



U.S. Department of the Interior  
Bureau of Land Management

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# Rock Creek Gen-Tie Line

Environmental Assessment: DOI-BLM-WY-D030-2023-0011-EA

Rawlins Field Office, Wyoming

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March 2023

The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

**DOI-BLM-WY-D030-2023-0011-EA**

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## Acronyms/Abbreviations

APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee
BLM	Bureau of Land Management
BMP	best management practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIAA	cumulative impact analysis area
DOE	U.S. Department of Energy
EA	Environmental Assessment
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FO	Field Office
gen-tie line	electric transmission line
GPS	Global Positioning System
ID	Interdisciplinary
Invenergy	Invenergy LLC
IPaC	Information for Planning and Consultation
kV	kilovolt
LRP	Limited Reclamation Potential
MPSA	Mountain Plover Study Area
MW	megawatts
NHD	National Hydrography Dataset
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NI	Not Impacted
NP	Not Present
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OPGW	optical ground wire
PDSA	Prairie Dog Study Area
PEIS	Programmatic Environmental Impact Statement
PFYC	Potential Fossil Yield Classification
PHMA	Priority Habitat Management Areas
PI	Potentially Impacted
Proposed Action	construction, operation, maintenance, and decommissioning of a section of a 230-kilovolt electric line
RMP	Resource Management Plan
RNSA	Raptor Nest Study Area
Rock Creek	Rock Creek Wind, LLC
ROD	Record of Decision
ROW	right of way
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service

WAPA	Western Area Power Administration
WEST	Western EcoSystems Technology, Inc.
WGFD	Wyoming Game and Fish Department
WVEC	West-Wide Energy Corridor
WVEC PEIS	<i>West-Wide Energy Corridor Final Programmatic Environmental Impact Statement</i>
WYDEQ	Wyoming Department of Environmental Quality
WYPDES	Wyoming Pollutant Discharge Elimination System



# 1 INTRODUCTION

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental effects of the Proposed Action, which consists of a right of way (ROW) application to construct, operate, maintain, and eventually decommission a 4.7-mile section of a proposed electric transmission line (gen-tie line) on Bureau of Land Management (BLM)-administered public lands in Albany and Carbon Counties, Wyoming.

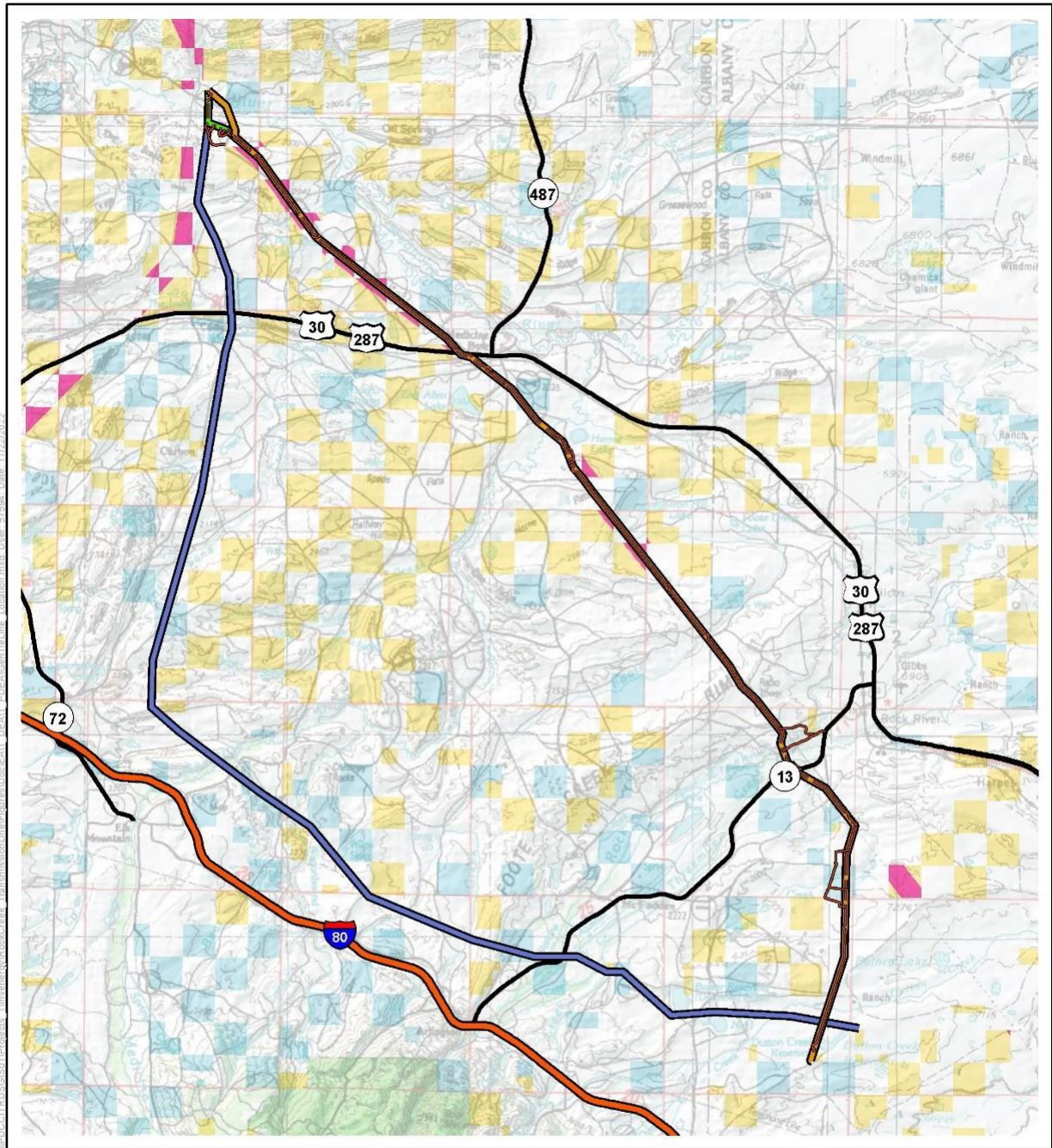
This EA will assist the BLM Rawlins Field Office (FO) in evaluating the ROW application, ensuring compliance with the National Environmental Policy Act (NEPA), and making a determination as to whether any significant effects could result from the Proposed Action and whether to grant, grant with modification, or deny the ROW application. The BLM is the lead agency for this NEPA analysis. In conformance with the Council on Environmental Quality's (CEQ) NEPA regulations (40 Code of Federal Regulations [CFR] 1501.5), this EA describes the potential impacts of a No Action Alternative, the Proposed Action, and one additional action alternative. If the BLM determines that the granting of the ROW is not expected to have significant and unmitigated environmental effects, then a Finding of No Significant Impact would be issued, and a Decision Record signed. If significant and unmitigated environmental effects are anticipated, then an Environmental Impact Statement would be prepared, or the No Action Alternative would be selected.

