private landowner approved mix (see GJFO and CVFRO Combined Seed Mixes dated October 26, 2022). TEP and GRG would incorporate these ROWs into their existing weed management plan to ensure monitoring and control of noxious weeds.

All irrigation ditches, cattle guards, fences, and artificial and natural livestock and wildlife water sources would be repaired to at least pre-construction conditions.

2.2 NO ACTION ALTERNATIVE

The No Action Alternative would not authorize construction or other ground-disturbing activities on BLM-managed lands or on NFS lands, resulting in no impact from those types of activities. TEP would not construct the 6-inch and 8-inch produced water pipelines to expand their water management system to support existing infrastructure and any future development. TEP would continue to truck produced water from the existing 9 producing wells for 24.45 miles between the McClung 29-10 pad and the Rulison Water Management Facility (156 trucks annually). Under the No Action Alternative, GRG would not construct the two 8-inch natural gas pipelines which would expand their ability to transport natural gas via pipeline to national markets.

2.3 LAND USE PLAN SPECIAL STIPULATIONS

Stipulations identified in the BLM 2015 CRVO ROD/ARMP (described in Section 2.4) and applicable to the West Mamm Creek Pipeline Project are listed in **Table 3**. Further descriptions of exception criteria and standards are found in the referenced land use plan. (The CRVFO/GJFO Supplemental Environmental Impact Statement [EIS] ROD/ARMP Amendment [ARMPA], approved October 2024 does not change the management direction of the West Mamm Creek area; the management direction approved in the 2015 CRVFO ROD/ARMP still remains germane to the project area.)

Table 3. Protective Stipulations Applicable to the West Mamm Creek Pipeline Project	
Authority	***Stipulations***
2015 ROD/ARMP	CRVFO-No Surface Occupancy (NSO)-5. Perennial Streams, Waterbodies, Riparian Areas, and Aquatic Dependent Species. Prohibit surface occupancy and surface-disturbing activities within a buffer distance of 328 horizontal feet from the outer edge of riparian/wetland zones.
	CRVFO-Timing Limitation (TL)-2. Big Game Winter Habitat. Prohibit surface occupancy and surface-disturbing activities from December 1 to April 15 to protect: mule deer critical winter range; elk winter concentration areas; moose winter range; Rocky Mountain bighorn sheep winter, severe winter and winter concentration areas; and pronghorn winter concentration area.
	CRVFO-TL-3: Big Game Production Areas. Prohibit surface occupancy and surface-disturbing activities during the following time period(s) in mapped big game production areas: **elk production (calving): May 15 to June 30**; Rocky Mountain bighorn sheep production (lambing) areas: April 15 to June 30; pronghorn production (fawning): April 15 to June 30.
	CRVFO-TL-4: Nesting Season for Migratory Birds. Prohibit initiation of surface occupancy and surface-disturbing activities between May 15 and July 15 to minimize the destruction of active nests. Application of the TL would consider the type of equipment to be used (e.g., hand-operated power tools verses mechanized/motorized equipment), the scale and duration of the Project, habitat types present, breeding phenology, weather conditions, elevation, and terrain.
	CRVFO-TL-5: Nesting Raptors. Prohibit surface occupancy and surface-disturbing activities within species-specific buffer distances from active nests of non-special status birds of prey and during species-specific nesting periods. The general nesting period for non-special status raptor species expected to occur in the area is February 15 to July 15.
	CRVFO-Controlled Surface Use (CSU)-1. Slopes Greater than 30% or Fragile/Saline Soils: As appropriate, apply CSU constraints on areas: 1) with slopes steeper than 30% or 2) areas with fragile and saline soils regardless of slope based on the NRCS soil description and surveys.
	CRVFO-CSU-3: Intermittent and Ephemeral Streams. Apply CSU constraints within 100 feet from the edge of intermittent or ephemeral stream drainages as defined by the USGS National Hydrography Dataset or field evaluation.
	CRVFO-CSU-4: Riparian and Wetland Vegetation Zones. Apply CSU constraints from 328 to 500 horizontal feet from the outer edge of the riparian/wetland zones.
	CRVFO-CSU-6: BLM Sensitive Plants outside of ACEC. Apply CSU constraints to surface-disturbing activities within a 100-meter (328-foot) buffer around occupied habitat for sensitive plants outside of ACECs.

The management direction for deer and elk winter range (Section 5.41) and elk habitat (Section 5.43) identified in the Forest Service LRMP – 2002 Revision and applicable to the West Mamm Creek Pipeline Project is summarized below.

Deer and Elk Winter Range (Section 5.41)

Management area description. These are areas which are managed for multiple use and emphasize habitat management for deer and elk to provide adequate amounts of quality forage, cover, and solitude.

Desired condition. Activities may include minerals exploration and development and road management. Motorized traffic is restricted during winter and spring, being generally confined to designated travelways or use corridors.

Standard/Biodiversity. Vegetation composition and structure are managed to meet the needs of deer, elk, and other species on their winter ranges within the constraints of the conservation of biological diversity and the maintenance and enhancement of sensitive habitats

Standard/Special Uses. Discourage special uses that require access during winter and spring periods.

Standard/Vegetation Management. Vegetation management will be designed to maintain or improve deer and elk habitat objectives.

Guidelines/Wildlife. 1) Where trees and shrubs are sparse, and terrain is the primary factor providing cover, minimize human activity during periods when elk and deer are concentrated in the area. 2) Habitat management goals are developed in coordination with the Colorado Division of Wildlife and the owners of intermingled and adjacent private land to minimize resource conflicts on and off National Forest System lands.

Elk Habitat (Section 5.43)

Management area description. These are areas which contain important elk habitat and also allow some human activity.

Desired condition. Vegetation is managed to provide healthy plant communities with a variety of species present for food and cover. Travel closures may exist based on elk habitat objectives.

Standard/Vegetation Management. Vegetation management practices will be used to maintain or improve elk habitat.

Guidelines/Wildlife. 1) Provide adequate forage to sustain elk populations. 2) Activities may be restricted in Polygon 46 for calving between May 15 and June 20 (see Elk habitat map 2/Figure 3-2 under Section 5.43 in the LRMP [Forest Service 2002]).

2.4 PLAN CONFORMANCE REVIEW

The Proposed Action is subject to, has been reviewed for, and is in conformance with (43 CFR 1610.5-3,) the following land use plan:

Land Use Plan (LUP) Name: *Colorado River Valley Field Office (CRVFO) Record of Decision and Approved Resource Management Plan (ROD/ARMP).*

Approved: *June 12, 2015*

Decision Language:

Page 106, LRT-GOAL-01 – *"Meet Public needs while for realty authorizations such as ROWs, renewable energy sources, permits, and leases when such needs are consistent with other resource values."*

Page 106, LRT-OBJ-01: *"Provide for the development of transportation systems, utilities, communication sites, and renewable energy resources when such needs are consistent with other resource values."*

Page 111, (MIN-GOAL-01): *"Provide opportunities for leasing, exploration, and development of fluid minerals using balanced multiple-use management to meet local and national energy needs."*

Page 111, (MIN-OBJ-01): *"Facilitate orderly, economic, and environmentally sound exploration and development of oil and gas resources (including coalbed, natural gas and geothermal) using the best available technology."*

Page 111, (MIN-MA-01): *"Manage approximately 603,100 acres of Federal mineral estate as open to oil and gas leasing and development."*

Determination of Conformance: The Proposed Action is subject to, has been reviewed for, and is in conformance (43 CFR 1610.5-3) with the following LUP.

Land Use Plan (LUP) Name: *U.S. Department of Agriculture, Forest Service, White River National Forest. Final Record of Decision: Oil and Gas Leasing on Lands Administered by The White River National Forest, approved December 3, 2015 and U.S. Department of Agriculture, Forest Service, White River National Forest Land and Resource Management Plan – 2002 Revision.*

Decision Language: LUP Chapter 2, Page 2-4 Geology, Mineral and Energy Resources, Standard 1. Recommend consent to lease on available lands for oil and gas leasing with appropriate lease stipulations as set forth in the December 3, 2015 Record of Decision on the White River National Forest Oil and Gas Leasing Final Environmental Impact Statement.

Page 6 of the ROD: *"Currently, 114,520 acres in the WRNF are leased."* [and later] *"If these leases expire, are relinquished, are terminated, or are completed and rehabilitated, then the parcels become subject to the USFS availability decisions."*

Determination of Conformance: The proposed pipelines would be located in areas administratively available for leasing (see Map 1 to the 2015 WRNF Oil and Gas Leasing ROD), in LUP Management Areas 5.41/Deer and Elk Winter Range and 5.43/Elk Habitat about which the LUP states, "*Oil and gas leasing and locatable mineral exploration is allowed in all prescriptions in Category 5*" (see LUP Table 3-5, footnote 3). The Proposed Action is therefore in conformance with the applicable LUP standards for the WRNF.

2.5 RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

This EA is a site-specific environmental analysis conducted in accordance with NEPA and consistent with the following statutes:

- Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.) - establishes the framework for the management of public lands, including the authorization of pipeline rights-of-way, ensuring that such uses are compatible with the conservation of resources and the multiple-use mandate of federal lands

- Mineral Leasing Act of 1920 - enables leasing of public lands for developing deposits of coal, petroleum, natural gas, and other hydrocarbons

- The Endangered Species Act of 1973 (P.L. 94-325) - provides a framework to conserve and protect endangered and threatened species and their habitats

- The Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703-712) - intended to ensure the sustainability of populations of all protected migratory bird species

- The Clean Air Act of 1963, as amended (P.L. 88-206) - protects public health and welfare nationwide through national ambient air quality standards for certain common and widespread pollutants based on the latest science

- Clean Water Act of 1972, amended 1977 - establishes objectives to restore and maintain the chemical, physical, and biological integrity of the nation's water

3. EFFECTS ANALYSIS

3.1 INTRODUCTION

The BLM and FS conducted an initial evaluation of resources and resource uses that could be impacted in **Table 4**. To support this evaluation, biological surveys and surveys for Waters of the United States (WOTUS) were conducted by WestWater Engineering, Inc. (WestWater 2023a). Various Class III cultural resource inventories of the area were completed previously by qualified contractors with no findings related to the Proposed Action. **Table 4** identifies the resources and resource uses analyzed in detail, and the reason for not analyzing other resources and uses.

Table 4. Resource and Resource Use Analysis Considerations

Resource/Resource Use	***Analyzed in Detail***	***Not Present, Unaffected by Alternatives, or Other Basis for Not Being Analyzed in Detail***
Access and Transportation	No	Traffic volumes would temporarily increase during the pipeline construction period including daily crew visits, truck deliveries of materials, and operation of equipment. During construction, existing roads would temporarily be open to one-way traffic for a period of up to 5 weeks in various sections. Traffic control or traffic lights would be used in areas with one-way traffic. After completion of the pipeline construction work, traffic would revert to existing traffic levels, focusing on periodic inspections and maintenance activities of the pipeline. The existing roads and pipeline corridor are sufficient to provide vehicle use for construction, operation, and maintenance of the Project. Traffic volume would increase during the construction period. The potential for indirect impacts also exists, through increasing opportunities for wildlife collisions, contributions to roadway deterioration, dust emissions on unpaved roads, and noise. Such impacts would generally be limited to the construction phase.
Areas of Environmental Concern	No	Not present in the Action Area.
Air Quality and Greenhouse Gas Emissions	Yes	See Section 3.2.
Cultural Resources	No	Existing and recent cultural resource inventories revealed no eligible sites within the Area of Potential Effect for the Proposed Action.
Environmental Justice	No	An environmental justice (EJ) screening was completed using data from the U.S. Census Bureau's American Community Survey (ACS) Five Year Estimates 2018–2022 (U.S. Census Bureau 2022) and reported in the EPA's EJScreen tool (U.S. Environmental Protection Agency [EPA] 2024). As updated in the most recent 2024 CEQ NEPA Regulations, disability has been added as part of the EJ definition. BLM is currently screening for persons with disabilities without a specific threshold per new guidance, in addition to low-income, minority, and Tribal populations. Based on these data sets, the Census block group surrounding the Mamm Creek area has minority populations that meet the criteria for identification as having potential environmental justice populations. Low-income populations in the area's Census block group are not identified as potential environmental justice populations and therefore would not be disproportionately adversely affected by the Proposed Action. While below the statewide average (11 percent), there are persons with a disability identified in

Table 4. Resource and Resource Use Analysis Considerations		
Resource/Resource Use	***Analyzed in Detail***	***Not Present, Unaffected by Alternatives, or Other Basis for Not Being Analyzed in Detail***
		the Census block group (6 percent). No issues or concerns were identified through scoping from these environmental justice populations as outlined in Section 1.5. Potential impacts from construction and operation of the Proposed Action are not expected to disproportionately affect potential environmental justice populations. Therefore, no additional environmental justice-related analysis is warranted.
Fossil Resources	No	The geology of the West Mamm Creek area and previous inventories indicate no presence of scientifically significant fossils. A standard discovery COA (see Appendix A) would be attached to the ROW grant directing the operator to protect and notify BLM/Forest Service if fossils are discovered.
Geology and Mineral Resources	No	The installation of the gas pipeline would not interfere with geologic resources or fluid minerals.
Invasive Non-Native Plants	No	Weed control would be required every year for the term of the authorization as a ROW stipulation because removal of vegetation, disturbance of soil, and movement of equipment commonly result in the spread of invasive non-native plants. The operator is responsible for addressing non-native, invasive non-native plants that are present or become established within the ROW corridor and must have an approved Pesticide Use Proposal (PUP) prior to any weeds treatment which would include site-specific BMPs. Fourteen Colorado State listed noxious weed species (B and C) were observed within the survey area. Noxious weeds were primarily observed near existing disturbances such as roads, pads, and pipeline ROWs. Cheatgrass (*Bromus tectorum*) and field bindweed (*Convolvulus arvensis*) are scattered throughout the project area, particularly along disturbances. Infestations of State-listed noxious weeds and other invasive non-native plants would be monitored and controlled during each growing season until final reclamation status is achieved. All disturbance on federal lands would be reclaimed to BLM/Forest Service standards as described in the Proposed Action, which would require total elimination of any List A or B State-listed noxious weeds from the area. A COA requires power washing of all off-road equipment before entering federal lands to minimize the risk of spreading invasive plants.
Migratory Birds including Raptors	No	No special status birds were observed during WestWater's 2023 surveys. Within the maximum 0.5-mile buffer around the proposed work area, 3 unoccupied raptor nests were found, in addition to two occupied nests: one great horned owl (171 meters from proposed gas pipeline) and one red-tailed hawk (1 meter from proposed gas pipeline). No bald or golden eagle nesting habitat was found during the surveys. A COA requires raptor nest surveys to be completed covering a 0.5 mile buffer around the project area no more than 2 weeks prior to beginning any new construction work during the raptor nesting season, February 15 to August 15 (CRVFO-TL-5 Raptors, (CRVFO RMP

Table 4. Resource and Resource Use Analysis Considerations		
Resource/Resource Use	***Analyzed in Detail***	***Not Present, Unaffected by Alternatives, or Other Basis for Not Being Analyzed in Detail***
		2015 Appendix B, pgs. 39-40). Results of the surveys would be shared with the wildlife biologist of the agency managing the surface where work is requested to be done during the TL. Any findings of occupied raptor nests would be handled on a case-by-case basis in coordination with the surface-managing agency biologist. Buffers and TLs are specific to the species occupying the nest and would be determined in accordance with findings. A COA requires vegetation-clearing activities to be done outside the migratory bird nesting season (May 15 to July 15); otherwise, a migratory bird nesting survey would be required prior to disturbance (CRVFO-TL-4): Nesting Season for Migratory Birds (CRVFO RMP 2015 Appendix B, pgs. 38-39). Results of the surveys would be shared with the wildlife biologist of the agency managing the surface where work is requested to be done during the TL. Any findings of occupied migratory bird nests would be handled on a case-by-case basis in coordination with the surface-managing agency biologist.
Native American Religious Concerns	No	No Native American religious issues were identified, and no historic properties are currently known within the Area of Potential Effect.
Noise	No	Heavy equipment and internal combustion engines would be the primary sources of noise. Increased noise levels would be temporary, primarily limited to the construction phase, and generally realized during daylight hours.
Prime or Unique Farmlands	No	Not Present
Range Management	X	See Section 3.3.
Recreation	No	The proposal minimizes impacts to recreation; recreationists are not generally encountered along pipeline corridors. Access would be maintained along County Road 319, West Mamm Creek Road, for hunters and sportspeople utilizing private, NFS and BLM lands to hunt and recreate, particularly during the fall archery and all rifle hunting seasons.
Rights-of-Way	No	The proposed Project would occur mostly adjacent to an existing pipeline corridor where operators are required to coordinate and communicate regarding Project plans with other ROW holders.
Socioeconomics	No	The Project is located in a rural, sparsely populated area of Garfield County mostly adjacent to existing linear rights-of-way and near existing oil and gas development infrastructure. Construction of the pipelines could provide a small number of temporary jobs and labor income for the proposed pipelines, which would utilize local contractors to the extent feasible. However, the Project would have minimal impact relative to the overall planning area economy. Based on this analysis, no additional socioeconomic-related analysis is warranted.
Soils	No	Design features included in the operator's proposal includes stormwater management, avoidance of steep slopes, use of existing ROW corridors, and prompt and effective reclamation.
Special Status Fish	No	Stormwater runoff and any water depletions required to complete this project may affect special status species of fish and amphibians. Tracking and mitigation of depletions would be required according to