## 1.1 Background

Rock Creek Wind, LLC (Rock Creek), a wholly owned subsidiary of Invenergy Wind Development North America, LLC, and affiliate of Invenergy LLC (Invenergy), submitted a ROW application (Invenergy 2021) to the BLM Rawlins FO pursuant to 43 CFR Part 2800 to use approximately 4.7 miles of BLM-administered lands for the construction, operation, maintenance, and eventual decommissioning of a section of a 230-kilovolt (kV) electric line (Proposed Action). The BLM ROW would be part of the 38.1-mile gen-tie line (referred to as the "Gen-Tie Line") that would begin at a new substation to be within the Rock Creek Wind Facility on private land in Albany County, Wyoming, and would terminate at the existing Aeolus Substation in Carbon County, Wyoming. The Gen-Tie Line would include temporary use areas. The Gen-Tie Line includes one alternative (the Western Route Alternative), which would result in a small deviation in the electrical line route in the northern portion of Gen-Tie Line.

The BLM portion of the proposed Gen-Tie Line is entirely within a BLM-designated energy-transmission corridor—West-Wide Energy Corridor (WWEC). The larger Gen-Tie Line also parallels two existing 115-kV transmission lines for approximately 25 miles, or almost three-quarters of its total length. An overview map showing the location of the proposed Gen-Tie Line routes, including crossing of BLM-administered lands, is provided on Figure 1-1. The Gen-Tie Line routes on BLM-administered land would facilitate the delivery of up to 400 megawatts (MW) of renewable energy produced at the proposed Rock Creek Wind Facility to the existing Aeolus Substation.

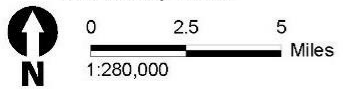
As described in Chapter 2, *Proposed Action and Alternatives*, private land activities are not part of the Proposed Action, nor are they within the decision jurisdiction of the BLM. However, the BLM has determined that the non-federal land portion of the Gen-Tie Line is an "indirect effect" of the Proposed Action. Therefore, the entire Gen-Tie Line, including both the portion on BLM-administered land and the portion on private land, are analyzed in Chapter 3, *Affected Environment and Environmental Consequences*, of this EA.



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- Proposed Action Alternative
- Western Route Alternative
- No Action Alternative
- West-Wide Energy Corridor
- Overland Travel Route
- Interstate
- Secondary Road

- Land Ownership**
- Bureau of Land Management
  - Private
  - State
  - U.S. Forest Service



**Gen-Tie Line Location**

**Figure 1-1. Proposed Gen-Tie Line**

## 1.2 The BLM's Purpose and Need for Action

The BLM's purpose and need is to respond to the ROW application that Rock Creek submitted for the construction, operation, maintenance, and eventual decommissioning of a proposed Gen-Tie Line on public lands administered by the BLM. The Gen-Tie Line would deliver renewable energy from the proposed Rock Creek Wind Facility on private and state land in Albany County, Wyoming, to the regional electrical grid by interconnecting to the existing Aeolus Substation in Carbon County, Wyoming.

In accordance with the Federal Land Policy and Management Act (FLPMA; Section 103(c)), public lands are to be managed for multiple uses that take into account the long-term needs of future generations for renewable and nonrenewable resources. The Secretary of the Interior is authorized to grant ROWs on public lands for systems of generation, transmission, and distribution of electric energy (FLPMA Section 501(a)(4)). The BLM must adhere to FLPMA, NEPA, BLM ROW regulations, and other applicable Federal laws and policies when processing ROW applications on BLM-administered lands and within designated FLPMA Section 368 corridors.

The Proposed Action or Western Route alternatives, if approved, would assist the BLM in addressing the management objectives outlined in Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, and the Department of the Interior's policies and commitments to increase renewable energy production on public lands and waters.

## 1.3 BLM Decisions to Be Made

The BLM would decide whether to grant the requested ROW, grant the requested ROW with terms and conditions or modifications, or deny the requested ROW. If the BLM denies the requested ROW, then the BLM decision would result in no ROW being granted. Rock Creek would not locate the proposed Gen-Tie Line on portions of BLM-administered lands and would pursue a Gen-Tie Line on private land to connect the Rock Creek Wind Facility to the Aeolus Substation.

## 1.4 Applicant's Goals and Objectives

Rock Creek's goals and objectives for the Gen-Tie Line are to reliably deliver up to 400 MW of renewable energy produced at the proposed Rock Creek Wind Facility to the existing regional transmission grid using designated utility corridors to the extent practicable. Interconnection with the existing electric grid would enable Rock Creek to deliver energy to energy users, thereby meeting electricity needs in the region and facilitating the Federal and state government renewable-energy goals and mandates. The facilitation of clean-energy generation and transmission is consistent with Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, and the Department of the Interior's policies and commitments to increase renewable-energy production on public lands and waters, including a target goal of permitting at least 25 gigawatts of onshore renewable energy by 2025. Routing of the proposed Gen-Tie Line within a designated utility corridor would be in conformance with the approved Rawlins Resource Management Plan (RMP), as amended, and other basic policy objectives for the management of the area (see Section 1.6, *Conformance to the BLM Land Use Plan*, and Section 1.7, *Other Federal, State, and Local Agency Involvement*). Co-locating the Gen-Tie Line with existing transmission lines would limit development in non-disturbed areas and avoid or minimize potential adverse impacts, such as those to wildlife and visual resources.

## 1.5 Law, Regulation, and Agency Policy

The BLM is processing Rock Creek’s ROW application under the authority of FLPMA. The BLM’s review and potential approval of the ROW application constitutes a Federal action that triggers compliance with relevant Federal laws and regulations, including NEPA, the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other applicable laws and regulations. Federal and BLM guidance for implementing NEPA includes the *CEQ Regulations for Implementing the Procedural Provisions of NEPA* outlined in 40 CFR Parts 1500–1508 and the *BLM NEPA Handbook H-1790-1* (BLM 2008a).

## 1.6 Conformance to the BLM Land Use Plan

BLM regulations at 43 CFR 1610.5-3 (Conformity and Implementation) require that BLM actions conform to the applicable land use plan for the relevant area. The BLM establishes goals and objectives for resources and allowable uses on the lands they manage. BLM RMPs must be prepared in accordance with FLPMA and regulations at 43 CFR 1600. The Gen-Tie Line area includes land administered by the BLM Rawlins FO. The current land use plan (and plan amendments) includes the Rawlins FO *Record of Decision and Approved Rawlins RMP*, and the *Wyoming Greater Sage-Grouse Approved Management Plan Amendment and Record of Decision* (BLM 2008b, 2015, 2019). The current land use plan and amendments allow for the development of transmission-line projects in designated utility corridors with appropriate mitigation to address any potential impacts on applicable sensitive resources.

## 1.7 Other Federal, State, and Local Agency Involvement

The Proposed Action would cross BLM-administered Federal land for approximately 4.7 miles (or 4.9 miles for the Western Route Alternative), as well as private and state land in Albany and Carbon counties. The BLM is coordinating and consulting with relevant Federal, state, and local agencies and tribes as part of the NEPA process. In addition to the BLM, Rock Creek would coordinate with agencies that have potential jurisdiction over the Proposed Action to obtain any necessary permits and approvals required for construction, operation, maintenance, and eventual decommissioning of the proposed Gen-Tie Line. Agencies with the potential for jurisdictional or regulatory authority for the proposed Gen-Tie Line are identified in Table 1-1.

**Table 1-1. Potential Federal, State, and Local Permits, Approval and Authorizing Actions**

Agency/Department	Permit/Approval	Authority
<b>Federal Agencies</b>		
Bureau of Land Management	ROW Grant	Federal Land Policy and Management Act (FLPMA) of 1976 (PL 94-579); 43 United States Code (U.S.C.) Sections 1761–1771; 43 Code of Federal Regulations (CFR) Part 2800
Federal Highway Administration	Permits to Cross Federal Aid Highway; 4(f) compliance	U.S. Department of Transportation Act, 23 CFR Part 1.23 and 1.27; 23 U.S.C. Sections 109 and 315; 23 CFR Part 645; 23 CFR Part 771
U.S. Fish and Wildlife Service	Section 7 of the Endangered Species Act (ESA) Consultation	ESA of 1973, Public Law 93–205, as amended (16 U.S.C. 1531 <i>et seq.</i> )
U.S. Fish and Wildlife Service	Bald and Golden Eagle Protection Act	Bald and Golden Eagle Protection Act of 1972 (16 U.S.C. § 668)

Agency/Department	Permit/Approval	Authority
U.S. Fish and Wildlife Service	Migratory Bird Treaty Act	Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712)
Federal Aviation Administration	A "Determination of No Hazard to Air Navigation" for Structure Heights and Locations in Proximity to Public Airports	Federal Aviation Act of 1958 (PL 85-726; 14 CFR Part 77)
Federal Aviation Administration	Section 1101 Air Space Permit for Air Space Construction Clearance	Federal Aviation Act of 1958 (PL 85-726; 14 CFR Part 77)
<b>Wyoming State Agencies</b>		
State Historic Preservation Office	National Historic Preservation Act (NHPA) Section 106 Consultation	NHPA Section 106 (36 CFR Part 800)
Wyoming Department of Environmental Quality (WDEQ)	Wyoming Air Quality Permits	Wyoming Administrative Rules, Chapter 6, Section 2
Wyoming Department of Environmental Quality (WDEQ)	Section 401 Permit Certification	Section 401 of the Clean Water Act
Wyoming Department of Environmental Quality (WDEQ)	Large Construction General Permit (Stormwater)	Wyoming Administrative Rules, Chapter 2
<b>Local Government – Albany and Carbon Counties</b>		
Albany County	Conditional Use Permit (Approval by Planning and Zoning Commission and Board of County Commissioners)	Albany County Zoning Resolution (Adopted 1997; Last Amended March 2, 2021). Although the zoning resolution does not explicitly note transmission lines, other related facilities (e.g., substations for electrical utilities) are noted as a conditional use in zones where the Gen-Tie Line would be. Therefore, a Conditional Use permit would be required for the Gen-Tie Line.
Carbon County	Conditional Use Permit (Major; Approval by Board of County Commissioners)	Carbon County Zoning Resolution of 2015 (Amended 7/7/2020); Section 5.4, <i>Design and Development Standards</i> , Subsection G, <i>Electrical Substations and Transmission Lines</i> .

## 1.8 Relationship to Other Non-Federal Plans

Wind energy development and associated transmission lines are consistent with the *Carbon County Land Use Plan* (Carbon County 2012), which identifies seven land use goals and associated strategies for achieving each goal. One of the goals addresses energy development: “Achieve a sustainable balance between energy development, agriculture, and the environment” (Carbon County 2012). One of the strategies to meet this goal is to “develop standards for wind energy, transmission lines, and other alternative energy development so they can occur with limited environmental impact on traditional land uses, humans, and wildlife” (Carbon County 2012).

The Carbon County Natural RMP includes priorities, such as “Federal agencies should achieve a sustainable land use balance between economic growth, energy development, recreation, agriculture, wildlife, conservation use of lands, quality of life, Carbon County’s custom and culture, and the environment by coordinating with Carbon County on all decisions” (Carbon County 2021). One of the land use priorities in the Carbon County Natural RMP is that Federal agencies conduct NEPA analysis “using multiple-use principles that take into consideration all the resources such as, but not limited to, agriculture, air, energy, mineral extraction, range, recreation, socioeconomics, timber, tourism, wildlife, and water” (Carbon County 2021).

The *Albany County Comprehensive Plan* includes goals to protect natural and environmental resources, promote economic development, encourage growth efficiency, conserve agricultural land, enhance county identify, and provide recreation opportunities (Albany County 2008). The *Albany County Comprehensive*



*Plan* also includes open space and public lands objectives, such as to “concentrate growth near existing developed areas on semi-productive agricultural lands and lands with low levels of environmental and natural resources, in order to promote growth efficiency and development with a small footprint” (Albany County 2008). The *Albany County Comprehensive Plan* also includes an economic development objective to promote renewable energy development and work with landowners and other interested agencies to identify suitable locations for renewable energy development (Albany County 2008).