Table 4. Resource and Resource Use Analysis Considerations		
Resource/Resource Use	***Analyzed in Detail***	***Not Present, Unaffected by Alternatives, or Other Basis for Not Being Analyzed in Detail***
		the 2017 Programmatic Biological Opinion issued by the USFWS for minor water depletions. . Stormwater management plans, spill prevention, and streambank erosion design features would be implemented for construction activities in riparian areas to protect fish and amphibian breeding and foraging habitat.
Special Status Wildlife	Yes	In a Biological Assessment dated July 2, 2024, the BLM and Forest Service made a determination that the Proposed Action "may affect but is not likely to adversely affect" Canada lynx (*Lynx canadensis*) and yellow-billed cuckoo (*Coccyzus americanus*) - YBCU, and that the Proposed Action would not jeopardize the continued existence of the nonessential, experimental 10(j)gray wolf (*Canis lupus*) population in Colorado. On August 26, 2024, the USFWS concurred with the determinations and conclusions. Colorado Natural Heritage Program's mapping program (CODEX) shows the project to be out of the range of snowshoe hares, the primary prey of Canada lynx. Their mapping system also shows the project to be out of Canada lynx range, with near areas having a very small probability of lynx use in both the summer and winter. Effects to YBCU are analyzed in Section 3.4.
Special Status Plants	Yes	
Vegetation	No	Vegetation along the ROW consists of sagebrush shrublands, oakbrush shrublands, mixed mountain shrublands, mixed spruce-fir woodlands, and riparian woodlands along West Mamm Creek. Gambel oak stands and mountain shrub communities dominate the lower elevation areas, which give way to aspen and spruce stands at the higher elevations. Total construction disturbance and removal of vegetation on BLM land would be 13.30 acres and 17.72 acres on NFS lands**.** This would include 5.85 acres of new disturbance on BLM and 11.14 acres on NFS. For BLM and Forest Service lands, reclamation would be completed within 30 days following completion of construction on all disturbed areas. This would include final grading to the original contours, reapplying salvaged topsoil, and seeding of a BLM/Forest Service approved mix on disturbed areas. While removal of vegetation would occur within the right-of-way, reclamation of all disturbed areas would be required to BLM/Forest Service standards. As a result, this disturbance is considered temporary.
Visual Resources	No	The Project is within BLM Visual Resource Management Class III and Class IV areas and a Forest Service Scenic Objective area designated as Low. The objective for VRM Class III is to partially retain existing landscape character, and the objective for VRM Class IV is to provide for management activities that require major modification of the landscape character. The Project is mostly adjacent to existing rights-of-way and would minimally widen the already disturbed area with minimal visual impacts. Portions of Segment 2 on BLM lands are located in VRM Class III and the lower half of Segment 2 does not follow an existing ROW but does generally follow an existing two-track, which would be restored on BLM lands to its pre-construction state during reclamation; on NFS lands, the two-track would not be restored but would be reclaimed to match the surrounding landscape. Visual blending COAs in Appendix A have been developed to minimize visual impacts along the entire pipeline corridor and specifically Segment 2 in VRM Class III on BLM lands while avoiding

Table 4. Resource and Resource Use Analysis Considerations		
Resource/Resource Use	***Analyzed in Detail***	***Not Present, Unaffected by Alternatives, or Other Basis for Not Being Analyzed in Detail***
		Harrington's beardtongue locations. Following restoration and revegetation, post-construction visual conditions would be unlikely to draw attention from the casual observer.
Wastes, Hazardous or Solid	No	The operator would properly manage each type of waste in accordance with state and local regulations. Solid waste would be kept in vehicles and removed from the work areas each day. Prior to reclamation, the permanent and short-term ROW areas would be cleared of all remaining debris, which would then be hauled to an approved disposal facility. At staging areas and/or along the working spread of the pipeline, portable sanitary facilities would be appropriately located and serviced to minimize the potential for discharge to stormwater conveyances and would be staked or otherwise secured to prevent blow-over, tipping by vandals, and leakage. Hazardous waste would be transported and stored using methods to avoid leaks or spills. The construction contractor would have a trained professional with a safety manual on-site that illustrates how to respond to human health or environmental hazards. Water used for hydrostatic pipeline testing would not be discharged to the surface; it would be transferred to TEP's Rulison Water Management Facility. Impacts from wastes are not anticipated due to the above BMPs which are included as design features in the POD or incorporated as a COA in Appendix A.
Water Resources – Groundwater	No	Installation of the gas and water pipelines would occur near the surface of the ROW alignment and would not affect groundwater.
Water Resources – Surface Water	Yes	See Section 3.6.
Wild and Scenic Rivers	No	Not Present
Wild Horses and Burros	No	Not Present
Wilderness	No	Not Present
Wildlife – Big Game Winter Range and Production Areas	Yes	See Section 3.7.
Wildlife - Other	No	It is unlikely that development of the Project would impact populations of sensitive species of bats due to the absence of known hibernacula or maternity roosting sites and the availability of foraging and roosting habitat in the surrounding area. The area surrounding the Project does not contain a sufficient amount of suitable American marten habitat to be anything other than marginal habitat. Due to the high availability of suitable habitat for the midget faded rattlesnake in the region surrounding the project, this Project is unlikely to impact the local population. (It is noted that Colorado Senate Bill 19-181 changed the scope of Colorado's Energy and Carbon Management Commission [ECMC] oversight to regulate oil and gas operations; however, ECMC does not regulate pipelines. Therefore, no approval from ECMC is required for this Project, including approval of a Wildlife Protection Plan.)

For the resources and resource uses analyzed in detail in the EA, **Table 5** identifies specific issues that either (1) assist the decision maker in making a reasoned choice among the alternatives or (2) may result in a significant impact. Each issue statement defines the issue and focuses the detailed analysis while the impact indicator defines the manner in which the impact is measured.

Table 5. Issues Analyzed in Detail

Resource/ Resource Use	*Issue Statement*	*Impact Indicator*
Air Quality and Greenhouse Gas Emissions	How would the Proposed Action affect air quality and contribute to greenhouse gas emissions?	• Emissions causing air quality to be above National Ambient Air Quality Standards (NAAQS) or Colorado Ambient Air Quality Standards (CAAQS). • Level of Greenhouse Gas (GHG) emissions
Range Management	How would the Proposed Action affect livestock grazing?	• Effects to range improvements • Disturbance in allotment forage areas • Grazing stock numbers • •Potential animal/truck collisions
Special Status Wildlife	How would the Proposed Action affect the Western DPS of yellow-billed cuckoo?	• Foraging use impacts from construction and disturbance • Effects on breeding
Special Status Plants	How would the Proposed Action affect Harrington's beardtongue?	• Disturbance to individual plants • Reproductive impacts created by dust • Habitat competition caused by invasive species
Water Resources – Surface Water	How would the Proposed Action affect the potential Waters of the United States (WOTUS)?	• Sources of pollution. • Erosive areas leading to sediment transport and deposition. • Number and description of drainage crossings.
Wildlife – Elk, Moose, and Mule Deer Winter Range, Elk Winter Concentration Area and Production Area, Moose Winter Range	How would the Proposed Action and proposed construction timing affect the resident elk, moose, and mule deer?	• New disturbance within elk production and winter concentration areas and elk, moose, and mule deer winter range. • Area of activity at any given time. • Typical hours of activity in a day. • Potential animal/truck collisions

The following subsections describe the affected environment (current conditions) and environmental consequences (direct, indirect, and cumulative impacts) of the Proposed Action and No Action alternatives. Impacts are defined as follows:

- Direct Impacts – resulting from the Proposed Action and occurring at the same time and place (40 CFR 1508.1(i)(1).
- Indirect Impacts – resulting from the Proposed Action but occurring at a different time or place (40 CFR 1508.1(i)(2).
- Cumulative Impacts – resulting from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of which agency

(Federal or non-Federal) or person undertakes other such actions. Cumulative impacts can result from actions with individually minor but collectively significant effects taking place over a period of time. ((40 CFR 1508.1(i)(3). Reasonably Foreseeable Development (RFD) and Reasonably Foreseeable Future Actions (RFFA). RFD is defined as those actions for which there have been applications made to the federal agencies, and RFFA are those actions which operators have identified based on planning but, for which, applications have not been submitted.

For this Project, short-term impacts are assumed to occur during or after the Proposed Action and continuing up to 3 years and long-term impacts extend beyond 3 years. For this Project, past and present actions include development by other operators in addition to TEP and GRG. There is no RFD in the West Mamm Creek area. TEP has indicated RFFA as possible development of one new well pad and frac pad and expansion of three existing pads on private lands and drilling up to a total of 47 wells on those pads in the West Mamm Creek area. It is estimated that up to 1,000 water truck trips per well for development of up to 47 wells would be required under the RFFA and that 17,167 annual produced water truck trips would be required to transport produced water from future production if the RFFA were developed. These truck trips would be eliminated with the installation of the produced water pipelines.

Separate NEPA would be required for construction/expansion of pads and/or well development affecting federal lands and/or minerals. TEP's future well pad development plans would be subject to the ECMC's permitting requirements under Senate Bill 19-181.

Potential impacts to resources addressed in this EA would be avoided, minimized, or offset by design features and BMPs incorporated into the Proposed Action by TEP and GRG in collaboration with the BLM and the Forest Service and by COAs in Appendix A.

3.2 ISSUE 1: HOW WOULD THE PROPOSED ACTION AFFECT AIR QUALITY AND CONTRIBUTE TO GREENHOUSE GAS EMISSIONS?

Affected Environment

The area surrounding the Proposed Action is split almost equally between CDPHE's Central Mountains and Western Slope air quality regions. Air quality within this area is influenced by the magnitude and distribution of pollutants and regional climate. Pollutant transport is largely controlled by the topography, which consists of a mix of mountains on the east, and mesas, plateaus, valleys, and canyons to the west. The primary concern in the Central Mountains region is particulate pollution from wood burning and road dust. In the Western Slope region, ozone is the primary pollutant of concern. The 2022 CDPHE Annual Data Report indicates that both the Central Mountains and Western Slope region complied with federal air quality standards during 2022 (CDPHE 2023).

Environmental Consequences

Proposed Action

Air pollutant emissions would occur during the construction phase and would be permitted as applicable by the CDPHE Air Pollution Control Division. The primary air pollutants emitted would be carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter less than or equal to 10 microns in size (PM_{10}), particulate matter less than or equal to 2.5 microns in size ($PM_{2.5}$), sulfur dioxide (SO_2), and volatile organic compounds (VOCs). The anticipated emissions include exhaust from heavy equipment and vehicle traffic, fugitive dust from vehicles and equipment on unpaved surfaces, and windblown dust from disturbed lands. These activities would temporarily elevate pollutant levels and would occur only for the short-term duration of the activities. Air emissions would not occur during operation of the pipelines. Air

quality impacts resulting from the Proposed Action would be below the National and Colorado ambient air quality standards.

Greenhouse Gas (GHG) Emissions. Minor amounts of GHG emissions including methane (CH_4), carbon dioxide (CO_2), and nitrous oxide (N_2O), would originate from pipelines' construction phase heavy equipment and related vehicle traffic. Potential climate change impacts associated with the Proposed Action's direct and indirect GHG emissions would be negligible.

Mitigation

Implementation of the following measures would reduce/minimize direct and indirect impacts to air quality from the Proposed Action:

- Water trucks would apply fresh or potable water to construction access roads, the construction zone within the ROW, staging areas, or any activity producing fugitive dust.
- Water would be acquired from an approved source and applied as necessary based on visible dust plume levels and soil moisture conditions.
- A dust control agent or enzymatic binder (magnesium chloride) would be required on NFSR 818 for extended dust control.
- Surface rock would be replaced after completion of Project.

Cumulative Impacts

Cumulative impacts would result from the existing development, the Proposed Action, and TEP's RFFA including development of one new well pad and frac pad, expansion of three existing well pads, and drilling of up to 47 new wells. The Colorado Air Resource Management Modeling Study – version 2.0 (CARMMS) (BLM 2017) can be used to estimate reasonably foreseeable future near-field air quality conditions for the area surrounding the Proposed Action. The CARMMS analysis included cumulative air emissions for year 2015 and future year emissions of CO, NO_x, PM_{10}, $PM_{2.5}$, SO_2, and VOCs from increased total (federal and non-federal) oil and gas development through year 2025 (post-2015) in the area nearby the Proposed Action and RFFA.

CARMMS analysis predicted that the contributions of cumulative air quality from federal and non-federal project-specific maximum potential annual emissions (full development plus one full year of production occurring in the same year) would be below the applicable National Ambient Air Quality Standards (NAAQS) and Colorado Ambient Air Quality Standards (CAAQS) for all pollutants in the area surrounding the West Mamm Creek area.

No Action Alternative

Under the No Action Alternative, the pipelines would not be installed and water trucks would continue to transport produced water from existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility. The total roadway mileage (one-way) from the existing McClung 29-10 pad to the existing Rulison Water Management Facility is approximately 24.45 miles of which 6.65 miles are on unpaved, gravel roads and 17.80 miles are on paved roads. The current estimates of water trucks traveling from the existing McClung 29-10 pad to the Rulison Water Management Facility are 156 trips per year.

Air pollutant and GHG emissions under the No Action Alternative would occur for water truck travel associated with existing production from 9 producing wells. The air pollutant emissions include exhaust from water truck traffic, fugitive dust from vehicles on unpaved surfaces, and windblown dust from

disturbed lands. Air emissions from water truck travel during operations includes CO, NO_x, PM_{10}, $PM_{2.5}$, SO_2, and VOCs and GHG emissions: CH_4, CO_2, and N_2O.

Air emissions for existing produced water truck travel were developed using field-specific equipment specifications and data, EPA emissions standards, and AP-42 (EPA 1995). The maximum annual air pollutant emissions of NO_x, CO, SO_2, PM_{10}, $PM_{2.5}$, and VOC from existing produced-water truck travel are shown in **Table 6.** Fugitive PM_{10} and $PM_{2.5}$ emissions from truck travel on the unpaved, gravel roads include a 50 percent control efficiency, assuming water would be applied to reduce dust emissions.

Table 6. Maximum Annual Emissions from Existing Produced-Water Truck Travel(tons/year)

Activity	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC
Existing Well Production – Fugitive Dust	0.26	0.03	0	0	0	0
Existing Well Production – Tailpipe	0.01	0.01	0.17	0.13	6.8E-04	0.02
Total Produced-Water Truck Travel	**0.27**	**0.04**	**0.17**	**0.13**	**6.8E-04**	**0.02**

Emissions of the greenhouse gases CO2, CH4, and N2O were quantified individually and also expressed in terms of CO2 equivalents (CO2e). Emissions of GHGs are reported in metric tons. GHGs have various capacities to trap heat in the atmosphere, which are known as global warming potentials (GWPs). GWPs are a measure of how much energy the emissions of 1 ton of a GHG will absorb over a given period relative to 1 ton of CO2. GWPs are used to convert emissions of different GHGs into CO2e. This analysis reports CO2e emissions using the 20-year and 100-year time horizon GWPs from the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC). The GWPs are shown in **Table 7** (IPCC 2021).

Table 7. Global Warming Potentials

Time Horizon	CO_2	CH_4	N_2O
100 year	1	29.8	273
20 year	1	82.5	273

The maximum annual GHG emissions from existing produced-water truck travel are shown in **Table 8**.

Table 8. Maximum Annual GHG Emissions from Existing Produced-Water Truck Travel (metric tons/year)

Activity	CO_2	CH_4	N_2O	20-year GWP CO_2e	100-year GWP CO_2e
Existing Well Production	19.9	6.9E-04	2.7E-04	20.0	20.0

The existing well production produced-water truck activities for each year over the life of the project (LOP) were calculated using a hyperbolic/harmonic decline curve for Piceance Basin gas wells (BLM 2022). The maximum total GHG emissions resulting from existing produced-water truck travel, assuming that the existing wells would continue to produce for 40 years, are shown in **Table 9**.

Table 9. Maximum 40 Year GHG Emissions from Existing Produced-Water Truck Travel (metric tons)

Activity	CO_2	CH_4	N_2O	20-year GWP CO_2e	100-year GWP CO_2e
Existing Well Production	100.3	3.5E-03	1.4E-03	100.9	100.8

Cumulative Impacts. For cumulative impacts under the No Action, the CARMMS analysis can be used to estimate reasonably foreseeable future near-field air quality conditions for the area surrounding the West Mamm Creek area. The CARMMS analysis included cumulative air emissions for year 2015 and future year emissions of CO, NO_x, PM_{10}, $PM_{2.5}$, SO_2, and VOCs from increased total (federal and non-federal) oil and gas development through year 2025 (post-2015) in the West Mamm Creek area.

The CARMMS analysis predicted that the contributions of cumulative air quality from federal and non-federal project-specific maximum potential annual emissions (full development plus one full year of production occurring in the same year) would be below the applicable NAAQS and CAAQS for all pollutants in the West Mamm Creek area.

TEP has indicated RFFA as possible development of one new well pad and frac pad and expansion of three existing pads on private lands and drilling up to a total of 47 wells on those pads in the West Mamm Creek area. As mentioned above, the existing development requires 156 water truck trips per year. It is estimated that if the RFFA were developed, future well completions would require 1,000 truck trips per well and future production for 2 years would require 17,167 annual truck trips. The RFFA emissions are accounted for in the CARMMS analysis.

Air emissions for produced water truck travel were developed using field-specific equipment specifications and data, EPA emissions standards, and AP-42 (EPA 1995). The maximum annual air pollutant emissions of NO_x, CO, SO_2, PM_{10}, $PM_{2.5}$, and VOC are shown in **Table 10.** These maximum emissions assume 1-year existing well production, 1-year of future well completions (47,000 truck trips), and 1-year of future well production [11,182 truck trips – calculated from the 2-year future well production value presented above, using a hyperbolic/harmonic decline curve for Piceance Basin gas wells (BLM 2022)]. The total emissions represent a conservative upper-bound value assuming concurrent well production, well completions and all future wells producing in the same year. Fugitive PM_{10} and $PM_{2.5}$ emissions from truck travel on the unpaved, gravel roads include a 50 percent control efficiency, assuming water would be applied to reduce dust emissions.

Table 10. Maximum Annual Emissions from Produced-Water Truck Travel (tons/year)

Activity	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC
Future Well Completions - Fugitive Dust	41.78	4.16	0	0	0	0
Future Well Completions – Tailpipe	1.56	1.51	26.09	19.44	0.10	2.40
Existing Well Production – Fugitive Dust	0.28	0.03	0	0	0	0
Existing Well Production – Tailpipe	0.01	0.01	0.17	0.13	6.9E-04	0.02
Future Well Production – Fugitive Dust	19.88	1.98	0	0	0	0
Future Well Production – Tailpipe	0.74	0.72	12.42	9.25	0.05	1.14
Total Produced-Water Truck Travel	**64.3**	**8.4**	**38.7**	**28.8**	**0.2**	**3.6**

The maximum annual GHG emissions from future produced-water truck travel are shown in **Table 11**. These maximum emissions assume 1-year existing well production, 1-year of future well completions, and 1-year of future well production. The total emissions represent a conservative upper-bound value assuming concurrent well production, well completions and all future wells producing in the same year.

Table 11. Maximum Annual Emissions from Produced-Water Truck Travel (metric tons/year)					
Activity	**CO_2**	**CH_4**	**N_2O**	**20-year GWP CO_2e**	**100-year GWP CO_2e**
Future Well Completions	3,057.3	0.11	0.04	3,077.4	3,071,8
Existing Well Production	20.3	7.0E-04	2.8E-04	20.4	20.4
Future Well Production	1,454.8	0.05	0.02	1,464.7	1,461.7
Total Produced-Water Truck	4,532.4	0.16	0.06	4,562.1	4,553.9

The maximum GHG emissions resulting from future produced-water truck travel, over the 40-year LOP, are shown in **Table 12**. Emissions were calculated for each year over the 40-year LOP, assuming 1-year of future well completions and 40 years of production from existing wells and future wells. The existing well production and future well production produced-water truck activities for each year over the LOP were calculated using a hyperbolic/harmonic decline curve for Piceance Basin gas wells (BLM 2022).

Table 12. Maximum Life-of-Project Emissions from Produced-Water Truck Travel (metric tons)					
Activity	**CO_2**	**CH_4**	**N_2O**	**20-year GWP CO_2e**	**100-year GWP CO_2e**
Future Well Completions	3,057.3	0.1	0.04	3,077.4	3,071.8
Existing Well Production	102.1	3.5E-03	1.4E-03	102.8	102.6
Future Well Production	7,321.2	0.3	0.1	7,369.2	7,355.9
Total Produced-Water Truck Travel	10,480.6	0.4	0.1	10,549.4	10,530.3

As mentioned above, the emissions from RFFA (from water truck traffic and from any other production related activities) are accounted for in the CARMMS analysis, and the CARMMS analysis predicted that the contributions of cumulative air quality from federal and non-federal project-specific maximum potential annual emissions would be below the applicable NAAQS and CAAQS for all pollutants in the West Mamm Creek area.

3.3 ISSUE 2: HOW WOULD THE PROPOSED ACTION AFFECT LIVESTOCK GRAZING?

Affected Environment

The Proposed Action would be located within three grazing allotments: two on BLM lands (Beaver Mamm and Grass Mesa) and one on NFS lands (Hunter Creek). The BLM and NFS grazing permits are for small ranching operations, typically cow-calf operations, and are highly dependent on the forage resources in the allotments for spring, summer, and fall grazing. Livestock management practices are limited to the permit terms of period of use and restrictions on the number and kind of livestock allowed. An exception to this limited management practice is on the BLM Beaver Mamm Allotment (BLM 2005). The Beaver Mamm Allotment is divided into three pastures, with livestock rotated from the lowest to the highest pasture during the period of use (BLM 2005). The Hunter Creek allotment is split into four pastures, which the permittee rotates through during the grazing season. **Table 13** summarizes the permitted grazing use on each BLM allotment and on the single WRNF allotment affected by the Project.

Table 13. Grazing Allotments				
Allotment	**Total Acres**	**AUM**	**Season**	**Livestock Number**
BLM				
Beaver Mamm (8104)	4,030	228	5/15 – 10/15	45
Grass Mesa (8112)	1,334	9 49	7/1 – 8/15 5/15 – 6/30	40 32
Forest Service				
Hunter Creek	5,993 total (4,336 NFS)	420	6/16 – 10/1	100
Source: BLM 2015.				

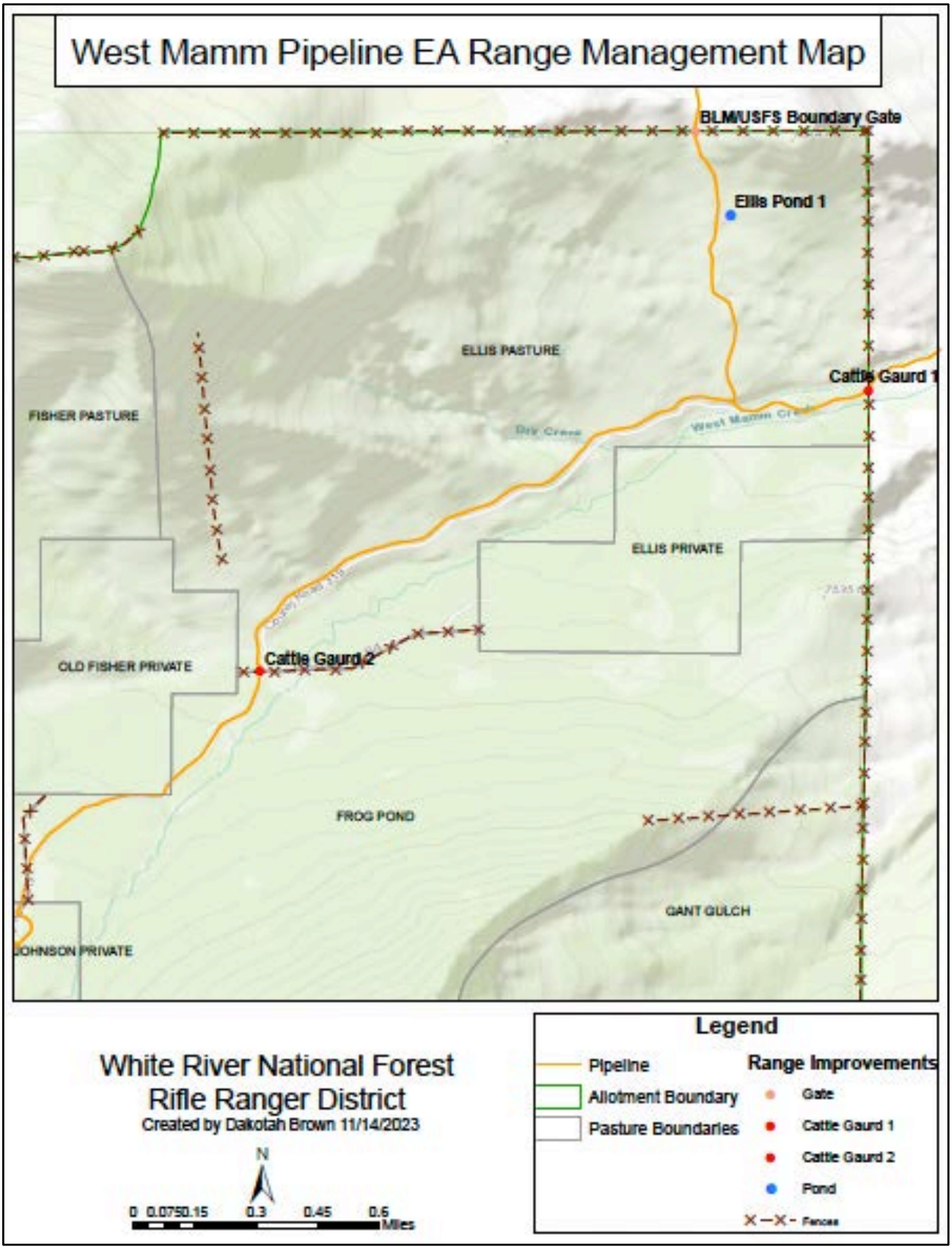
Environmental Consequences

Proposed Action

As shown in **Table 14**, the Proposed Action would temporarily affect disturbed areas (e.g., roads and rights-of-way), previously disturbed areas (reclaimed rights-of-way), and undisturbed areas (adjacent to the existing rights-of-way) within the three allotments identified in Tables 13 and 14 on federal lands. Disturbance would occur over a 4-month period, and surface disturbance would be entirely "short-term" because reclamation of the pipeline corridor, except at existing road crossings, would occur within 30 days after pipeline construction is completed. Rangeland improvements that could be affected include fences and cattle guards within the Hunter Creek allotment (see **Map 3**).

Table 14. Grazing Allotment Surface Disturbance on Federal Lands					
Allotment	**Segment 1**	**Segment 2**	**Segment 3**	**Segment 4**	**Segment 5**
	Acres Affected (new disturbance)				
BLM					
Beaver Mamm	4.81 (0.11)	--	--	--	--
Grass Mesa	--	8.49 (5.84)	--	--	--
Forest Service					
Hunter Creek	--	4.23 (3.58)	1.6 (0.73)	7.56 (7.50)	4.33 (2.91)

Surface-disturbing activities associated with pipeline construction would result in the temporary loss of forage on grazing allotments, increased human activities for the short-term, and increase the potential to spread noxious weeds and other invasive non-native species. An increase in human activity related to construction and maintenance of the Proposed Action would cause livestock to move away from locations where construction is taking place. The negative impact that an increase in human activity would have on grazing livestock is expected to be minor. Installation of the produced water pipelines would eliminate the estimated 156 water trucks per year traveling from the existing McClung 29-10 pad to the Rulison Water Management Facility, thereby reducing the potential for animal/truck collisions.



Map 3. Forest Service Range Management for Hunter Creek Allotment

Removal of fences and cattle guards during construction would potentially allow cattle to escape pastures and drift onto other pastures and/or allotments. If necessary, a plan would be prepared to maintain the integrity of livestock fencing during all phases of construction. Open pipeline trenches could present a hazard to livestock and limit movement within the allotment. BMPs (including constructing trenches with natural egress ramp in the trench) and COAs (see Appendix A), including repairing or replacing any range improvements affected by construction would be designed to mitigate impacts to allotments and/or cattle.

With implementation of COAs in Appendix A, desirable forbs and grasses along the pipeline alignment would be reestablished within 3 to 5 years. A seed mix consistent with BLM and Forest Service standards in terms of species and seeding rate for the specific habitat type would be used on all BLM and NFS lands affected by the Project.

Mitigation

Implementation of the following measures would reduce/minimize direct and indirect impacts to grazing lands from the Proposed Action:

- Any equipment used during project implementation that would operate outside the limits of the road prism would be cleaned prior to entering federal lands (includes UTVs, bulldozers, skidders, graders, backhoes, mastication equipment, dump trucks, etc.).
- Disturbed areas would be reseeded with approved seed mix
- Plant prevention measures in the Colorado Noxious Weed Act as well as the 2021 NFS Invasive Species Management Program direction would be implemented.
- New road construction, road blading, brushing, and ditch cleaning in areas with high concentrations of invasive plants would be conducted in consultation with the Forest Service Botanist incorporating invasive plant prevention measures, as appropriate, including but not limited to pretreatment and post treatment of roads (15 ft off each side) with herbicide. Herbicides would be pre-approved by the Forest Service and application records would be completed and reported to the Forest Service Botanist.
- All range structural improvements (fences, gates, cattleguards, water developments) within the project area boundary would be protected during implementation activities (see Map 3).
- If equipment is accessing the area via cattleguards, cattleguards would be cleaned out and repaired.
- All irrigation ditches, cattle guards, fences, and artificial and natural livestock and wildlife water sources would be repaired to at least pre-construction conditions. Irrigation ditches must be kept in functioning condition at pipeline crossings. TEP would be in contact with ditch owners during the planning process.
- The operator would communicate with Forest Service and BLM range staff on the implementation schedule to coordinate the cattle grazing rotation schedule.
- Contracts would require that specific gates remain closed during work and non-work hours whenever project activities occur within a pasture when authorized cattle use is occurring. The operator would coordinate with Forest Service and BLM to identify gate closures, as necessary.
- Contracts would require the purchase of a 16-foot steel gate to replace the wire gate that separates BLM and Forest Service ownership to prevent cattle trespass across ownership boundaries during this Project.

Cumulative Impacts

The analysis area for cumulative impacts is the area affected by the Proposed Action and by TEP's RFFA. It includes BLM and NFS lands primarily managed for grazing, recreation, vegetation, and wildlife, and an existing pipeline corridor (featuring buried natural gas and produced water pipelines) and production from existing well pads on both federal and private lands; these activities are likely to continue. The Proposed Action is a pipeline project associated with oil and gas development, which would be similar to the types of past, present, and reasonably foreseeable future actions within the analysis area.

As described above, TEP's RFFA may involve the development of one new well pad and frac pad and the expansion of three existing well pads (see Map 1) to accommodate up to 47 new wells. The pads would be located on private lands and would access both federal and private minerals. The schedule for the RFFA is unknown at this time and is unlikely to occur within the next 6 to 12 months; therefore, cumulative impacts are anticipated to be similar to or the same as the Proposed Action's direct and indirect impacts. Should other projects be proposed, impacts within grazing allotments on federal lands would be minor because projects would be subject to similar mitigation requirements (i.e., repair of affected range improvements and application of measures to prevent the introduction and/or spread of invasive plants). If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production. Installation of the produced water pipelines would eliminate the truck trips and would reduce the potential for animal/truck collisions.

No Action Alternative

The No Action Alternative would not result in short-term loss of forage or other surface-disturbing adverse impacts on livestock or ranching operations, because the pipelines would not be installed. Water trucks would continue to transport produced water from the 9 existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility (156 trucks per year) with continuing potential for animal/truck collisions.

For cumulative impacts, if the No Action Alternative were chosen (pipelines are not installed) and the RFFA were developed, increased truck traffic to transport water would be required. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production, resulting in increased potential for animal/truck collisions.

3.4 ISSUE 3: HOW WOULD THE PROPOSED ACTION AFFECT THE WESTERN DISTINCT POPULATION SEGMENT OF YELLOW-BILLED CUCKOO?

Affected Environment

Yellow-billed cuckoo (YBCU) Western Distinct Population Segment (DPS) is a threatened species under the Endangered Species Act (ESA) and has the potential to occur in the project area.

YBCU use dense wooded habitat in lower to moderate elevations with thick cover. The USFWS divides the species into two DPSs generally divided by the crest of the Rocky Mountains and Continental Divide, the Western DPS and the Eastern DPS. The Western DPS is generally constrained to forested riparian areas of low to moderate elevations, breeding in suitable habitat on the upper and middle Rio Grande, the Colorado River Basin, the Sacramento and San Joaquin River systems, the Columbia River system, and on the Fraser River (USFWS 2014). Observations of breeding YBCU above 7,000 feet are extremely rare (USFWS 2014). Woodlands with multi-layered vegetation such as riparian forest, orchards, dense thickets, and abandoned, forested farmland make great YBCU habitat. YBCU prefer patches of multi-

layered vegetation that are a minimum of 12 acres, with a width of at least 325 feet (100 meters) wide (Halterman and Petry Habitat Assessment 2023, see Appendix B).

WestWater Engineering conducted a biological survey during July 2021 (WestWater 2023a) and follow up surveys during the 2023 field season (WestWater 2023b). A YBCU visual habitat survey was conducted on June 16, 2023, by Adam Petry and Dr. Murrelet Halterman (see Appendix B). During the summer of 2024, a complete round of YBCU surveys were done on the potential habitat according to the USFWS protocol by certified biologists. No YBCU were detected in the summer of 2024.

A 14.9-acre patch with an elevation of 7,200 to 7,300 feet was identified on private land in the project area, which has potential to provide YBCU foraging habitat but is too narrow in width and likely too high in elevation to provide suitable breeding habitat. The private land is dominated by ponderosa pine and cottonwood forest. Individuals and nests may be present in a habitat patch on adjacent private land. This potential habitat is riparian forest adjacent to West Mamm Creek. Eighty meters from the patch of potential habitat is an active but relatively quiet road, County Road 319. TEP would use this road to access parts of the project area and already uses it to maintain other facilities in the area; the road is also used by the public and by private landowners to access their properties.

Private land in the project area consists of riparian habitat that has potential for YBCU foraging use. The noise from water running in West Mamm Creek can be loud enough (a maximum of 64 dB recorded in June) to compete with some construction and increased traffic on the road, especially in the spring, but noise decreases with creek flow as the summer progresses.

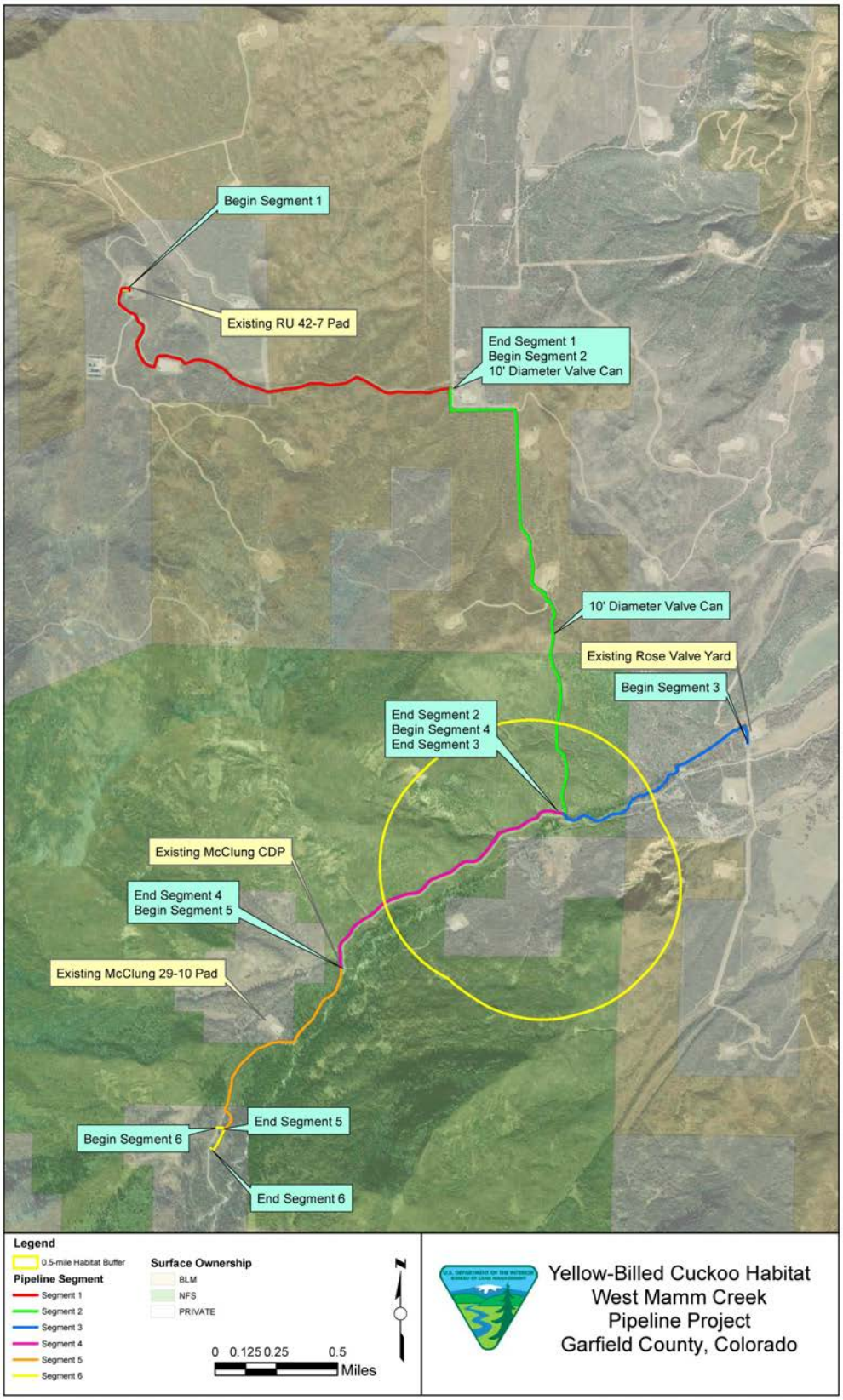
Environmental Consequences

Proposed Action

Disturbance from project construction and corresponding traffic near potential habitat may deter use by YBCU. As the potential habitat found near the project area falls short of the minimum width (325 feet/100 meters) required for YBCU breeding habitat (see Appendix B), breeding and nesting behavior is unlikely; however, the potential habitat does meet YBCU requirements for foraging use. If, however, YBCU nests are present, YBCU parents may abandon them in response to increased disturbance. Due to the distance from the project, potential habitat would not be permanently or physically changed. The completion of the proposed project would decrease TEP's traffic on the road by allowing the pipeline to replace some of the trucking operations. Temporary disturbance during construction, such as noise and vibration, increased traffic, and use of heavy equipment can disrupt foraging, breeding, nest building/site selection, and raising young.