## **1.9 Relationship to Other Environmental Analyses**

In response to a requirement in Section 368 of the Energy Policy Act of 2005, a Programmatic Environmental Impact Statement (PEIS) was prepared by the BLM, U.S. Department of Energy (DOE), and other agencies to identify preferred corridors in 11 western states (Washington, Oregon, Idaho, Montana, Wyoming, California, Nevada, Utah, Colorado, Arizona, and New Mexico) to accommodate linear facilities (e.g., pipelines and transmission lines). The *West-Wide Energy Corridor Final Programmatic Environmental Impact Statement* (WWEC PEIS) was published on November 28, 2008 (DOE and BLM 2008). The WWEC PEIS identifies new corridors on federally administered land, and BLM amended the relevant land management plans to include the newly designated corridors (BLM 2009). The Records of Decision (RODs) for the WWEC PEIS designate corridors only on federally administered land; therefore, no corridors are designated crossing lands under state, local, or tribal jurisdiction.

The RMP Amendments for Energy Corridors on BLM-administered land in the 11 western states designate energy corridors and provide guidance, design features for environmental protection, and mitigation measures to be used where transmission lines are proposed across public lands. Designation of corridors does not preclude an applicant from applying for a ROW on public lands outside of the federally designated energy corridors, as provided for in FLPMA. In this case, the BLM’s process for authorizing ROWs across Federal land the agency administers applies.

Pursuant to CEQ and U.S. Department of the Interior regulations at 40 CFR 1501.11–1501.12 and 43 CFR 46, respectively, as well as BLM guidance (BLM 2008a), this EA incorporates by reference information found in the WWEC PEIS (DOE and BLM 2008). The WWEC PEIS analyzed and the RODs approved corridor designations as preferred locations for future energy-transport projects in 11 western states, including the corridor in which the proposed Rock Creek ROW would be.

Tiering to and incorporation by reference of the WWEC PEIS is appropriate for supplementing the description of the affected environment and general conclusions about environmental impacts associated with energy corridors in the area. To ensure full disclosure, this EA provides additional analyses and description of impacts specific to this Gen-Tie Line.

## **1.10 Scoping and Issues Development**

The BLM reviewed the Gen-Tie Line in connection with the Gen-Tie Line to assess the type and magnitude of potential impacts on resources and resource uses. External scoping is optional for EAs, and the BLM has decided external scoping to the public was not needed for this EA. A list of all resources considered is contained in Appendix A, *Interdisciplinary (ID) Team Checklist*. The *Potentially Impacted* (PI) resources are listed below with issue statements describing the relevant potential impact. These resources are carried forward for description in the Affected Environment and analysis in the Environmental Impacts sections (Chapter 3) of this EA. Resources that the BLM identified as *Not Impacted* (NI) by the Gen-Tie Line or *Not Present* (NP) in the analysis area, as documented in the ID Team Checklist, were not carried forward for detailed analysis.

- Cultural Resources
  - Issue: How would the Gen-Tie Line directly affect historic properties?
  - Issue: How would the Gen-Tie Line indirectly affect historic properties through changes in the visual, atmospheric, and auditory environment?
- Native American Religious Concerns
  - Issue: How would the Gen-Tie Line affect Traditional Cultural Properties and other resources of potential concern to Native American Tribes?
- Paleontology
  - Issue: How would the Gen-Tie Line affect paleontological resources in the Potential Fossil Yield Classification (PFYC) Class 2, Class 3, and Class 4 areas and recorded paleontological occurrences within one mile of the Gen-Tie Line?
- Soils
  - Issue: How many acres of surface would be disturbed by the Gen-Tie Line?
  - Issue: How would surface disturbance affect soil resources, including loss of soils, compaction of soils, and an increase in the potential for erosion?
  - Issue: How would soils and vegetation be reclaimed following construction of the Gen-Tie Line to restore these areas in accordance with BLM reclamation objectives and management objectives in the Gen-Tie Line?
- Special Status Plants
  - Issue: How would the Gen-Tie Line affect special status plant species in the vicinity of the project, such as the persistent sepal yellowcress?
- Special Status Wildlife
  - Issue: How would the Gen-Tie Line affect BLM sensitive species, raptors, and migratory birds?
- Vegetation
  - Issue: How would the Gen-Tie Line affect existing and desired vegetation communities in the vicinity of the Gen-Tie Line including sagebrush, grasslands, and shrub-steppe vegetation communities?
- Water Resources
  - Issue: How would the Gen-Tie Line affect water quality and quantity due to project-related water use and the crossing of an estimated six intermittent streams on BLM-administered land and two perennial rivers not on BLM-administered land??
- Wetlands/Riparian Zones
  - Issue: How would the Gen-Tie Line affect wetlands and riparian zones, particularly in the emergent wetlands on BLM-administered land crossed by the Proposed Action?
- Wildlife and Fish
  - Issue: How would the Gen-Tie Line affect wildlife and fish, including pronghorn, mule deer, and elk winter, yearlong habitats, and mule deer and pronghorn crucial range in the Gen-Tie Line boundary vicinity?



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## 2 PROPOSED ACTION AND ALTERNATIVES

### 2.1 Proposed Action (BLM Right-of-Way)

The Proposed Action involves the grant of a ROW for the construction, operation, maintenance, and eventual decommissioning of a section of the Gen-Tie Line on approximately 4.7 miles of Federal BLM-administered lands. The Proposed Action is part of the approximately 38.1-mile Gen-Tie Line with the remaining, non-federal portion of the Gen-Tie Line on private property.

Pursuant to NEPA, CEQ’s NEPA regulations, and BLM NEPA guidance, the BLM has determined that the non-federal land portion of the Gen-Tie Line is an “indirect effect” of the Proposed Action and, therefore, the entire Gen-Tie Line is evaluated in this EA. The BLM has determined, pursuant to 40 CFR 1501.9 and the *BLM NEPA Handbook*, that the Rock Creek Wind Facility and existing Aeolus Substation are not direct or indirect effects or connected actions to the Proposed Action and do not fall within the scope of this environmental review.

The Rock Creek Wind Facility is entirely on private land, and its interconnection to the Aeolus Substation may be achieved by a non-federal gen-tie line option, should BLM deny the requested ROW grant, as described in the No Action Alternative. As such, BLM has concluded that construction, operation, maintenance, and decommissioning of the Rock Creek Wind Facility on private land could proceed without BLM approval of the requested ROW grant. The Aeolus Substation is an existing operating substation and therefore part of baseline environmental conditions. Because these non-federal actions and their effects cannot be prevented or modified by BLM decision making, the effects of the Rock Creek Wind Facility and Aeolus Substation are not included as part of the Proposed Action. Although not included as part of the Proposed Action, the construction, operation, maintenance, and eventual decommissioning of the Rock Creek Wind Facility and operation and maintenance of the Aeolus Substation are included in the cumulative effects analysis in this EA.