Following construction, there would occasionally be routine maintenance within the right-of-way. If maintenance requiring heavy equipment is needed within 0.5 mile of potential habitat, the associated visual, auditory, and vibrational disturbance could lead to habitat abandonment or declined use by YBCU.

To mitigate any potential effects to YBCU in the potential habitat, TEP and GRG have agreed that work within a 0.5-mile buffer around the potential habitat would be conducted outside a TL protecting the YBCU breeding season (see **Map 4**). Project-related construction or operation of heavy equipment inside the buffer would be prohibited for the period that YBCU have demonstrated breeding behavior in Colorado (May 15th to September 15th).



Map 4. Yellow-Billed Cuckoo Habitat Buffer

The BLM and Forest Service submitted a Biological Assessment to the USFWS on July 2, 2024 with a determination of "may affect but not likely to adversely affect" for the YBCU. The BLM and Forest Service requested informal consultation for effects to YBCU. On August 26, 2024, the USFWS concurred with the determination that the Proposed Action "May Affect but is Not Likely to Adversely Affect" Western YBCU (see Appendix C). Because TEP and GRG have already agreed to limit work within the 0.5-mile buffer of the potential habitat to outside of the May 15th to September 15th timing limitation, and because the potential habitat would not be permanently altered, the results of the surveys do not affect the determination in the Biological Assessment. However, a result of no YBCU observations at the end of a full survey (in August) would lift the timing limitation and allow TEP and GRG to begin work within the 0.5-mile buffer prior to September 15th. A detection of a YBCU during that survey would require adherence to the duration of the timing limitation within the buffer.

Mitigation

Implementation of the following would reduce/minimize direct and indirect impacts to YBCU from the Proposed Action:

- Project-related construction or operation of heavy equipment inside the 0.5-mile buffer would be prohibited for the period that YBCU have demonstrated breeding behavior in Colorado (May 15th to September 15th) unless there is a result of no YBCU observations at the end of a full survey (in August) for YBCU conducted in the year of construction.

Cumulative Impacts

The analysis area for cumulative impacts is the area affected by the Proposed Action and by TEP's RFFA. It includes BLM and NFS lands primarily managed for grazing, recreation, vegetation, and wildlife, and an existing pipeline corridor (featuring buried natural gas and produced water pipelines) and production from existing well pads on both federal and private lands; these activities are likely to continue. The Proposed Action is a pipeline project associated with oil and gas development, which would be similar to the types of past, present, and reasonably foreseeable future actions within the analysis area.

As described above, TEP's RFFA may involve the development of one new well pad and frac pad and the expansion of three existing well pads (see Map 1) to accommodate up to 47 new wells. The pads would be located on private lands and would access both federal and private minerals. The schedule for the RFFA is unknown at this time and is unlikely to occur within the next 6 to 12 months; therefore, cumulative impacts are anticipated to be similar to or the same as the Proposed Action's direct and indirect impacts. The patch of YBCU habitat near the project area is located exclusively on privately owned land. No development is expected to occur on the private parcel; however, the agencies involved in this proposal have no jurisdiction over the use of private land. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production. Installation of the produced water pipelines would eliminate the truck trips and would reduce the potential for disturbance to YBCU due to truck traffic.

No Action Alternative

The No Action Alternative would not result in disturbance to YBCU foraging or breeding, because the pipelines would not be installed. Water trucks would continue to transport produced water from existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility Impacts described above related to traffic would continue under the No Action Alternative because trucks would continue to transport produced water.

For cumulative impacts, if the No Action Alternative were chosen (pipelines are not installed) and the RFFA were developed, increased truck traffic to transport water would be required. If TEP's RFFA is

developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required, and 17,167 annual produced water truck trips would be required to transport produced water from future production, resulting in increased potential for disturbance to YBCU due to truck traffic.

3.5 ISSUE 4: HOW WOULD THE PROPOSED ACTION AFFECT HARRINGTON'S BEARDTONGUE?

Affected Environment

Harrington's beardtongue (*Penstemon harringtonii*), which is a BLM sensitive and Forest Service-sensitive plant species, is known to occur within and adjacent to the proposed pipeline alignment. It is a narrowly endemic species known from 74 occurrences in an approximately 82- by 48-mile range in northwestern Colorado. It is usually found in open sagebrush shrublands on gentle slopes between 6,400 and 9,400 feet in elevation [Colorado Natural Heritage Program (CNHP) 2006]. Mature pinyon-juniper woodlands often surround the shrublands that support Harrington's beardtongue, pinyon pine (*Pinus edulis),* and Utah juniper (*Juniperus osteosperma)* are frequently scattered within the sagebrush habitat. Most Harrington's beardtongue plants occur within sagebrush shrublands and are rarely documented in pinyon-juniper woodlands (CNHP 2006). Harrington's beardtongue is occasionally found along roadsides and in disturbed areas such as cow trails or naturally eroding slopes (Buckner and Bunin 1992, Nold 1999, Lyon and Huggins 2003, and CNHP 2006). The habitat supporting Harrington's beardtongue has a long history of grazing by wild ungulates and domestic livestock (Buckner and Bunin 1992). These and other associated activities may have influenced local soil and vegetation patterns and may be partially responsible for the conditions to which Harrington's beardtongue is adapted.

Surveys for Harrington's beardtongue were conducted in 2021 and 2023 (WestWater 2023a and 2023b). The first survey in 2021 followed old protocols for BLM CRVFO plant inventory standards for noxious weeds and SSS plants (BLM 2013) and used a 30-meter survey buffer from the proposed project features. A new survey protocol for SSS plants and noxious weeds was issued in the fall of 2021 (BLM 2021), requiring that surveys for SSS plants in the CRVFO be conducted within 100 meters of proposed project features. Follow-up surveys for the 100-meter buffer were conducted in July 2023 (Westwater 2023b). An estimated 140 Harrington's beardtongue (PEHA) plants were observed during the surveys. Of these, approximately 131 plants were found within 100 meters of the proposed disturbance for the proposed pipeline. Two plants are within the proposed disturbance area for the proposed pipeline. Habitat for Harrington's beardtongue in the project area is limited to scattered patches of open sagebrush shrublands. Vegetation communities throughout the majority of the project area consist of dense mountain shrublands, Gambel's oak shrublands, or aspen woodlands, which not suitable habitat for Harrington's beardtongue.

Environmental Consequences

Proposed Action

Construction activities and the associated disturbances may impact individual Harrington's beardtongue plants. Many of the known occurrences are beyond 30 meters of the project disturbance. Two individual plants are within the disturbance footprint and may be able to be avoided using the required mitigation practices. Direct impacts may result from accidental trammeling by foot or equipment. Silt fencing would be required for plants adjacent to the workspace to minimize accidental trammeling. Dust created by construction or maintenance activities may also cause direct reproductive impacts to Harrington's beardtongue. The required timing limitation during the flowering period should minimize these impacts from dust.

Invasive species introduced from construction or maintenance activities may cause indirect impacts to this species due to Harrington's beardtongue being outcompeted in their habitat. TEP and GRG would be required to regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the Glenwood Springs Field Office Noxious and Invasive Weed Management Plan for Oil and

Gas Operators, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by the BLM prior to the use of herbicides, which includes herbicide-specific and site-specific BMPs required to be observed by the applicator on BLM lands. Broadleaf herbicides would not be applied aerially (within 100 meters of known occurrences or areas with Harrington's beardtongue salvaged topsoil) during the period of aboveground growth, flowering, and seeding. An approved reclamation seed mix would be applied to avoid invasive introduction.

This Project may impact individual plants but is not likely to cause a trend towards federal listing or result in loss of viability of Harrington's beardtongue.

Mitigation

Implementation of the following measures would reduce/minimize direct and indirect impacts to Harrington's beardtongue plants from the Proposed Action:

- During pipeline construction, TEP and GRG would adhere to BLM's dust-abatement requirements to avoid or minimize potential impacts to nearby Harrington's beardtongue occurrences. . Dust abatement would use freshwater or as directed by the BLM CRVFO. A dust control agent or enzymatic binder (magnesium chloride) would be required on NFSR 818. When vehicles are within 100 meters of individual plants, speed limits would remain under 15 MPH.
- No vegetation clearing or construction would occur within 100 meters of Harrington's beardtongue plants from May 15th to July 15th, encompassing the Harrington's beardtongue flowering season.
- All dirt work would be contained within the ROW boundary. Qualified and approved botanical monitors would install silt fencing (or flagging) around known Harrington's beardtongue occurrences within 5 meters of the disturbance footprint to minimize the risk of inadvertent impacts from unauthorized vehicular travel. The biological monitor does not need to be present during construction.
- If removal of topsoil from the Harrington's beardtongue areas occurs, soil would be stockpiled separately in order to salvage possible seed source for Harrington's beardtongue plants that would be removed during project construction. Topsoil would not be stockpiled in a depth exceeding 12 inches and would not be stockpiled for an extended period (over 6 months). If long-term storage is necessary and, if possible, the topsoil could be distributed over other excavated material and re-salvaged during interim or final reclamation.
- All reclamation of temporarily disturbed areas within Harrington's beardtongue habitat would be seeded with a native seed mix approved by the BLM and consisting of native grasses and forbs compatible with potential reestablishment of Harrington's beardtongue as a result of natural colonization. This would consist of a variety of cool-season grasses selected to meet other reclamation goals without potentially outcompeting Harrington's beardtongue (i.e., emphasis on short or mid-height bunchgrasses and short or fine-textured forbs).
- During subsequent weed management, the broadleaf herbicides would not be applied aerially (within 100 meters of known occurrences or areas with Harrington's beardtongue salvaged topsoil) during the period of aboveground growth, flowering, and seeding. If treatment of noxious weeds or other invasive plants is needed in the Harrington's beardtongue habitat seeding areas, the weed control would avoid the season of aboveground growth by PEHA to the extent possible and be applied by hand.
- After work is completed, the botanical monitor would submit a report to the BLM CRVFO within 30 days detailing measures taken to avoid Harrington's beardtongue, impact to population (number of plants impacted/how), and photos of the work space with silt fencing (or flagging).

Cumulative Impacts

The analysis area for cumulative impacts is the area affected by the Proposed Action and by TEP's RFFA. It includes BLM and NFS lands primarily managed for grazing, recreation, vegetation, and wildlife, and an existing pipeline corridor (featuring buried natural gas and produced water pipelines) and production from existing well pads on both federal and private lands; these activities are likely to continue. The Proposed Action is a pipeline project associated with oil and gas development, which would be similar to the types of past, present, and reasonably foreseeable future actions within the analysis area.

As described above, TEP's RFFA may involve the development of one new well pad and frac pad and the expansion of three existing well pads (see Map 1) to accommodate up to 47 new wells. The pads would be located on private lands and would access both federal and private minerals. The schedule for the RFFA is unknown at this time and is unlikely to occur within the next 6 to 12 months, and the survey data from Westwater confirms that the proposed well pad/frac pad do not have known occurrences or host suitable habitat for Harrington's penstemon; therefore, the cumulative impacts are anticipated to be similar to or the same as the Proposed Action's direct and indirect impacts. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production. Installation of the produced water pipelines would eliminate the truck trips thereby reducing overall dust impacts to Harrington's beardtongue.

No Action Alternative

The No Action Alternative would result in no direct disturbance or reproductive impacts to Harrington's Beardtongue, because the Proposed Action would not be constructed. Water trucks would continue to transport produced water from the 9 existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility (156 trucks per year) with continuing potential for impacts to Harrignton's beardtongue resulting from dust associated with the water trucks.

For cumulative impacts, if the No Action Alternative were chosen (pipelines are not installed) and the RFFA were developed, increased truck traffic to transport water would be required. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production, resulting in increased potential impacts to Harrington's beardtongue due to the water truck trips and associated dust.

3.6 ISSUE 5: HOW WOULD THE PROPOSED ACTION AFFECT THE POTENTIAL WATERS OF THE UNITED STATES (WOTUS)?

Affected Environment

Surveys by WestWater identified eleven locations where the Proposed Action would cross potential Waters of the United States (WOTUS) (see **Table 15 and Map 5**). Table 15 shows 11 crossings of ephemeral and intermittent drainages, including three crossings of Dry Creek. WestWater (2023a) also reviewed the online National Wetlands Inventory database, which showed no additional potential WOTUS in the project area.

Table 15. Proposed Pipeline Crossings of Potential Waters of the U.S.				
Label	***Hydrologic Feature***	***Easting***	***Northing***	***Comment***
WOTUS-1	Ephemeral drainage near west end of Segment 2.	260666	4370732	No OHWM.
WOTUS-2	Intermittent drainage at north end of Segment 2.	260847	4370730	No OHWM
WOTUS-3	Ephemeral drainage at west end of Segment 2.	260528	4370729	No OHWM
WOTUS-4	Intermittent drainage at north end of Segment 2.	260926	4370408	No OHWM
WOTUS-5	Dry Creek near east end of Segment 3.	262389	4368594	OHWM 3 feet wide x 1 inch deep
WOTUS-6	Ephemeral drainage near south end of Segment 2.	261162	4368484	OHWM 2 feet wide x 1 inch deep
WOTUS-7	Dry Creek near middle of Segment 3.	261961	4368346	OHWM 2 feet wide x 1 inch deep
WOTUS-8	Dry Creek near intersection of Segments 2, 3, and 4.	261228	4368027	OHWM 1 foot wide x 1 inch deep
WOTUS-9	Ephemeral drainage near middle of Segment 4.	260770	4367900	OHWM 1 foot wide x 1 inch deep
WOTUS-10	Ephemeral drainage near west end of Segment 4.	259905	4367370	No OHWM
WOTUS-11	Ephemeral drainage near west end of Segment 4 and east end of Segment 5.	259748	4367110	No OHWM
OHWM = Ordinary High Water Mark				

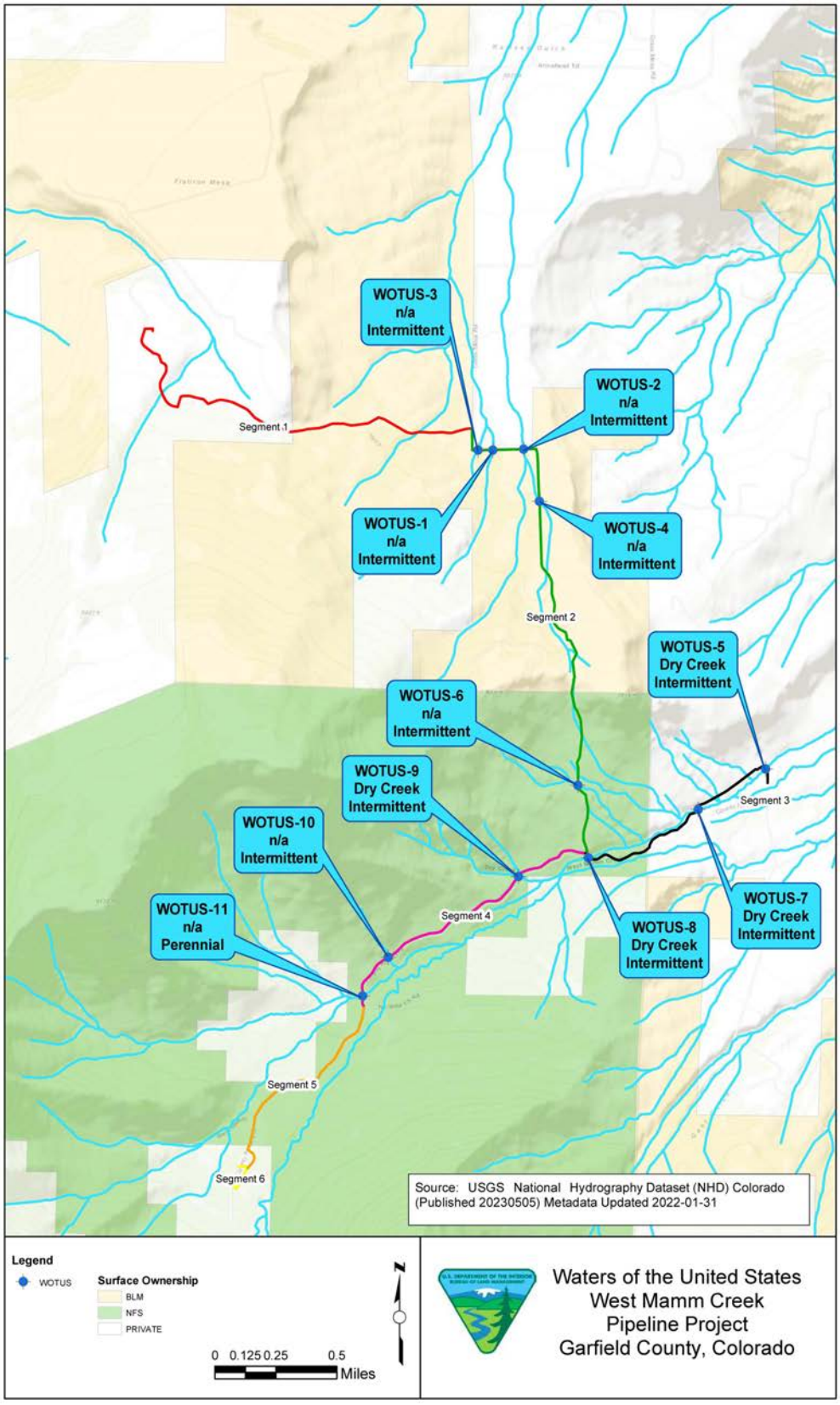
Environmental Consequences

Proposed Action

As described above, the Proposed Action would cross 11 potential WOTUS (see Table 15 and Map 5), which are intermittent tributaries. Temporary impacts to these potential WOTUS would be expected during pipeline installation, which would typically occur in 'the dry' or when water is not flowing. If water were flowing, a flume would be used to divert water around construction.