#### 2.1.1 Location and Overview

The proposed Gen-Tie Line would include the construction, operation, maintenance, and eventual decommissioning of a 230-kV, single-circuit, alternating-current electric line that would begin at a new substation to be located within the Rock Creek Wind Facility site on private land in Albany County, Wyoming, and terminate at the existing Aeolus substation in Carbon County, Wyoming. Construction and operation of the Gen-Tie Line would require approximately 279 transmission-pole structures and would result in temporary two-track routes to access structures. Approximately 23 miles of existing access roads would be used for Gen-Tie Line activities. Work areas would be temporarily established around each transmission structure during construction, and 10 tensioning and pulling sites would be temporarily used. Table 2-1, below, outlines the number of components and associated dimensions for the entire Gen-Tie Line, including structures on BLM-administered land and private land.

**Table 2-1. Proposed Action Gen-Tie Line Components**

Component	Disturbance Type	Amount	Dimensions
Transmission Structure Work Area	Temporary	279 areas	75 feet by 150 feet
Tensioning and Pulling Sites	Temporary	10 sites	200 feet by 450 feet
Transmission Pole Structures	Permanent	279 structures	6 feet in diameter
Laydown Areas	Temporary	1 area	Dimensions to be determined

\*\*Includes the total number of features, including features on BLM-administered land and private land.

Table 2-2 lists the acres of surface disturbance on BLM-administered lands from the Proposed Action and total surface disturbance from the Gen-Tie Line. Disturbances are broken down by the disturbance resulting from the transmission structures, work areas required for structure construction, laydown area, and the tensioning and pulling sites. Figure 2-1 shows the Proposed Action routing and the locations where the components cross BLM-administered lands.

**Table 2-2. Total Acres of Surface Disturbance from Proposed Action and Gen-Tie Line**

Component	Proposed Action Temporary Disturbance (acres on BLM-administered surface)	Gen-Tie Line Temporary Disturbance (total acres)	Proposed Action Permanent Disturbance (acres on BLM-administered surface)	Gen-Tie Line Permanent Disturbance (total acres)
Transmission Structures	8.3	92.7	0.02	0.2
Laydown Areas	--	15.0	--	--
Total	8.3	107.7	0.02	0.2

BLM = Bureau of Land Management

The proposed Gen-Tie Line would be within the existing 1,320-foot-wide Western Area Power Administration (WAPA) 115-kV transmission line corridor for more than 70 percent of its length to the terminus at the existing Aeolus substation in Carbon County, Wyoming, northwest of Medicine Bow, Wyoming. The Proposed Action is entirely within this corridor. The township, range, and section information for the Gen-Tie Line are shown in Table 2-3.

**Table 2-3. Township, Range and Section for Proposed Gen-Tie Line**

Township/Range	Section
21N 78W	2, 12
22N 78W	26
22N 79W	2
23N 79W	18, 20, 28, 34
23N 80W	12

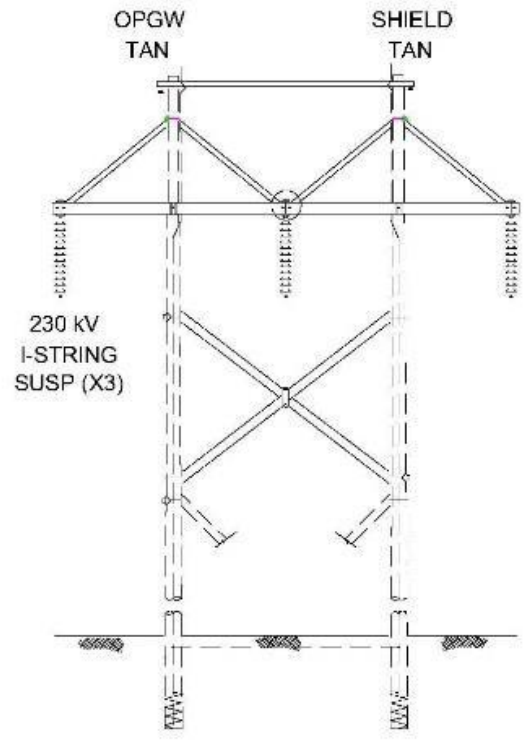
The BLM ROW for the Proposed Action would be 150-feet wide, 75 feet on either side of the centerline, and the BLM ROW would be issued for a 30-year term.

## 2.1.2 Gen-Tie Line Facilities

### 2.1.2.1 Gen-Tie Line Structures

The proposed transmission pole–structure types that would be used for the Gen-Tie Line are self-supporting, wooden H-Frame structures. The three conductors comprising the three-phase single-circuit line and one fiber optic cable would be supported by the H-Frame structures. In total, the Gen-Tie Line would require approximately 279 structures, with approximately 32 anticipated structures on BLM-administered land. In some instances, such as changes in direction or line crossings, the three individual phases of the circuit may need to be separated onto individual monopole support structures to accommodate large angles or dead-end loads. Figure 2-1Figure 2-2 depict the types of towers under consideration for the Gen-Tie Line. Structure heights are expected to range between 60- and 115-feet above ground, with final structure heights being determined by topography and the natural features on the route. Alternate structure types may be considered to meet engineering, reliability, or economic requirements.

TYPICAL POLE LENGTH ALL STRUCTURES THIS PROJECT IS 95 FEET  
WITH AN EMBEDMENT OF 10%+5 (14.5 FEET)




			APPROVED BY: S. BEILSTEIN
			CHECKED BY: S. BEILSTEIN
A	12/09/2021	10% DESIGN	DESIGNED BY: A. AMATO
REV	DATE	DESCRIPTION	DRAWN BY: A. AMATO
 RRC POWER & ENERGY, LLC 7681 SW MOHAWK ST. TUALATIN, OR 97082 PHONE: (503) 342-4084 www.RRCcompanies.com		DRAWING NAME:	
		230 KV TANGENT, H-FRAME WOOD POLE X-ARM BRACES, CROSS BRACE(S) DIRECT EMBEDMENT (RUS MANUAL PAGE 036 DWG TH-230)	
		PROJECT NUMBER: EE2109045	
		DATE ISSUED:	
		DRAWING No. H FRAME TAN	REVISION <b>A</b>
		CADFILE: HFRAME TAN	SCALE: N.T.S.

Figure 2-1. H-Frame Structures

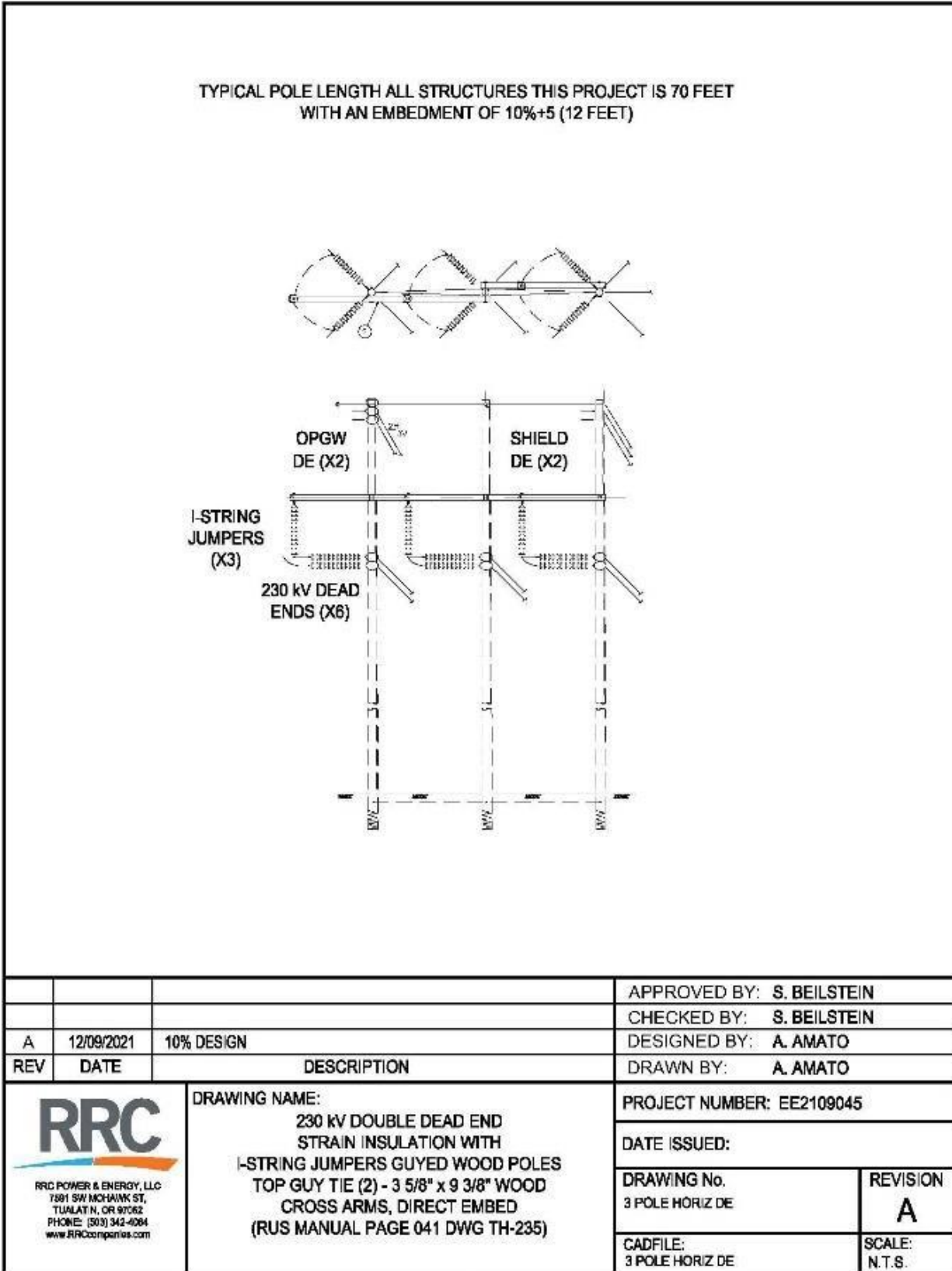


Figure 2-2. H-Frame Support Structures to Accommodate Large Angles or Dead-End Loads

### **2.1.2.2 Foundations**

Self-supporting tubular monopole support structures require a single footing for the structural base, which minimizes the work area necessary for each structure and can aid in reducing overall construction time and impact. Depending on the soil conditions encountered at the installation site, foundations are anticipated to range from three to six feet in diameter and 12 to 30 feet in depth. Final foundation depths would not be known until exact structure locations have been determined and a detailed geotechnical analysis has been performed. Current desktop level analysis indicates that structures would likely be directly embedded. However, if soil conditions do not prove to be conducive to this installation method, then drilled pier foundations may be utilized. Drilled piers require the same work area for installation as direct embedment but offer more stability in areas of weaker soils.

### **2.1.2.3 Conductors**

The conductor for a circuit would consist of three phases, with a single conductor for each phase. The final configuration would be determined during the engineering design of the Gen-Tie Line; however, a delta configuration is typical for this type of project. Aluminum-stranded conductors with a steel-supported core would be used. The aluminum carries the majority of the electrical current, and the steel provides tensile strength to support the aluminum strands. Minimum conductor height above the ground for the 230-kV lines would be 23 feet at maximum sag, either maximum operating temperature or extreme ice, in accordance with the National Electric Safety Code. The exact height of each structure would be governed by topography and safety requirements for conductor clearance. Alternate materials, configurations, or designs may be selected to optimize efficiency, reliability, and/or economics.

### **2.1.2.4 Insulators and Associated Hardware**

Three braced-post or strain-insulator assemblies would be used to position and support each conductor, while maintaining electrical design clearances between the conductors and the structure. Typically, braced-post insulators would be used for 230-kV tangent structures, whereas strain insulators would be used for 230-kV dead-end structures.

### **2.1.2.5 Overhead Ground Wires/Fiber Optic Communications**

To protect the 230-kV conductors from direct lightning strikes and provide a communications path for protection and control of the circuit, an optical ground wire (OPGW) would be installed on the top of the structures. Current from lightning strikes would be transferred through the OPGW and structures into the ground.

### **2.1.2.6 Substation**

The Gen-Tie Line would not include the construction of any new or modified substations on BLM-administered land. The gen-tie line is planned for interconnection at the existing Aeolus substation and a new collector substation within the Rock Creek Wind Facility site on private lands. Minor construction activities at the Aeolus substation on private land may be required for the Gen-Tie Line, such as modification of the substation bay and other activities that are not expected to result in appreciable surface disturbance.