TEP and GRG would implement BMPs included in their respective Stormwater Management Plans (SWMPs) and Spill Prevention Control and Countermeasure Plans (SPCC Plans) which address potential spills and potential stormwater discharge sources of pollution that could affect surface-water quality if not managed properly. The SWMPs identify BMPs that would be used to maintain surface-water-quality standards.

The potential sedimentation of surface waters would be highest during construction and would decrease after reclamation as revegetation progresses. Reclamation is expected to be complete within three to four growing seasons, and revegetation monitoring would continue until approved by BLM and Forest Service. The mitigation measures described below would reduce the risk of potential indirect impacts to surface waters. Additionally, to minimize effects, the 50-foot construction area is proposed within or adjacent to existing rights-of-way, and it is within previously disturbed areas for almost 50% of the alignment.



Map 5. Waters of the United States

The BLM RMP stipulation designated "CSU-3 for Intermittent and Ephemeral Streams" requires application of CSU constraints within 100 feet from the edge of intermittent or ephemeral stream drainages as defined by the U.S. Geological Survey National Hydrography Dataset or field evaluation. This stipulation would apply to 100 feet on both sides of a drainage at four locations on BLM-managed lands, for a total of 800 feet (7%) of the 2.14 miles on BLM lands. With a proposed disturbance width of up to 50 feet, this length represents 0.9 acre of impacts to intermittent and ephemeral streams. Design measures, BMPs, and ROW stipulations would satisfy this CSU without the need for relocation.

Mitigation

Implementation of the following measures would reduce/minimize direct and indirect impacts to surface waters from the Proposed Action:

- Impacts to surface water quality from surface disturbance related to pipeline installation would be minimized by implementing sediment and erosion control measures, segregating and windrowing topsoil, and reclaiming disturbed surfaces as proposed and as directed by the BLM/Forest Service.
- In accordance with CDPHE general stormwater permit and Stormwater Management Plan (SWMP), stormwater BMPs would be implemented prior to construction and then maintained.
- The Operator would implement post-construction seeding of disturbed areas to minimize sedimentation, reducing impacts to surface water quality.
- The Proposed Action would be constructed in compliance with U.S. Army Corp of Engineers requirements.

Cumulative Impacts

The analysis area for cumulative impacts is the area affected by the Proposed Action and by TEP's RFFA. It includes BLM and NFS lands primarily managed for grazing, recreation, vegetation, and wildlife, and an existing pipeline corridor (featuring buried natural gas and produced water pipelines) and production from existing well pads on both federal and private lands; these activities are likely to continue. The Proposed Action is a pipeline project associated with oil and gas development, which would be similar to the types of past, present, and reasonably foreseeable future actions within the analysis area.

As described above, TEP's RFFA may involve the development of a new well pad and frac pad and the expansion of two existing well pads (see Map 1) to accommodate up to 47 new wells. The pads would be located on private lands and would access both federal and private minerals. The schedule for the RFFA is unknown at this time and is unlikely to occur within the next 6 to 12 months; therefore, cumulative impacts are anticipated to be similar to or the same as the Proposed Action's direct and indirect impacts. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production. Installation of the produced water pipelines would eliminate the truck trips and would reduce the potential for spills resulting from the produced water trucks.

No Action Alternative

The No Action Alternative would result in no surface-disturbing effects to WOTUS, because the pipelines would not be installed. Water trucks would continue to transport produced water from the 9 existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility (156 trucks per year) with continuing potential for spills resulting from the produced water trucks.

For cumulative impacts, if the No Action Alternative were chosen (pipelines are not installed) and the RFFA were developed, increased truck traffic to transport water would be required. If TEP's RFFA is

developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production, resulting in increased potential for spills.

3.7 ISSUE 6: HOW WOULD THE PROPOSED ACTION AND PROPOSED CONSTRUCTION AFFECT THE RESIDENT ELK, MOOSE, AND MULE DEER?

Affected Environment

Portions of the Proposed Action lie within areas mapped by CPW (2022) as Elk Winter Concentration and Elk Production areas (see **Map 6**) as well as Moose (see **Map 7**) and Mule Deer Winter Range (see **Map 8**). The east end of Segment 1, almost all of Segment 2, and the east end of Segment 3 coincide with Elk Winter Concentration Area, and the south end of Segment 5 and all of Segment 6 coincide with Elk Production Area. Most of Segments 1, 2 and 4 and all of Segments 5 and 6 are in Moose Winter Range. All of Segments 1 and 2 and most of Segments 3 and 4 coincide with Mule Deer Winter Range; however, mule deer winter range is not considered a high concern and does not have an associated timing limitation. Winter densities of big game animals in a given area are dependent on the type of habitat present and the severity of the winter.

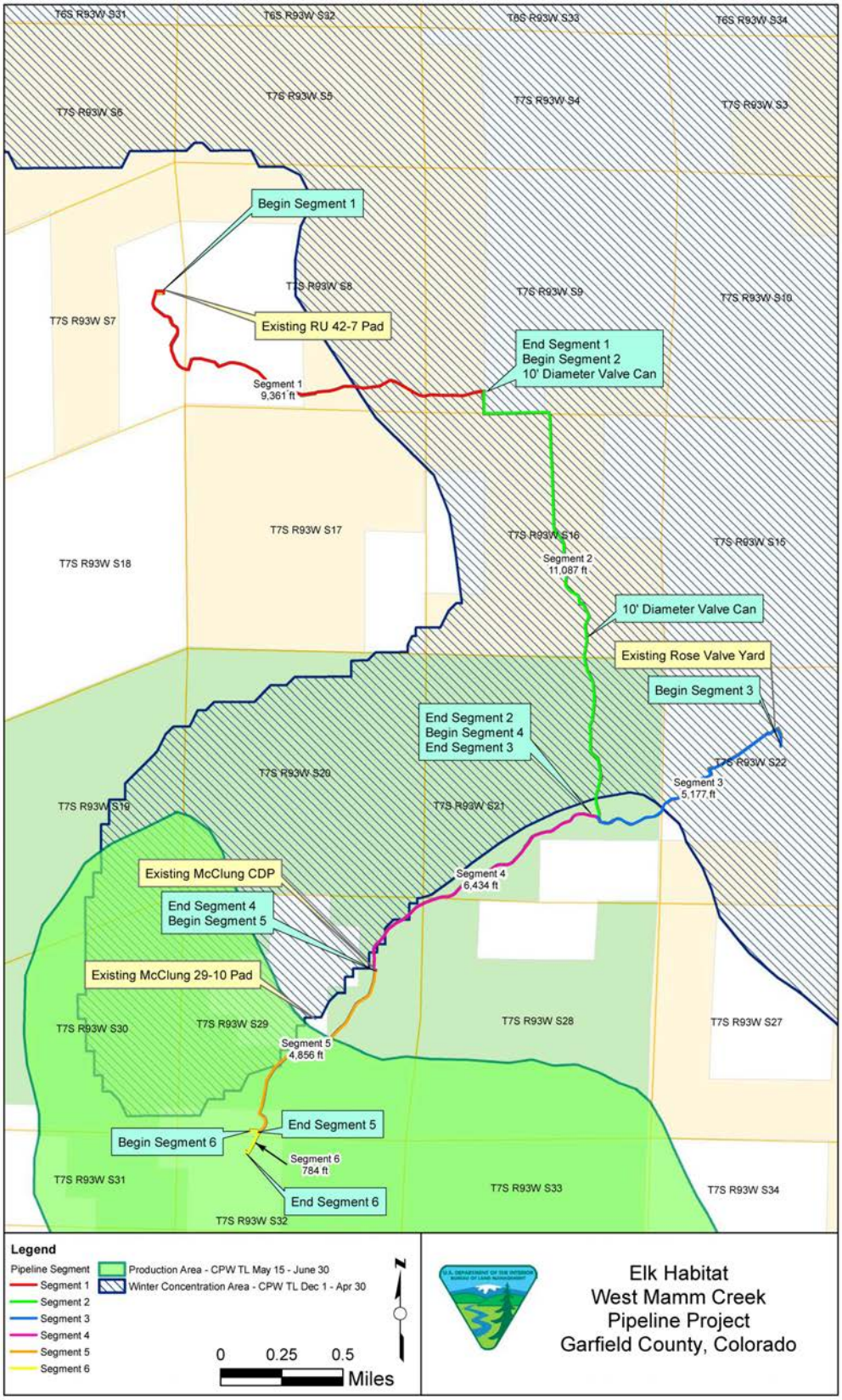
Elk Winter Concentration Areas are that part of the elk winter range where densities are at least 200% greater than the surrounding winter range density during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter as defined for each Data Analysis Unit (DAU). The BLM Big Game Habitat for Oil and Gas Conservation RMPA (2024) requires a TL for these areas that corresponds with CPW's recommended TL: December 1 to April 30. Elk Production Areas are that part of the overall range of elk occupied by the females from May 15 to June 30 for calving, which is the BLM TL as well as the CPW-recommended TL. Moose Winter Range is that part of the overall range of moose where 90% of the individuals are located during the winter months, a timeframe delineated by CPW with specific start/end dates for each moose population within the State. CPW does not consider Moose Winter Range High Priority Habitat (HPH) so there is no corresponding CPW-recommended TL, but the BLM CRVFO RMP (2015) has designated a TL from December 1 to April 15 to protect these areas. Mule Deer Winter Range is that part of the overall range where 90% of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter as defined for each DAU. There is no corresponding TL from CPW or BLM CRVFO for these areas.

Environmental Consequences

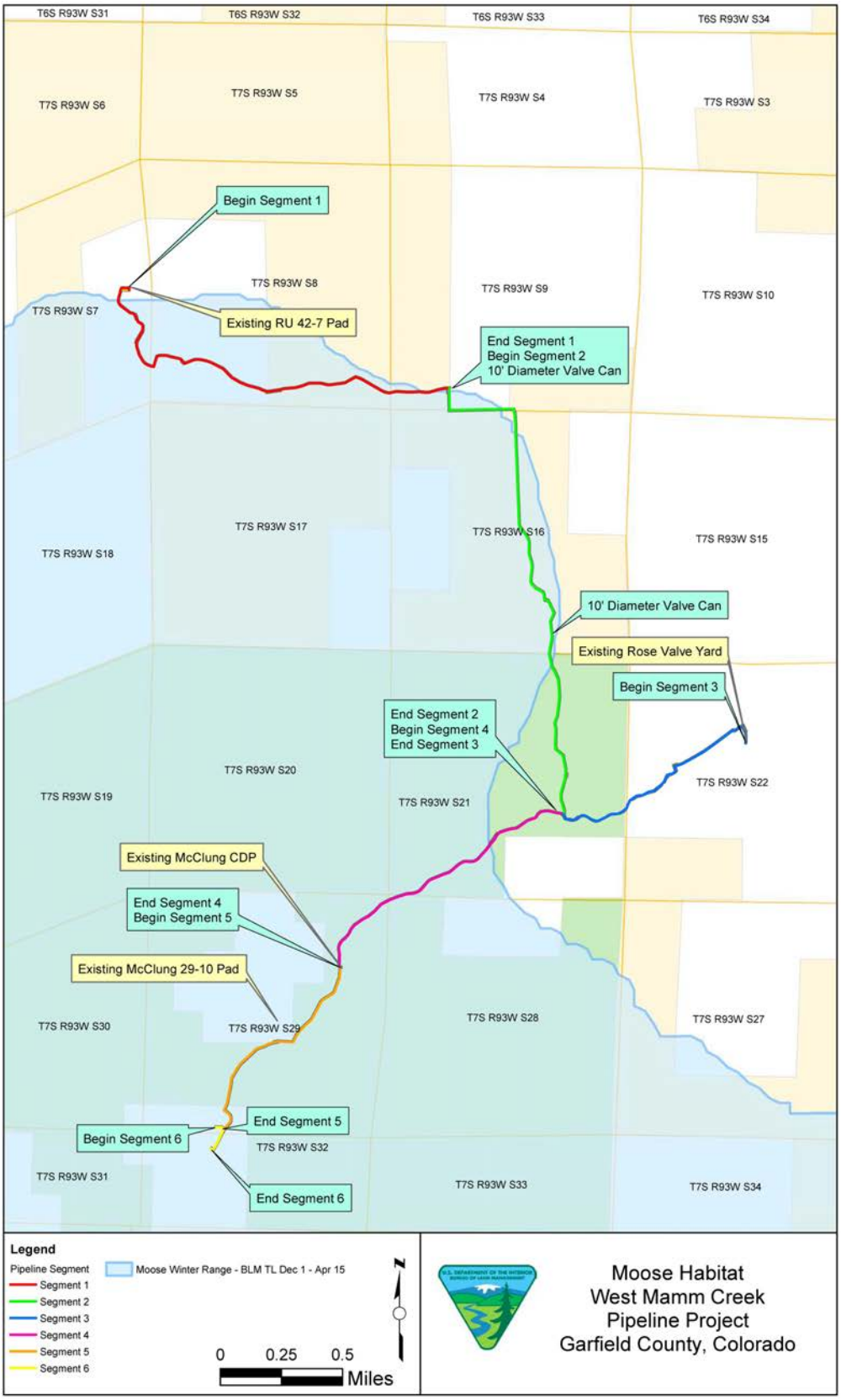
Proposed Action

The general project vicinity has had decades of energy development and other commercial, agricultural, and motorized recreational activity on both federal and private lands. Because of this activity, impacts to wildlife from the project would be reduced compared to less developed areas. Some habituation of the animals to oil and gas operations and other human activities in the mosaic of public and private lands also tends to reduce impacts compared to more remote locations

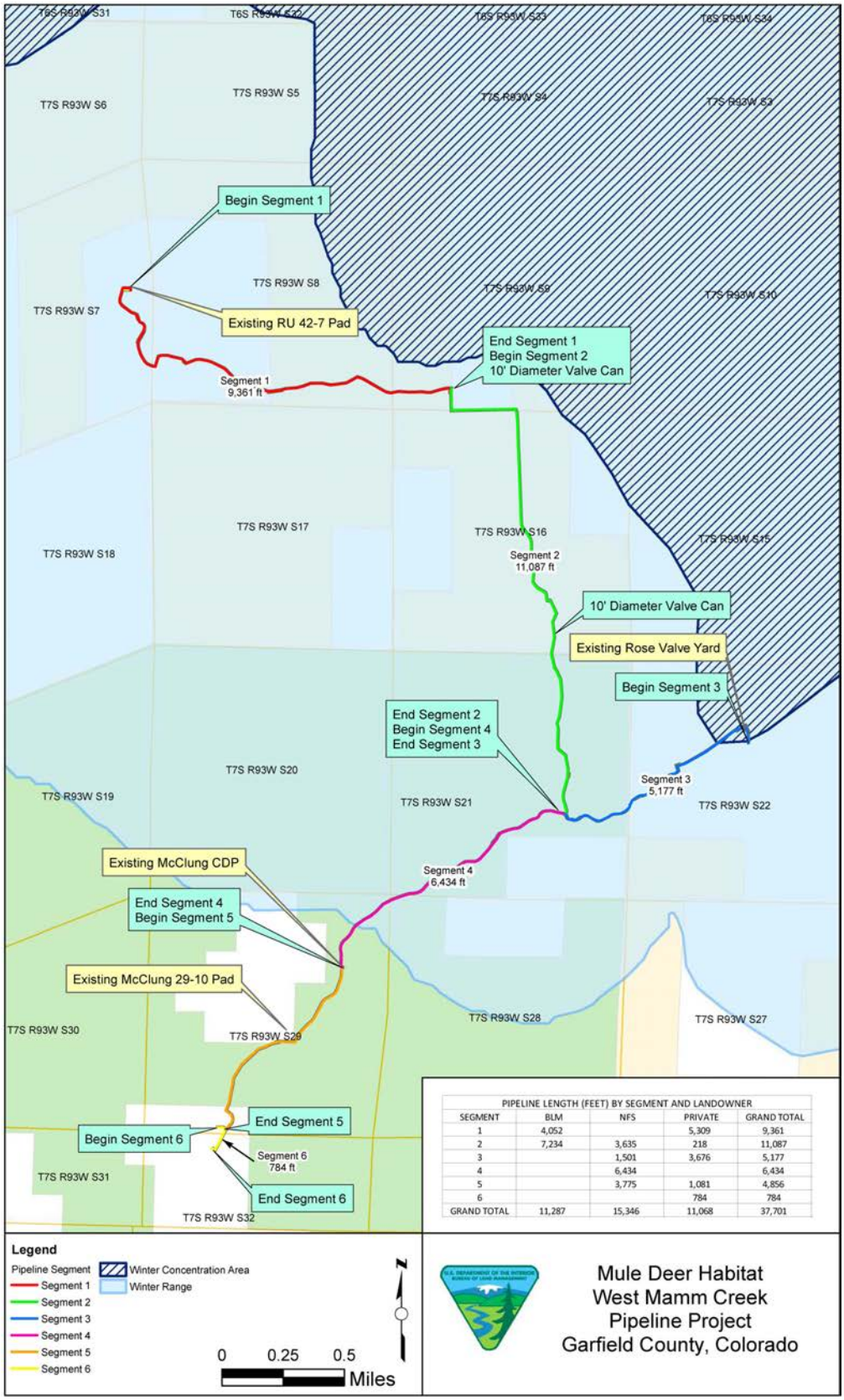
Impacts to terrestrial wildlife from the Proposed Action may include habitat fragmentation and loss from construction of project components, effective habitat loss due to avoidance and displacement from preferred habitat, reduced survivorship from physical stress and energy depletion, and direct mortality due to animal/truck collisions.



Map 6. Elk Habitat



Map 7. Moose Habitat



Map 8. Mule Deer Habitat

Effective habitat loss due to avoidance and displacement generally affects a larger area than physical habitat loss. The extent of this effective habitat loss cannot be estimated quantitatively because of the variation of habitat type and quality in terms of forage, cover, climate, proximity to water, and sensitivity of the animals to disturbance. Sensitivity to disturbance is affected by the prior exposure of the animals to human use and associated noise and activity and by the effective radius of the disturbance based on intensity and noise levels at the site and the effectiveness of topographic and vegetation screening. In general, disturbance-related impacts are temporary, with altered patterns of distribution and habitat use returning to pre-disturbance conditions when development transitions to long-term production. This return to prior patterns may occur relatively quickly if the animals have remained in the project vicinity, or upon their return to the area during the next seasonal movement.

TEP and GRG have agreed to construct outside of the timing limitation for big game (December 1 to April 30 for winter concentration areas and winter range and May 15 to June 30 for elk production areas), and, therefore, impacts to big game would be minimal. Any impacts would also be temporary and short term, occurring during construction. Installation of the pipelines would eliminate water truck traffic on area roads avoiding impacts to big game during operations.

Mitigation

Implementation of the following measure, would reduce/minimize direct and indirect impacts to big game from the Proposed Action:

- Construction would not occur from December 1 to April 30 within Elk Winter Concentration Areas, and TEP and GRG would eliminate traffic within Elk Winter Concentration Areas from December 1 to April 30 annually unless emergency maintenance is required by TEP or GRG. In cases where emergency maintenance is needed during the TL, TEP and/or GRG must coordinate with the surface-managing agency's wildlife biologist.
- Construction would not occur from December 1 to April 15 within Moose Winter Range, and TEP and GRG would eliminate traffic within Moose Winter Range from December 1 to April 15 annually unless emergency maintenance is required by TEP or GRG. In cases where emergency maintenance is needed during the TL, TEP and/or GRG must coordinate with the surface-managing agency's wildlife biologist.
- Construction would not occur from May 15 to June 30 within Elk Production Area, and traffic would be eliminated within Elk Production Area between May 15 and June 30 unless emergency maintenance is required by TEP or GRG. In cases where emergency maintenance is needed during the TL, TEP and/or GRG must coordinate with the surface-managing agency's wildlife biologist.

Cumulative Impacts

The analysis area for cumulative impacts is the area affected by the Proposed Action and by TEP's RFFA. It includes BLM and NFS lands primarily managed for grazing, recreation, vegetation, and wildlife, and an existing pipeline corridor (featuring buried natural gas and produced water pipelines) and production from existing well pads on both federal and private lands; these activities are likely to continue. The Proposed Action is a pipeline project associated with oil and gas development, which would be similar to the types of past, present, and reasonably foreseeable future actions within the analysis area.

As described above, TEP's RFFA may involve the development of one new well pad and frac pad and the expansion of three existing well pads (see Map 1) to accommodate drilling of up to 47 new wells. The pads would be located on private lands and would access both federal and private minerals. The schedule for the RFFA is unknown at this time and is unlikely to occur within the next 6 to 12 months; therefore, cumulative

impacts are anticipated to be similar to the Proposed Action's direct and indirect impacts. Completion of the proposed pipeline Project could assist in the full development of the RFFA, which would present the potential for a greater degree of habitat fragmentation and disturbance for big game in the area due to the expansion of the existing well pads and the development of the new pad, as well as the drilling, completion, maintenance, and eventual reclamation of the 47 new wells. If TEP's RFFA is developed and the proposed pipeline Project is not, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production. Installation of the produced water pipelines would eliminate the truck trips and would reduce the potential for animal/truck collisions and traffic-related disturbance.

No Action Alternative

Under the No Action Alternative, the proposed pipelines would not be built and would, therefore, not result in impacts to big game or big game habitat. Water trucks would continue to transport produced water from the 9 existing producing wells in the West Mamm Creek area to the Rulison Water Management Facility (156 trucks per year) with continuing potential for animal/truck collisions.

For cumulative impacts, if the No Action Alternative were chosen (pipelines are not installed) and the RFFA were developed, increased truck traffic to transport water would be required. If TEP's RFFA is developed, up to 1,000 water truck trips per well for development of up to 47 wells would be required and 17,167 annual produced water truck trips would be required to transport produced water from future production, resulting in increased potential for animal/truck collisions.

4. COORDINATION AND CONSULTATION

4.1 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

- Colorado Parks and Wildlife – wildlife
- Colorado State Historic Preservation Office (via informational letter, February 2024)
- Ute Indian Tribe, Southern Ute Indian Tribe, and Ute Mountain Ute (via biannual consultation letters, August 2023 and February 2024)
- WestWater Engineering, Inc. – biological surveys
- Grand River Institute – cultural surveys

4.2 LIST OF PREPARERS

BLM and Forest Service staff who participated in preparation of this EA are listed alphabetically by last name in **Table 16**. Participation by these individuals varied, including reviewing survey results submitted by the operator's consultants, evaluating impacts likely to occur from implementation of the Proposed Action, and identifying appropriate ROW stipulations to be attached and enforced by the BLM (see Appendix A).

Table 16. BLM and WRNF Interdisciplinary Team Authors and Reviewers		
Name	***Title***	***Areas of Participation***
BLM, Colorado River Valley Field Office		
Jill Bogdanovich	Reality Specialist	EA Project Lead, Right-of-Way Permitting, Access and Transportation
Jacob Casey	Planning and Environmental Coordinator	Technical Review, NEPA Review
Vanessa Caranese	Geologist	Fossil Resources, Geology and Mineral Resources, Groundwater, Soils, Surface Water, Waters of the US
Forrest Cook	Air Resources	Air Quality, Noise
Lindsey Freitag	Ecologist	Special Status Plants, Vegetation, Areas of Environmental Concern,
Matt Heinritz	Archaeologist	Cultural Resources, Native American Religious Concerns
Justin Jones	Rangeland Management Specialist	Range Management
Emily McCall	Wildlife Biologist	Migratory Birds, Raptors, Special Status Fish and Wildlife, Aquatic and Terrestrial Wildlife, Invasive Non-Native Plants
Lisa Strunk	Economist	Environmental Justice and Socioeconomics
Wesley Toews	Natural Resource Specialist	Visual Resources, Wastes-Hazardous or Solid
Forest Service, White River National Forest		
Joseph Fazzi	Realty Specialist	Special Use Permitting & Coordination
Karla Mobley	Civil Engineer Technician	Road Use Permitting, Pipeline Construction
Natasha Goedert	Wildlife Biologist	Migratory Birds, Special Status Fish and Wildlife, and Aquatic and Terrestrial Wildlife Review
Dakotah Matarozzo	Rangeland Management Specialist	Range Management Review
Jared Pierce	Landscape Architect	Scenic Resources Review
Nick Rzyska-Filipek	Fish Biologist	Special Status Species (Fish), Threatened and Endangered Species (Fish), Aquatic Wildlife Review
Sage Stowell	Ecologist/Biologist	Invasive Non-native Species, Special Status Species (Plants), Vegetation Review

4.3 PUBLIC COMMENT ON DRAFT EA

The EA is available by request at the BLM CRVFO, c/o Jill Bogdanovich, 2300 River Frontage Rd, Silt, CO 81652. The document is also available on the BLM ePlanning website at https://eplanning.blm.gov/eplanning-ui/project/2025023/510 and on the Forest Service project website at https://www.fs.usda.gov/project/whiteriver/?project=64353. Email notification will be directly provided to those individuals and groups who provided scoping comments. Additional information regarding this Proposed Action can also be obtained from Cary Green, USDA Forest Service Environmental Coordinator at 970-390-3234 or by e-mail at cary.green@usda.gov.

Comments on this Proposed Action will be accepted for 30 days beginning on the first day after the date of publication of this notice published in the *Glenwood Springs Post Independent*, the newspaper of record. If the comment period ends on a Saturday, Sunday, or Federal holiday, comments will be accepted until the end of the next Federal working day. A timely submission will be determined as outlined in 36

CFR 218.25(a)(4). It is the responsibility of the sender to ensure timely receipt of any comments submitted.

Only individuals or entities (as defined by 36 CFR 218.2) who submit timely, specific written comments (as specified in 36 CFR 218.2) about this proposed action during this or another public comment period established by the Responsible Official will be eligible to file an objection. Other eligibility requirements are specified in 36 CFR 218.25(a)(3) and include, among other requirements, the commenter's name, postal address, title of the proposed action, and signature or other verification of identity upon request and identification of the individual or entity who authored the comment(s). All written comments received by the Responsible Official, including names and addresses of commenters shall be placed in the project file and shall become a matter of public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the Agency with the ability to provide the commenter with subsequent environmental documents.

Comments should be within the scope of the proposed action, have a direct relationship to the proposed action, and must include supporting reasons for the Responsible Official to consider (36 CFR 218.2).

Submit comments to the Responsible Official, Scott Fitzwilliams using the following methods: mail, electronically, or in person (Monday through Friday, 8:00 a.m. to 4:30 p.m., excluding holidays) to: Colorado River Valley Field Office, c/o Jill Bogdanovich, 2300 River Frontage Rd, Silt, CO 81652. Electronic comments including attachments can be submitted to the BLM ePlanning website at https://eplanning.blm.gov/eplanning-ui/project/2025023/510. The ePlanning notice provides information on how to submit comments or questions regarding the project. Acceptable formats for electronic comments are text or html e-mail, Adobe portable document format, and formats viewable in Microsoft Office applications.

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APPENDIX A

DOI-BLM-CO-G020-2023-0048-EA

CONDITIONS OF APPROVAL (COAs) APPLICABLE TO ALL ACTIVITIES ASSOCIATED WITH THE WEST MAMM CREEK PIPELINE PROJECT

The following measures identified below must be implemented by the operator to avoid or reduce potential impacts from Project activities.

1. Administrative Notification. The operator must notify the BLM representative at least 48 hours prior to initiation of construction. The operator must schedule a pre-construction meeting, including key operator and contractor personnel, to ensure that any unresolved issues are fully addressed prior to initiation of surface-disturbing activities or placement of production facilities. Project staking including trench centerlines and offset limits along the disturbance corridor must be completed to the satisfaction of the BLM and/or Forest Service personnel prior to commencing any surface disturbing activities. Furthermore, all old flagging along alternate routes or unnecessary flagging installed during the planning of this project must be located and removed from the area prior to construction start-up.

2. Pipeline Construction and Maintenance. Construction methods, techniques and procedures described in TEP's Plan of Development (dated 2/27/2023) for Flatiron to West Mamm Creek Proposed 8" and 6" Water Pipeline Right-of-Way and GRG's Plan of Development (dated 3/14/2023) for the WMC 8" Loop Pipeline must be implemented. The disturbance limits of the pipelines must be staked and/or flagged prior to any commencement of operations. All trees and brush within the disturbance corridor must be hydro-axed or chipped prior to beginning excavation work unless specific trees along the edge of the corridor have been identified as "save" trees for visual mitigation by the BLM and/or Forest Service. Topsoil stripping must not be allowed where topsoil windrowing or stockpiling is to occur along the pipeline corridor to retain the root mass of the brush species and enhance the recovery of the hydro-axed vegetation. No equipment or vehicle use must be allowed outside the staked disturbance corridor of the pipeline ROW unless authorized by BLM and/or Forest Service personnel for visual mitigation work.

3. Road Construction and Maintenance. Roads must be crowned, ditched, surfaced, drained with culverts and/or water dips, and constructed to BLM Gold Book and BLM Road Manual 9113 and 9113-1 standards. Initial gravel application must be a minimum of 6 inches. The operator must provide timely year-round road maintenance and cleanup on the access roads. A regular schedule for maintenance must include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement, and dust abatement. When rutting within the traveled way becomes greater than 6 inches, blading and/or gravelling must be conducted as approved by the BLM and Forest Service.

4. Private Landowners and Existing Rights-of-Way. The operator must obtain agreements allowing construction with all existing authorized surface users of Federal ROW locations prior to surface disturbance or construction of the location, staging areas, or access across or adjacent to any existing ROW locations. In the case of privately owned surface, the operator must certify to BLM and/or Forest Service that a Surface Use Agreement has been reached with the authorized surface user prior to construction.

5. Dust Abatement. The operator must implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust. Posted speed limits on county and private roads must be strictly followed during all phases of the pipeline project to reduce vehicle speeds and thereby reduce dust along the access roads. The BLM and/or Forest Service may prohibit the use of magnesium chloride or other dust-suppressing agents to avoid or minimize impacts to nearby sensitive plants, surface waters, or aquatic life.

6. Drainage Crossings and Culverts. Construction activities at all drainage crossings (e.g., burying pipelines, installing culverts) must be timed to avoid high flow conditions. Construction that disturbs any flowing stream must utilize either a piped stream diversion or a cofferdam and pump to divert flow around the disturbed area.

   Culverts must be designed and installed to pass a 25-year or greater storm event. On perennial and intermittent streams, culverts must be designed to allow for passage of aquatic biota. The minimum culvert diameter in any installation for a drainage crossing or road drainage must be 24 inches. Crossings of drainages deemed to be jurisdictional waters of the U.S. pursuant to Section 404 of the Clean Water Act may require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the U.S. Army Corps of Engineers (USACE) recommends designing drainage crossings for the 100-year event. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 12.

   Pipelines installed beneath stream crossings must be buried a minimum depth of 4 feet below the channel substrate to avoid exposure by channel scour and degradation. Following burial, the channel grade and substrate composition must be returned to pre-construction conditions.

7. Jurisdictional Waters of the U.S. The operator must obtain appropriate permits from the U.S. Army Corps of Engineers (USACE) prior to discharging fill material into Waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. are defined in 33 CFR Section 328.3 and may include wetlands as well as perennial, intermittent, and ephemeral streams. Permanent impacts to jurisdictional waters may require mitigation. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 12. Copies of any printed or emailed approved USACE permits or verification letters must be forwarded to the BLM.

8. Wetlands and Riparian Zones. The operator must restore temporarily disturbed wetlands or riparian areas. The operator must consult with the BLM Colorado River Valley Field Office to determine appropriate mitigation, including verification of native plant species to be used in restoration.

9. Reclamation. Specific measures to follow during interim reclamation are described below.

   a. Reclamation Plans. The Reclamation Plan must contain the following components: detailed reclamation plats, which include contours and indicate irregular rather than smooth contours as appropriate for visual and ecological benefit; timeline for reclamation earthwork, and seeding; soil test results and/or a soil profile description; amendments to be used; soil treatment techniques such as roughening, pocking, terracing; erosion control techniques such as hydromulch, blankets/matting, and wattles; and visual mitigations if in a sensitive VRM area. Before construction, it is recommended to collect pre-disturbance transect data to establish a reference for future reclamation monitoring.

   b. Deadline for Reclamation Earthwork and Seeding. Reclamation, including seeding, of temporarily disturbed areas along roads and pipelines, and of topsoil piles and berms, must be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 must be seeded during the remainder of the early winter season instead of during the following spring, unless BLM approves otherwise based on weather. If road or pipeline construction occurs discontinuously (e.g., new segments installed as new pads are built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, must be phased such that no portion of the temporarily disturbed area remains in an unreclaimed condition for longer than 30 days. BLM may authorize deviation from this

requirement based on the season and the amount of work remaining on the entirety of the road or pipeline when the 30-day period has expired.

The operator must contact the BLM project lead Natural Resource Specialist (NRS) and/or Forest Service by telephone or email approximately 72 hours before reclamation and reseeding begin. This would allow the NRS to schedule a pre-reclamation field visit if needed to ensure that all parties are in agreement and provide time for adjustments to the plan before work is initiated.

The deadlines for seeding described above are subject to extension upon approval of the BLM and/or Forest Service based on season, timing limitations, or other constraints on a case-by-case basis. If the BLM and/or Forest Service approves an extension for seeding, the operator may be required to stabilize the reclaimed surfaces using hydromulch, erosion matting, or other method until seeding is implemented.

c. Topsoil Stripping, Storage, and Replacement. *All* topsoil must be stripped following removal of vegetation during construction of pipelines. In areas of thin soil, a minimum of the upper 6 inches of surficial material must be stripped. The BLM and/or Forest Service may specify a stripping depth during the onsite visit or based on subsequent information regarding soil thickness and suitability as determined during pre-construction soil sampling. The stripped topsoil must be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.

Topsoil must be windrowed, segregated, and stored along pipelines and roads for later spreading across the disturbed corridor during final reclamation. Topsoil stockpiles and berms must be promptly seeded to maintain soil microbial activity, reduce erosion, and minimize weed establishment.

d. Seedbed Preparation. For cut-and-fill slopes, initial seedbed preparation must consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. For compacted areas, initial seedbed preparation must include ripping to a minimum depth of 18 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping must be conducted in two passes at perpendicular directions. Following final contouring, the backfilled or ripped surfaces must be covered evenly with topsoil.

If directed by the BLM and/or Forest Service, the operator must implement measures following seedbed preparation (when broadcast-seeding or hydroseeding is to be used) to create small depressions to enhance capture of moisture and establishment of seeded species. Depressions (pocking) must be no deeper than 1 to 2 inches and must not result in piles or mounds of displaced soil. Excavated depressions must not be used unless approved by the BLM and/or Forest Service for the purpose of erosion control on slopes. Where excavated depressions are approved by the BLM and/or Forest Service, the excavated soil must be placed only on the downslope side of the depression.

If directed by the BLM and/or Forest Service, the operator must conduct soil testing prior to reseeding to identify if and what type of soil amendments may be required to enhance revegetation success. At a minimum, the soil tests must include texture, pH, organic matter, sodium adsorption ratio (SAR), cation exchange capacity (CEC), alkalinity/salinity, and basic nutrients (nitrogen, phosphorus, potassium [NPK]). Depending on the outcome of the soil testing, the BLM and/or Forest Service may require the operator to submit a plan for soil amendment.

Any requests to use soil amendments not directed by the BLM and/or Forest Service must be submitted for approval.

e. Seed Mixes. A seed mix consistent with BLM standards for species selection and seeding rate for the specific habitat type must be used on all BLM lands affected by the project (see GJFO and CVFRO Combined Seed Mixes dated October 26, 2022). For NFS and private surfaces, the operator must use a BLM-approved native seed mix unless specified otherwise by the Forest Service or private landowner.