### **2.1.2.7 Site Access**

No permanent or temporary access roads would be constructed to support the Gen-Tie Line. The Gen-Tie Line would primarily use existing transmission-line access roads because it would parallel the existing

WAPA 115-kV transmission line. Maximum use would be made of existing roads. Where structure sites are not immediately accessible from existing roads, rubber-tire trucks would drive overland to access Gen-Tie Line components. The anticipated paths of these trucks are shown on Figure 1-1. Use of these trucks could result in the creation of temporary two-tracks, which would be reclaimed in coordination with the BLM or local agencies using an approved seed mix.

In addition, measures would be taken to minimize impacts in specific locations and during certain periods of the year. For example, construction activities would not occur when weather or other conditions increase potential environmental impacts to unacceptable levels, as determined by the applicable regulatory authority. Such conditions could arise in frozen soils, as well as during heavy rains or high winds. To prevent impacts during such periods, construction activities would be restricted or curtailed.

### **2.1.2.8**      *Temporary Use Areas*

The Gen-Tie Line construction contractor would develop temporary mobilization and laydown area(s) to facilitate Gen-Tie Line construction; however, these areas would not be on BLM-administered lands. Construction yards sited along non-federal portions of the Gen-Tie Line would be in previously disturbed sites or in areas of minimal vegetative cover, where possible. All sites would be determined through discussions with landowners or the applicable land management agencies. The construction yards would serve as field offices, reporting locations for workers, parking spaces for vehicles and equipment, sites for material storage, and stations for equipment maintenance. Facilities would be fenced, and their gates locked. Security guards would be stationed where needed.

### **2.1.3**      **Construction Activities, Schedule, and Workforce**

Gen-Tie Line construction is expected to take approximately 27 months and occur between spring 2023 and summer 2025; however, the timing schedule may be subject to change due to factors beyond Rock Creek's control. Construction of the Gen-Tie Line would follow the sequence of: 1) surveying the centerline; 2) clearing transmission pole-structure sites; 3) installing foundations; 4) assembling and erecting the structures; 5) installing ground wires and conductors; 6) installing counterpoise/ground rods; and 7) performing cleanup and site reclamation. Various phases of construction would occur at different locations throughout the construction process. The stages of the construction process are described in further detail below.

#### **2.1.3.1**      *Flagging or Staking the Right of Way*

Before construction surveying begins, it would be necessary to obtain either a land survey permit on Federal and state lands or rights of entry for private lands. Construction survey work would consist of locating the centerline, structure-center hubs, and ROW boundaries. Flagging and staking are planned to take place in the vicinity of the Gen-Tie Line to facilitate construction activities. Flagging and staking would be temporary.

#### **2.1.3.2**      *Structure Site Clearing*

At each structure site, a work area approximately 75 feet by 150 feet would be required for location of foundations, erection of the structure, and necessary crane maneuvers. The work area would be cleared of vegetation only to the extent necessary, and surface disturbance may occur in any part of the work area during construction. Topsoil and subsoil will be segregated and stabilized to avoid mixing and enhance the potential for reclamation. After Gen-Tie Line construction, all work areas not needed for normal maintenance would be graded to blend, as closely as possible, with the natural contours and revegetated where required.



### **2.1.3.3      *Right of Way Clearing***

Based on aerial photography and preliminary site reconnaissance, no trees or tall vegetation exist along the Gen-Tie Line alignment, but clearing may be necessary in limited areas of the Gen-Tie Line route (including on BLM land). To the extent that clearing of some natural vegetation along the proposed Gen-Tie Line may be required, selective clearing would be performed only when necessary to provide for surveying, electrical safety clearances, line reliability, and maintenance. Topping or removal of mature vegetation, under or near the conductors, would be performed to provide adequate electrical clearance, as required by National Electric Safety Code standards.

### **2.1.3.4      *Foundation Installation***

Excavations for foundations would be made with power-drilling equipment. In rocky areas, special rock anchors may be installed. In the highly unexpected occurrence of extreme soil conditions that require blasting, conventional or plastic explosives would be used. Safeguards (e.g., blasting mats) would be employed when adjacent areas need to be protected. After excavation, the poles would be set into the holes and backfilled with crushed rock or concrete. In some cases, a concrete drilled-pier foundation might be required. If so, anchor bolts would be positioned into the excavation, and then backfilled with concrete. If soil conditions are poor, then a polymer-slurry additive may be included to stabilize the excavation.

### **2.1.3.5      *Structure Assembly and Erection***

H-frame structure components would be transported to each structure site by truck. Structure sections would be assembled. The assembled structure would then be hoisted into place by a large crane and set into a drilled hole or on top of a drilled pier.

### **2.1.3.6      *Conductor Installation***

After the structures are erected, insulators, hardware, and stringing blocks would be delivered to each structure site. The structures would be rigged with insulator strings and stringing blocks at each ground-wire and conductor position. For public protection during wire installation, guard structures may be erected over obstacles such as roads. Guard structures would be placed on one or both sides of an obstacle, which would prevent OPGW, conductor, or equipment from falling on the obstacle. Equipment for erecting guard structures would include diggers, line trucks, pole trailers, and cranes. Guard structures may not be required for roads with minimal traffic. In such cases, other safety measures, such as barriers, flaggers, or other traffic control, would be used.

Pilot lines would be pulled (i.e., strung) from structure to structure and threaded through the stringing blocks at each structure. The pilot lines would then be used to pull in a steel cable (the “hardline”), which is used to pull in the OPGW and conductors. OPGW and conductors would be strung using powered pulling equipment at one end and powered braking or tensioning equipment at the other end of a conductor segment. Sites for tensioning equipment and pulling equipment would be approximately two to four miles apart, sited outside of Federal lands, and each site would encompass an area approximately 200 feet by 400 feet. Tensioners, pullers, line trucks, wire trailers, and tractors needed for stringing and anchoring the OPGW or conductor would be at this site. The tensioner, in concert with the puller, would maintain tension on the OPGW or conductor during installation.

### 2.1.3.7 **Ground Rod Installation**

Copper-clad ground rods or cables would be installed adjacent to structures to achieve a maximum 15-ohm ground resistance.