The seed must contain no prohibited or restricted noxious weed seeds and must contain no more than 0.5 percent by weight of other weed seeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation must be submitted to BLM and/or Forest Service at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria must not be applied to public lands.

f. Seeding Procedures. Seeding must be conducted no more than 24 hours following completion of final seedbed preparation.

Where practicable, seed must be installed by drill-seeding to a depth of 0.25 to 0.5 inch. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover or by hydroseeding and hydromulching. Hydroseeding and hydromulching must be conducted in two separate applications to ensure adequate contact of seeds with the soil. The BLM and/or Forest Service may approve deviations from these seeding requirements for seeding of sagebrush.

If sagebrush seeding is required, it should consist of broadcast-seeding shortly before expected winter snowfall, or on top of snow. If drill-seeding of sagebrush is approved, it should include placing the seed in the box on the drill for "fluffy" seeds, with the drop tube left open to allow seed to fall onto the ground surface.

If interim revegetation is unsuccessful, the operator must implement corrective measures, potentially including reseeding as directed by the BLM and/or Forest Service. These efforts would be required until interim reclamation standards are met or the BLM and/or Forest Service agrees that site conditions would prevent attaining that standard.

g. Mulch. Mulch must be applied within 24 hours following completion of seeding within pinyon-juniper, sagebrush shrubland, and/or salt desert shrub habitat types. Mulch may consist of either hydromulch, certified weed-free straw, or certified weed-free native grass hay crimped into the soil. Mulch must not be used within Gambel's oak or montane/subalpine conifer or aspen habitat types, unless requested or approved by the BLM and/or Forest Service.

NOTE: Mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

h. Erosion Control. Cut-and-fill slopes must be protected against erosion with the use of water bars, lateral furrows, or other BMPs approved by the BLM and/or Forest Service. Additional BMPs such as biodegradable wattles, weed-free straw bales, or silt fences must be employed as necessary to reduce transport of sediments into the drainages. . The BLM and/or Forest Service

may, in areas with high erosion potential, require use of hydromulch or biodegradable blankets/matting to ensure adequate protection from slope erosion and offsite transport of sediments and to improve reclamation success.

i. Monitoring. The operator must conduct reclamation monitoring surveys of all federal sites categorized as "operator reclamation in progress." All aspects of the surveys including, sample design, reference data, and data collection methods, must follow the 2023 CRVFO & GJFO Reclamation Monitoring Protocols. Operators must submit an annual report digitally to the BLM and/or Forest Service by January 31. The annual monitoring report must include all required reporting information and use the four Reclamation Categories defined in the 2023 CRVFO & GJFO Reclamation Monitoring Protocols to assess whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report must identify appropriate corrective actions. Upon review and, if appropriate, approval of the report by the BLM and/or Forest Service, the operator must coordinate with the BLM and/or Forest Service (and surface landowner, if applicable) to implement such corrective actions in order to achieve successful reclamation over time.

Reclamation site monitoring must be conducted annually or within an established monitor cycle approved by the BLM and/or Forest Service. A planning meeting to identify sites for the upcoming monitoring survey must be conducted with BLM and/or Forest Service and the operator prior to the start of the growing season.

10. Temporary and Interim Reclamation. For Fee locations, the revegetation method and seed mix must be the same as if the location were federal surface, unless the private landowner specifies a different method and mix. In such case, however, the operator must be responsible for achieving temporary stabilization and interim reclamation that minimizes erosion and sediment transport from disturbed surfaces and soil stockpiles and minimizes the potential for infestations of State-listed noxious weeds or other invasive non-native plant species.

11. Weed Control. The operator must regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the project Pesticide Use Proposal (PUP). The Glenwood Springs Field Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators* dated March 2007 must be referenced for guidance on selection, use, and application of herbicide in specific settings such as proximity to surface water or special status plants within the CRVFO area A PUP must be approved by the BLM prior to the use of herbicides, and pesticides must be applied by certified applicators trained in the identification of native milkweeds and forbs. Herbicide must not be applied to any known special status plant. To reduce impacts to native pollinators, the operator must avoid the risk of herbicide drift onto non-target plant species by spot-treating target species, limiting herbicide applications to low-wind conditions, and mechanically removing noxious weeds when practicable. Applicators must take special care to avoid herbicide contact with non-target species when native plants in the treatment area and project vicinity are in bloom. Annual weed monitoring reports and Pesticide Application Records (PARs), including GPS data in accordance with the February 27, 2014, letter to operators, must be submitted by **December 1.**

Before entering federal and private lands, all off road equipment must be power washed to remove seeds, soil, and vegetative matter.

12. Ips Beetle. To minimize the potential for triggering or expanding an outbreak of the *Ips* beetle, the BLM and/or Forest Service may require any pinyon trees inadvertently damaged or intentionally trimmed during road, pad, or pipeline construction to be cut to the ground or grubbed from the ground

and either chipped and buried in the toe of the fill slope or removed within 24 hours to a location approved by the Colorado State Forest Service. Prior to authorizing use of any slash from pinyon pines for purposes of visual mitigation, erosion control, as a coarse mulch, or to impede travel along a pipeline route by off-highway vehicles, the BLM would inspect the affected stand for signs of *Ips* beetle infestation. No slash or pruned material from an infected stay must be used for such purposes.

13. Big Game Winter Range Timing Limitation. To minimize impacts to wintering big game, no construction activities shall occur during an annual Timing Limitation (TL) period from **December 1 to April 30 in areas on BLM lands designated as Elk Winter Concentration Area, and from December 1 to April 15 in areas designated as Moose Winter Range (where it does not overlap with Elk Winter Concentration Area),** by CPW to minimize disturbance to elk and moose during times of stress. In areas designated as both Elk Winter Concentration Area and Moose Winter Range, the December 1 to April 30 TL must be adhered to. Additionally, no construction activities would occur during an annual TL from **May 15 to June 30 in areas on BLM lands designated as Elk Production Area** by CPW to minimize disturbance to calving elk and their offspring.

14. Raptor Nesting. To help ensure compliance with the Migratory Bird Treaty Act (MBTA), **the operator would not initiate construction during the general raptor nesting season (February 15 to August 15) unless a nesting survey no more than 2 weeks before the planned work indicates no active nests within the species-specific buffer width (see Table A.14 below) of the Project.** Surveys must cover a 0.5-mile buffer around the work area to determine what species' nests are present and which buffers, if any, must be applied. If no active nest is identified during surveys and work is initiated during the raptor nesting season, or outside the raptor nesting season but continues into the nesting season, raptors that begin nesting within the specified buffer once work is in progress do not require mitigation unless nesting begins during a hiatus in work at the site. The operator must notify BLM and/or Forest Service of any planned or unplanned work stoppage or substantially reduced work intensity longer than 2 weeks after work has been initiated. Depending on the timing of the work hiatus or reduced intensity, the operator may be required to conduct a follow-up nesting survey before recommencing the work.

    The operator remains responsible for compliance with the MBTA with respect to a "take" of birds or of active nests (those containing eggs or young), including nest failure caused by human activity, if project-related activities are initiated within the specified buffer distance of any known active raptor nest, even if outside the nesting season specified in this COA.

15. Migratory Birds – Nesting Habitat. Pursuant to BLM Instruction Memorandum 2008-050, all vegetation removal or surface disturbance in previously undisturbed lands providing potential nesting habitat for migratory birds is prohibited from **May 15 to July 15**. An exception to this TL may be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate that no migratory bird species are nesting within 30 meters (100 feet) of the area to be disturbed. Nesting would be deemed to be occurring if a territorial (singing) male is present within the distance specified above. Nesting surveys would include an audial survey for diagnostic vocalizations in conjunction with a visual survey for adults and nests. Surveys would be conducted by a qualified breeding bird surveyor between sunrise and 10:00 AM under favorable conditions for detecting and identifying migratory birds. This provision does not apply to ongoing construction activities that are initiated prior to May 15 and continue into the 60-day period at the same location.

Table A.14. Raptor Timing Limitations and Buffers

		Timing Limitations	
Raptor species		**Dates**	**Buffer width, miles**
Eagle,	Bald	15 November - 31 July	0.25 miles
	Golden	15 November - 31 July	**0.5 miles**
Falcon,	**American peregrine**	15 February - 15 August	**0.5 miles**
	Prairie	15 February - 15 August	**0.5 miles**
Goshawk,	**Northern**	15 February - 15 August	**0.5 miles**
Harrier,	Northern	15 February - 15 August	0.25 miles
Hawk,	Cooper's	15 February - 15 August	0.25 miles
	Ferruginous	15 February - 15 August	**0.5 miles**
	Red-tailed	15 February - 15 August	0.25 miles
	Sharp-shinned	15 February - 15 August	0.25 miles
	Swainson's	15 February - 15 August	0.25 miles
Kestrel,	American	15 February - 15 August	0.25 miles
Osprey		15 February - 15 August	0.25 miles
Owl	**Mexican spotted**	15 February - 15 August	**0.5 miles**
	(all other species)	15 February - 15 August	0.25 miles
Vulture,	Turkey	15 February - 15 August	0.25 miles

16. Migratory Birds – General. It would be the responsibility of the operator to comply with the Migratory Bird Treaty Act (MBTA) with respect to "take" of migratory bird species, which includes injury and direct mortality resulting from human actions not intended to have such result. Mortality or injury to birds must be reported within 24 hours to the BLM and or Forest Service project lead or the wildlife biologist. The operator must notify the BLM project lead or Oil and Gas Team wildlife biologist within 24 hours if the operator discovers a dead or injured Federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the USFWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence.

17. Yellow-Billed Cuckoo. Project-related construction or operation of heavy equipment inside the 0.5-mile buffer must be prohibited for the period that YBCU have demonstrated breeding behavior in Colorado (May 15th to September 15th) unless there is a result of no YBCU observations at the end of a full survey (in August) for YBCU conducted in the year of construction.

18. Reptiles. Construction personnel must be educated on snake identification and conflict avoidance to prevent injury to personnel and mortality to snakes that may be encountered during construction of the project.

19. Wildlife Exclusion and Escape. On federal lands, the operator must construct and maintain equipment and trenches to exclude livestock, wildlife, and humans (except authorized personnel) from entering, and in the event of inadvertent entry, to allow escape from these below-grade areas. Wildlife may become disoriented and trapped, and mortalities due to stress, starvation, or dehydration can occur.

At a minimum, on federal lands, the operator must: install and maintain escape ramps, ladders, or other methods of wildlife escape from trenches. Escape ramps must be repaired or replaced promptly when damaged, and ramps must be secured and properly positioned to allow wildlife to escape.

Open excavations on federal lands, whether placed or accumulated from precipitation, may pose a risk to birds and other wildlife as a result of asphyxiation, ingestion, absorption through the skin, or interference with buoyancy and temperature regulation.

All mortality or injury to wildlife on federal lands must be reported within 24 hours to the BLM and/or Forest Service project lead or wildlife biologist.

20. Range Management. Range improvements (e.g., fences, gates, reservoirs, water pipelines) must be avoided during construction to the maximum extent possible. If range improvements are damaged during construction, the operator would be responsible for repairing or replacing the damaged range improvements. The operator must notify BLM and/or Forest Service staff if damages to range improvements occur. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate must be installed across the roadway to control grazing livestock.

    Any equipment used during project implementation that would operate outside the limits of the road prism must be cleaned prior to entering federal lands (includes UTVs, bulldozers, skidders, graders, backhoes, mastication equipment, dump trucks, etc.).

    Disturbed areas must be reseeded with approved seed mix.

    Continue implementation of invasive plant prevention measures in the Colorado Noxious Weed Act as well as the 2021 NFS Invasive Species Management Program direction.

    New road construction, road blading, brushing, and ditch cleaning in areas with high concentrations of invasive plants must be conducted in consultation with the Forest Service Botanist incorporating invasive plant prevention measures, as appropriate, including but not limited to pretreatment and post treatment of roads (15 ft off each side) with herbicide. Herbicides must be pre-approved by the Forest Service and application records must be completed and reported to the Forest Service Botanist. See attached application record form.

    All range structural improvements (fences, gates, cattleguards, water developments) within the project area boundary must be protected during implementation activities.

    If equipment is accessing the project area via cattleguards, cattleguards must be cleaned out and repaired.

    All irrigation ditches, cattle guards, fences, and artificial and natural livestock and wildlife water sources must be repaired to at least pre-construction conditions. Irrigation ditches must be kept in functioning condition at pipeline crossings. TEP would be in contact with ditch owners during the planning process.

    The operator must communicate with Forest Service and/or BLM range staff on the implementation schedule to coordinate the cattle grazing rotation schedule.

Contracts must require that specific gates remain closed during work and non-work hours whenever project activities occur within a pasture when authorized cattle use is occurring. Coordinate with Forest Service and BLM to identify gate closures, as necessary.

Contracts must require the purchase of a 16-foot steel gate to replace the wire gate that separates BLM and Forest Service ownership to prevent cattle trespass across ownership boundaries during this project.

21. Paleontological Resources. All persons associated with operations under this authorization must be informed that any discoveries of paleontological resources must not be damaged, destroyed, removed, moved, or disturbed. If paleontological resources are encountered, the operator must immediately suspend all activities in the immediate vicinity of the discovery and notify the BLM and/or Forest Service of the findings. The discovery must be protected until notified to proceed by the BLM and/or Forest Service.

22. Cultural Education/Discovery. All persons in the area who are associated with this project must be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons would be subject to prosecution.

    If subsurface cultural values are uncovered during operations, all work in proximity to the resource would cease and the BLM and/or Forest Service notified immediately. The operator must take any additional measures requested by the BLM and/or Forest Service to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within 48 hours of the discovery, the SHPO and consulting parties would be notified of the discovery and consultation would begin to determine an appropriate mitigation measure. BLM in cooperation with the operator would ensure that the discovery is protected from further disturbance until mitigation is completed. Operations may resume at the discovery site upon receipt of written instructions and authorization by the BLM and/or Forest Service.

    Pursuant to 43 CFR 10.5 (a-e), the operator must notify the BLM and/or Forest Service, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on federal land. Further, pursuant to 43 CFR 10.5 (a-e), the operator must stop activities in proximity to the discovery that could adversely affect the discovery. The operator must make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the BLM and/or Forest Service, or until the BLM and/or Forest Service has issued a written notice to proceed, whichever occurs first.

    Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the Proposed Action must also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities must be mitigated at the operator's cost, including the cost of consultation with Native American groups.

    Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361).

23. Visual Blending. ROW facilities must be placed to avoid or minimize visibility from travel corridors, residential areas, and other sensitive observation points—unless directed otherwise by the BLM and/or the Forest Service due to other resource concerns.

    To the extent practicable, existing vegetation adjacent to the pipeline corridor must be preserved when clearing for pipelines. Cleared trees that are not hydro axed and rocks must be salvaged and redistributed over the reclaimed pipeline corridor where hydro seeding is planned.

    To assist with revegetation, root systems must be left in place where feasible and only removed in the trench construction.

    Aboveground facilities must be painted ***Shadow Gray*** to minimize contrast with adjacent vegetation or rock outcrops.

    BLM Visual Blending COAs Specific to Segment 2 Lines L30 through L53 on POD Exhibit A: Vegetation must be removed to create a "feathered" edge along the buried pipeline alignment Segment 2 in VRM Class III, either using a hydroaxe or by felling (chain sawing) individual and/or patches of trees. This work would be conducted by the operator under direction of a BLM representative as an adaptive BMP. Such removal of vegetation would not specifically disturb the surface and would only occur within 100 feet of the approved ROW corridor. No feathering would occur on the east side of the ROW corridor between Lines L30 and L33 to avoid impacts to Harrington's penstemon.

    When clearing large woody material during feathering and scalloping of the pipeline corridor edge on Segment 2, the debris of hydroaxed or felled trees and tall shrubs must be salvaged and stockpiled for spreading lightly across the reseeded surface. Rocks must also be salvaged and redistributed along across the pipeline corridor. The purpose of these measures is to soften both the linearity and contrast in color and texture of the smooth surface of the pipeline corridor.

    A portion of Segment 2 partially parallels an unmaintained, existing two-track on BLM (road 8191E) and NFS lands (road NFSR 818) where the proposed pipeline deviates from existing roads south of the existing J16W pad. The existing two-track would be restored on BLM lands between the J16W and the NFS boundary to its pre-construction state during reclamation to allow range permittee access; on NFS lands, the two-track would not be restored but would be reclaimed to match the surrounding landscape between the BLM boundary and CR 319.

    During construction, the BLM, Forest Service, and operator representatives would jointly review construction measures to determine effectiveness in meeting visual resource mitigation measures, and if subtle changes in construction techniques are warranted, they must be directed by the BLM and/or Forest Service.

24. Firewood. The operator would purchase a firewood cutting permit to compensate the BLM for the removal of timber if two cords or greater of firewood sized pinyon and juniper trees of are removed. If trees with 5-inch dbh or greater are to be cut, a Forest Service fuel wood or timber sale contract would be required.

25. Air Quality. Water trucks must apply fresh or potable water to construction access roads, the construction zone within the ROW, staging areas, or any activity producing fugitive dust.

Water must be acquired from an approved source and applied as necessary based on visible dust plume levels and soil moisture conditions.

A dust control agent or enzymatic binder (magnesium chloride) must be required on NFSR 818 for extended dust control.

Surface rock must be replaced after completion of Project.

26. Surface Water. Impacts to surface water quality from surface disturbance related to pipeline installation would be minimized by implementing sediment and erosion control measures, segregating and windrowing topsoil, and reclaiming disturbed surfaces promptly.

    In accordance with CDPHE general stormwater permit and Stormwater Management Plan (SWMP), stormwater BMPs would be implemented prior to construction and then maintained.

    The Operator would implement post-construction seeding of disturbed areas to minimize sedimentation, reducing impacts to surface water quality.

    The Proposed Action must be constructed in compliance with U.S. Army Corp of Engineers requirements.

27. Recreation. Access along County Road 319, West Mamm Creek Road must be maintained for hunters and sportspeople utilizing private, Forest Service, and BLM lands to hunt and recreate, particularly during the fall archery and all rifle hunting seasons.

28. Wastes, Hazardous or Solid. The operator must properly manage each type of waste in accordance with state and local regulations. Solid waste must be kept in vehicles and removed from the work areas each day. Prior to reclamation, the permanent and short-term ROW areas must be cleared of all remaining debris, which must then be hauled to an approved disposal facility. At staging areas and/or along the working spread of the pipeline, portable sanitary facilities must be appropriately located and serviced to minimize the potential for discharge to stormwater conveyances and must be staked or otherwise secured to prevent blow-over, tipping by vandals, and leakage. Hazardous waste must be transported and stored using methods to avoid leaks or spills. The construction contractor must have a trained professional with a safety manual on-site that illustrates how to respond to human health or environmental hazards.

29. Harrington's beardtongue. The following measures must be required to avoid direct disturbance to Harrington's beardtongue plants. If avoidance is not possible, measures must be taken to reduce/minimize impacts to sensitive plants to the best extent possible.

    During pipeline construction, the operator must adhere to BLM's dust-abatement requirements to avoid or minimize potential impacts to nearby Harrington's beardtongue occurrences. Dust abatement must use freshwater or as directed by the BLM and/or Forest Service. When vehicles are within 100 meters of individual plants, speed limits must remain under 15 mph.

    No vegetation clearing or construction would occur within 100 meters of Harrington's beardtongue plants from May 15th to July 15th, encompassing the Harrington's beardtongue flowering season.

    All dirt work must be contained within the ROW boundary. Qualified and approved botanical monitors must install silt fencing (or flagging) around known Harrington's beardtongue occurrences

within 5 meters of the disturbance footprint to minimize the risk of inadvertent impacts from unauthorized vehicular travel. The biological monitor does not need to be present during construction.

If removal of topsoil from the Harrington's beardtongue areas occurs, soil must be stockpiled separately in order to salvage possible seed source for Harrington's beardtongue plants that would be removed during project construction. Topsoil would not be stockpiled in a depth exceeding 12 inches and would not be stockpiled for an extended period (over 6 months). If long-term storage is necessary and, if possible, the topsoil could be distributed over other excavated material and re-salvaged during interim or final reclamation.

All reclamation of temporarily disturbed areas within Harrington's beardtongue habitat must be seeded with a native seed mix approved by the BLM and consisting of native grasses and forbs compatible with potential reestablishment of Harrington's beardtongue as a result of natural colonization. This would consist of a variety of cool-season grasses selected to meet other reclamation goals without potentially outcompeting Harrington's beardtongue (i.e., emphasis on short or mid-height bunchgrasses and short or fine-textured forbs).

During subsequent weed management, the broadleaf herbicides would not be applied aerially (within 100 meters of known occurrences or areas with Harrington's beardtongue salvaged topsoil) during the period of aboveground growth, flowering, and seeding. If treatment of noxious weeds or other invasive plants is needed in the Harrington's beardtongue habitat seeding areas, the weed control must avoid the season of aboveground growth by PEHA to the extent possible and be applied by hand.

After work is completed, the botanical monitor would submit a report to the BLM and/or Forest Service CRVFO within 30 days, detailing measures taken to avoid Harrington's beardtongue, impact to population (number of plants impacted/how), and photos of the work space with silt fencing (or flagging).

APPENDIX B

HABITAT ASSESSMENT

APPENDIX

Habitat Assessment

Executive Summary

A habitat assessment for the federally threatened Distinct Population Segment of the Yellow-billed Cuckoo (YBCU, cuckoo) was conducted on June 16, 2023, within 0.5-mile of the proposed TEP Rocky Mountain Pipeline Project located on mixed-surface lands owned and managed by the Bureau of Land Management (BLM) Colorado River Valley Field Office (CRVFO), U.S.D.A. Forest Service, and several private parcels in Garfield County, Colorado. The assessment was performed by Dr. Murrelet Halterman, YBCU expert and lead author of the species natural history and current survey protocol, and Adam Petry, a YBCU researcher in Colorado and host of the U.S. Fish and Wildlife Service's Region 6 YBCU Survey Protocol Training Workshop and Advanced Field Workshop. Based on the site visit, the project area contains possible migratory/stopover and foraging habitat for YBCU as well as possible limited breeding habitat. Call playback surveys may potentially be recommended at the site but would likely be constrained pending additional site condition variables (e.g. creek noise, accipiter nests) and land access issues addressed below.

Western Yellow-billed Cuckoo

The upper West Mamm Creek riparian corridor meets the habitat suitability criteria outlined in the USFWS' *Guidelines for the identification and evaluation of suitable habitat for western Yellow-billed Cuckoo in Utah* (USFWS 2017), including:

1. *Vegetation that is predominantly multi-layered, with riparian canopy trees and at least one layer of understory shrubby vegetation;*
2. *Patches of multi-layered vegetation (as described above) that are at least 12 acres (5 ha) or greater in extent and separated from other patches of suitable habitat by at least 300 meters;*
3. *Somewhere within a patch, the multi-layered riparian vegetation (as described above) should be at least 100 meters wide by 100 meters long. This is to avoid patches that may be long enough to meet the minimum area (12 acres) but are so narrow that they are unsuitable - 750 m x 75 m (length x width) for example; and,*
4. *Open areas or gaps of multi-layered vegetation within a patch are less than 300 m.*

The project area consists of a predominately multi-layered woodland along West Mamm Creek with adjacent robust stringers and patches of xero-riparian midstory. The majority of the creek corridor does not meet habitat width minimum parameters of 100 meters, but the project area contains at least one multi-layered woodland patch of 12 or more acres with a 100-meter by 100-meter sub-patch. The 12-acre patch is largely located on private land, however, and remains inaccessible for survey and evaluation purposes. Despite limited survey efforts in the greater area, the nearest known YBCU detections to the project area have been

documented approximately 11 miles south of along Plateau Creek near Collbran in 2008 and approximately 15 miles east of the project area near New Castle in 1999. Both detections were of presumed migrants in similar habitat to the project area. Several additional factors for YBCU habitat suitability are addressed below.

Habitat Quality

Upper West Mamm Creek supports a relatively narrow, moderately disturbed, predominately native riparian woodland corridor. The project area contains two of the three physical and biological features required for cuckoos, including riparian woodlands with multi-level structural complexity and vertical stratification as well as adequate prey base (potential prey was observed during the site evaluation on June 16, 2023). The third physical and biological feature - dynamic riverine processes – appeared to be marginally lacking in the project area, although a more thorough evaluation of the feature could not be achieved due to private lands. While the creek is believed to support a relatively natural hydrograph, the steep bed and bank is also heavily incised and eroded in sections, which can tend to channelize flow and narrow and reduce floodplain dynamism.

The majority of the project area also contains a consistent and/or dense midstory that could provide important layers of interior foliage and volume for nest concealment as well as opportunities for prey populations. Cuckoos have been observed utilizing oakbrush in xero-riparian habitats in Colorado and regularly in Arizona and the project area supports large amounts of mature Gambel oak. This surrounding vegetative composition may or may not possibly increase the overall suitable acreage for YBCU breeding potential.

The project area generally lacks large patch acreages and patch width, both of which are generally important features of suitable cuckoo breeding habitat. Best available data indicate that limiting factors for cuckoo breeding habitat suitability in the project area can be characterized by an overall minimal patch width, generally higher elevation, loud creek corridor, the potential for nesting accipiters (particularly Cooper's Hawks), and the potential for livestock overgrazing.

Patch Size

USFWS states that the species requires at least 12 acres of multi-layered woodlands to support cuckoo breeding in Colorado. While little data exist for home range size in the northern latitude states such as Colorado, anecdotal data collected by the author in Colorado in the last decade indicates the species tends to average at least 20-30 acres of core habitat per home range with additional surrounding foraging habitat. Data also indicate that cuckoos rarely occupy patches with strips of habitat less than 325 feet (100 meters) wide, which suggest that edge effects as well as overall patch size influence YBCU nest site selection. The most suitable habitat patch in question is located on private land and cannot be accessed or evaluated further.

Site Noise

If surveys were to be conducted in the project area, noise would likely negatively affect survey feasibility and defensibility. Natural ambient noise (primarily surface water noise from the creek) would likely contribute to a reduced and discontinuous sphere of acoustic receptivity. Due to the species' well-documented low call frequency, limited responsiveness to call playbacks, and variable and occasional soft call volumes, survey inputs compromised by ambient and/or anthropogenic noise may effectively reduce the chances for species detectability and therefore impact survey defensibility. During the site visit in June, multiple

ambient noise level measurement along West Mamm Creek were collected and resulted in an average of 54 dB, with a maximum of 64 dB. For comparison, the call playback is broadcasted during surveys at 70 dB and an ambient outdoor noise level is approximately 30 dB.

Raptor Nest(s)

West Mamm Creek supports excellent accipiter nesting habitat. One or more active Cooper's Hawk nests and/or territories are probable within the project area. Per the YBCU protocol methodology, call playback surveys for YBCU should not be conducted within 300 meters of a Cooper's Hawk detection or Cooper's Hawk nest, primarily due to the increased risk of YBCU predation by the Cooper's Hawks. Based on probable active Cooper's Hawk territories in the project area, necessary avoidance buffers would effectively eliminate at least a third or more (greater than or equal to 1200 meters) of a potential YBCU survey call route.

Summary

The Project Area is believed to support possible foraging and migratory/stopover habitat for the YBCU and possible limited suitable breeding habitat, predominately on private land. YBCU general inventory surveys (1 or 2 survey visits during the species' peak breeding window in July) may be feasible and beneficial prior to project construction if accipiter nest buffers (300 meters from a Cooper's Hawk detection and/or active nest) and loud creek noise (≥ 50 dB) can be adequately avoided.

Prepared by Adam Petry and reviewed by Dr. Murrelet Halterman

APPENDIX C

U.S. FISH AND WILDLIFE SERVICE CONCURRENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Colorado Ecological Services Field Office
445 W. Gunnison Ave Suite 240
Grand Junction, Colorado 81501

In Reply Refer to:
FWS/R6/Ecosphere 2024-0100359

August 26, 2024

Memorandum

To: Erin Jones, Acting Field Office Manager, Colorado River Valley Field Office, Bureau of Land Management, Silt, Colorado

From: for Western Colorado Field Supervisor, Colorado Field Office, U.S. Fish and Wildlife Service, Grand Junction, Colorado

JOHN CLAYTON Digitally signed by JOHN CLAYTON
Date: 2024.08.26 16:39:37 -06'00'

Subject: Proposed West Mamm Creek Pipeline Project

This memo responds to your July 1, 2024, request for informal consultation with the U.S. Fish and Wildlife Service (Service), pursuant to Section 7 of the Endangered Species Act of 1972, as amended (ESA). Your request is for the Bureau of Land Management (BLM), Colorado River Valley Field Office (CRVFO), and United States Forest Service (USFS) White River National Forest (WRNF) to meet ESA Section 7 consultation requirements for the Environmental Assessment on impacts to BLM CRVFO and USFS WRNF lands concerning Terra Energy Partners (TEP) LLC's Proposed West Mamm Creek Pipeline project. The USFS has coordinated with BLM on the consultation and is allowing BLM to be the lead agency for the consultation, and the WRNF is intending to use this consultation for their NEPA and ESA compliance. The purpose of the Biological Assessment (BA) provided with your request for consultation is to evaluate the effects of the construction of water and gas delivery pipelines by TEP on BLM and USFS lands on federally listed endangered and threatened species.

The BLM CRVFO has determined that the proposed action may affect, but is not likely to adversely affect Canada lynx (*Lynx canadensis,* Lynx) and yellow-billed cuckoo (*Coccyzus americanus,* YBCU), and that the proposed action will not jeopardize the continued existence of the nonessential, experimental 10(j) gray wolf (*Canis lupus*) population in Colorado.

Project Location

The proposed project is in Garfield County, Colorado, approximately 5 miles south of Rifle. The proposed pipelines would run adjacent to the West Mamm Creek drainage, crossing lands managed by the USFS WRNF, the BLM CRVFO, and private land. The BLM-managed portion consists of oakbrush shrubland, mountain shrubland and patches of open sagebrush and includes a Colorado Parks and Wildlife (CPW) lynx potential habitat polygon. The USFS-managed portion consists of oakbrush chapparal, riparian corridors (consisting of oaks, cottonwoods, and willows), sagebrush, ponderosa pine, quaking aspen, Engelmann spruce, and subalpine fir.

Elevations in this project range from 7000 to 7800 feet. According to USFS WRNF vegetation polygons, the project area following the existing ROW would cross into both secondary and primary lynx habitat. The private land is dominated by cottonwood forest and hawthorn understory. No Critical Habitat would be impacted by the Proposed Action. Several federally endangered or threatened species were not carried forward for analysis, as no suitable habitat or occurrences of the species were found in the Proposed Action area.

Proposed Action

TEP is requesting new Rights-of-Ways (ROWs) from BLM for the installation and operation of a new buried 8-inch produced water pipeline and a new buried 6-inch produced water pipeline. Installation of the buried 8-inch produced water pipeline would also require Special and Temporary Use permits from the USFS. The proposed 8-inch produced water pipeline would connect TEP's existing and proposed West Mamm Creek development to their existing water transfer system at an existing pad. The proposed 6-inch produced water pipeline would be installed from the existing pad to a proposed 10-foot diameter tank, and will parallel the proposed 8-inch and 6-inch produced water pipelines. A temporary construction workspace would be set up adjacent to the construction ROW and would consist of an additional 20 ft along the pipeline length and 25ft for existing road and pipeline crossings, for a total workspace width of 50-55ft during construction. Installation of the produced water pipelines will support existing infrastructure in West Mamm Creek as well as any future development, although none is currently planned. Access to the proposed 8-inch and 6-inch produced water pipelines will be on existing Fee lease roads, county roads, National Forest System Road (NFSR) 818, and existing BLM lease roads and two tracks. TEP is requesting a separate ROW for access on the existing BLM lease roads and two track. The produced water pipelines would cross BLM lands managed by the Colorado River Valley Field Office (CRVFO), National Forest System (NFS) lands managed by the White River National Forest (WRNF) within the Rifle Ranger District, and private lands in Garfield County, Colorado. Construction is expected to begin in fall of 2024 or spring of 2025, depending on approval timelines, and be completed before the end of October 2025.

Effects Determination Analysis

Potential impacts on special status species from the proposed Mamm Creek Pipeline Project were analyzed in chapter 9 of the BA. The analysis includes the direct, indirect, and cumulative effects of the proposed project on lynx and YBCU on USFS managed, BLM managed, and private land.

Potential effects to Canada lynx from the pipeline project would be primarily in the form of habitat loss. On USFS lands, the pipeline ROW would fall within a small section of both primary and secondary-quality mapped lynx habitat. The total acreage of the ROW and temporary workspace that occurs in lynx habitat would be 5.09 acres. Vegetation removal would total 5.1 acres within mapped lynx habitat, however the 2.2 acres within the temporary workspace would be reseeded and the remaining 2.9 would eventually be revegetated and maintained as a pipeline ROW. According to the BA, the action area is low elevation (7,000-8,000ft) and the mapped lynx habitat is surrounded by non-habitat, so it is expected that lynx would only travel through the area on dispersal movements. The closest Lynx linkage area to the action area is

approximately 5 miles to the southeast. Construction activity would occur during daylight hours and over a relatively small area at a time.

Potential effects to the YBCU would primarily be in the form of disturbances from construction in the proposed project area that may deter use by YBCU. These disturbances would manifest as noise from construction machinery and corresponding traffic. There is potential riparian forest habitat adjacent to Mamm Creek found near the project area on private land, however, according to the BA it falls short of the minimum width (325ft/100m) required for YBCU breeding habitat. Additionally, observations of breeding YBCU above 7,000ft are extremely rare (USFWS 2014). YBCU may still use this habitat for foraging. According to the BA, the completion of the proposed project would create an overall decrease in disturbance from traffic because the pipeline would replace some of TEP's trucking operations on County Road 319. TEP has agreed that work within a 0.5-mile buffer around the potential habitat would be conducted outside the YBCU breeding season by prohibiting project-related construction or operation of heavy machinery for the period that YBCU have demonstrated breeding behavior in Colorado (May 15th to September 15th). Because data on YBCU presence/absence is sparce in this area of Colorado, BLM and USFS have conducted 4 YBCU call surveys in the private patch of potential habitat with landowner consent according to USFWS protocol (Halterman et al., 2016). No YBCU were found during all four call surveys (Emily McCall, pers. comm., 2024) . It should also be noted that the high level of ambient noise from Mamm Creek in the potential habitat (64 dB recorded in June) could be loud enough to compete with noise from construction in the spring and early summer.

After evaluating the proposed action, resulting effects, and your determinations and rationale, which are further defined in the 2024 TEP Pipeline BA, we concur with your stated determination that the proposed action "**May Affect but is Not Likely to Adversely Affect**" the Canada lynx and Western yellow-billed cuckoo.

On November 8, 2023, the U.S. Fish and Wildlife Service (Service) promulgated an Endangered Species Act (ESA) section 10(j) (i.e., experimental population) rule (10(j) rule) for gray wolf (*Canis lupus*) within the State of Colorado (88 FR 77014). In promulgating a section 10(j) rule, the Service must find, "based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild." (50 CFR § 17.81(c)(2). In our final section 10(j) rule for gray wolf in Colorado, we determined that the reintroduced population of gray wolf in Colorado is nonessential to the continued existence of the gray wolf in wild, meaning the loss of the gray wolf population in Colorado will not appreciably reduce the likelihood of the survival of the species in the wild (see 50 CFR § 17.80(b).

Regarding the gray wolf, the proposed project includes no predator control that could lead to effects to gray wolves. Given this, and the conclusions in our 10(j) rule for the gray wolf, we concur with your determination of **"Not likely to Jeopardize the continued existence of"** the gray wolf.

Based on your request and our response, our joint responsibilities under section 7 of the ESA have been satisfied. However, section 7 consultation must be reinitiated: 1) If the amount or extent of taking specified in the incidental take statement is exceeded; 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; 3) If 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 biological opinion or written concurrence; or 4) If a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Thank you for your consideration of threatened and endangered species. If you have any comments or questions, please contact Kathleen Gissing at kathleen_gissing@fws.gov or Sarah Quadt at sarah_quadt@fws.gov.

Literature Cited:

Halterman, M.D., M.J. Johnson, J.A. Holmes and S.A. Laymon. DRAFT 2016. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45 p.

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Personal Communications:

McCall, Emily. 2024. Microsoft Teams Message (8.20.24; 8:28 AM).