### 2.1.3.8 **Workforce**

The workforce necessary for Gen-Tie Line construction would vary with the type of work being completed, but may include up to approximately 50 to 60 employees. Work would generally occur between sunrise and sunset, Monday through Saturday. Additional hours and days may be necessary to correct schedule deficiencies or complete critical activities.

### 2.1.3.9 **Water Use**

Water needed for Gen-Tie Line construction will be appropriated via a temporary water use agreement between Rock Creek Wind, LLC, and Wheatland Irrigation District. Wheatland Irrigation District will provide the water for construction from its existing permitted appropriation of water from Dutton Creek. Projected water use by construction support need is shown in Table 2-4.

**Table 2-4. Total Water Consumption from Proposed Action and Gen-Tie Line**

Water Use	Purpose	Total (gallons)
Vehicle Washing*	Prevent transporting noxious seeds and spores	12,800
Concrete Mixing**	anchors backfill, dead-end structure foundations	1,600,000
Reclamation	Post- Construction reseeding and re- stabilization	927,000
Dust Control***	County roads, BLM roads, general construction	360,000

\*Based on a projected washing of 25 trucks per week for 64 weeks.

\*\*Based on a projected 6,000 gallons/acre over 145 acres

\*\*\*Based on a projected need to apply water for dust control for 180 days.

### 2.1.4 **Interim Reclamation**

Reclamation activities would be conducted on areas that have been temporarily disturbed during construction. The following prescriptions would be implemented on the temporarily disturbed areas after construction has been completed.

- To the maximum extent possible, any trees and shrubs within work areas would be identified and flagged prior to initiation of activities for protection against trampling or removal.
- Following completion of construction, temporarily disturbed areas would be restored as closely as practicable to the original preconstruction topographic contours.
- Hydrologic features, including wash banks, would not be disturbed.
- New seed from local areas would be broadcast or planted in disturbed areas in the manner prescribed by the BLM. All seed would be certified weed-free.
- The prevention of weeds and exotic-species invasion would be addressed throughout construction and would occur in accordance with the approved Weed Management Plan, which will be an attachment to Rock Creek’s Plan of Development. All heavy equipment utilized would be washed prior to going off-road on BLM land and/or on leaving areas with known invasive species. This practice would ensure that weed seed from a different region is not transported into the area. Monitoring would be conducted post-construction, as required by Rock Creek’s approved Wyoming Game and Fish Department Monitoring Plan and approved Weed Management Plan, and appropriate contingency

responses would be implemented as necessary to control weeds and ensure the re-establishment of native species.

### **2.1.5 Operations and Maintenance**

Gen-Tie Line inspections would be completed at least once per calendar year and with no more than 18 calendar months between inspections. Inspections would be completed aerially. The workforce necessary for Gen-Tie Line operational maintenance activities would vary with the type of work being completed. Findings would be documented in an inspection log, and appropriate maintenance actions would be determined in coordination with current users. The BLM would be informed of any nonroutine maintenance actions requiring disturbance of BLM-administered lands prior to implementation.

Maintenance would be performed, as needed, using common methods and equipment for this type of work. When access is required for nonemergency maintenance and repairs, Rock Creek would adhere to the same precautions that were taken during the original construction. Emergency maintenance would involve prompt movement of repair crews to repair or replace any damaged equipment.

Crews would be instructed to protect crops, plants, wildlife, and other resources prior to commencing work. Restoration procedures following completion of repair work would be consistent with those prescribed for normal construction. The comfort and safety of local residents would be provided for by limiting noise, dust, and maintenance-vehicle traffic. All employees and contractors would adhere to appropriate health, safety, and emergency response plans, to be approved by the BLM.

### **2.1.6 Decommissioning and Restoration**

At the end of the ROW term, and assuming the ROW is not renewed nor the Gen-Tie Line facilities repurposed for other transmission uses consistent with then-existing BLM requirements, the Gen-Tie Line facilities (including the portion with the ROW) would be decommissioned and the area restored pursuant to a BLM-approved decommissioning and restoration plan that Rock Creek develops. One year prior to expiration of the ROW, Rock Creek would contact the BLM-authorized officer to arrange a joint inspection of the ROW. This inspection would be held to agree to an acceptable decommissioning and restoration plan. The BLM-authorized officer must approve the plan in writing prior to commencement of any decommissioning activities. Decommissioning and restoration procedures would attempt to restore and reclaim the landscape as near to original conditions as possible. The decommissioning and restoration plan would be reviewed and approved by the appointed authorized officer and would include the following information:

- The facilities and access routes to be removed, restored, and/or rehabilitated
- How facilities and access routes would be removed, and the disturbed areas restored
- The time of year the facilities and access routes would be removed
- Stabilization and reclamation techniques to be used during restoration

## **2.2 Western Route Alternative**

The Western Route Alternative includes an approximately 1.7-mile deviation in the final segment of the Gen-Tie line connecting to the Aeolus substation. Under this alternative, the final 1.7-mile-long segment of the Gen-Tie line would extend west and north onto BLM-administered land in T23N, R80W, Section 02 and then head north into T24N, R80W, Section 35 on BLM-administered and connect to the Aeolus substation (Figure 2-1). All of the project components, construction activities, access, schedule, and workforce would be the same as the Proposed Action, except that the Western Route Alternative would

decrease the estimated number of transmission poles from 279 to 277 (Table 2-5) and the length of the Gen-Tie Line and amount of surface disturbance on BLM-administered land would be increased compared to the Proposed Action (Table 2-6).

**Table 2-5. Proposed Gen-Tie Line Components for the Western Route Alternative**

Component	Disturbance Type	Amount	Dimensions
Transmission Structure Work Area	Temporary	277 areas	75 feet by 150 feet
Tensioning and Pulling Sites	Temporary	10 sites	200 feet by 450 feet
Transmission Pole Structures	Permanent	277 structures	6 feet in diameter
Laydown Areas	Temporary	1 area	Dimensions to be determined

\*\*Includes the total number of features, including features on BLM-administered land and private land.

**Table 2-6. Total Acres of Surface Disturbance Including the Western Route Alternative**

Component	Proposed Action Temporary Disturbance (acres on BLM-administered surface)	Gen-Tie Line Temporary Disturbance (total acres)	Proposed Action Permanent Disturbance (acres on BLM-administered surface)	Gen-Tie Line Permanent Disturbance (total acres)
Transmission Structures	8.8	92.2	0.02	0.2
Laydown Areas	--	15.0	--	--
Total	8.8	107.2	0.02	0.2

BLM = Bureau of Land Management

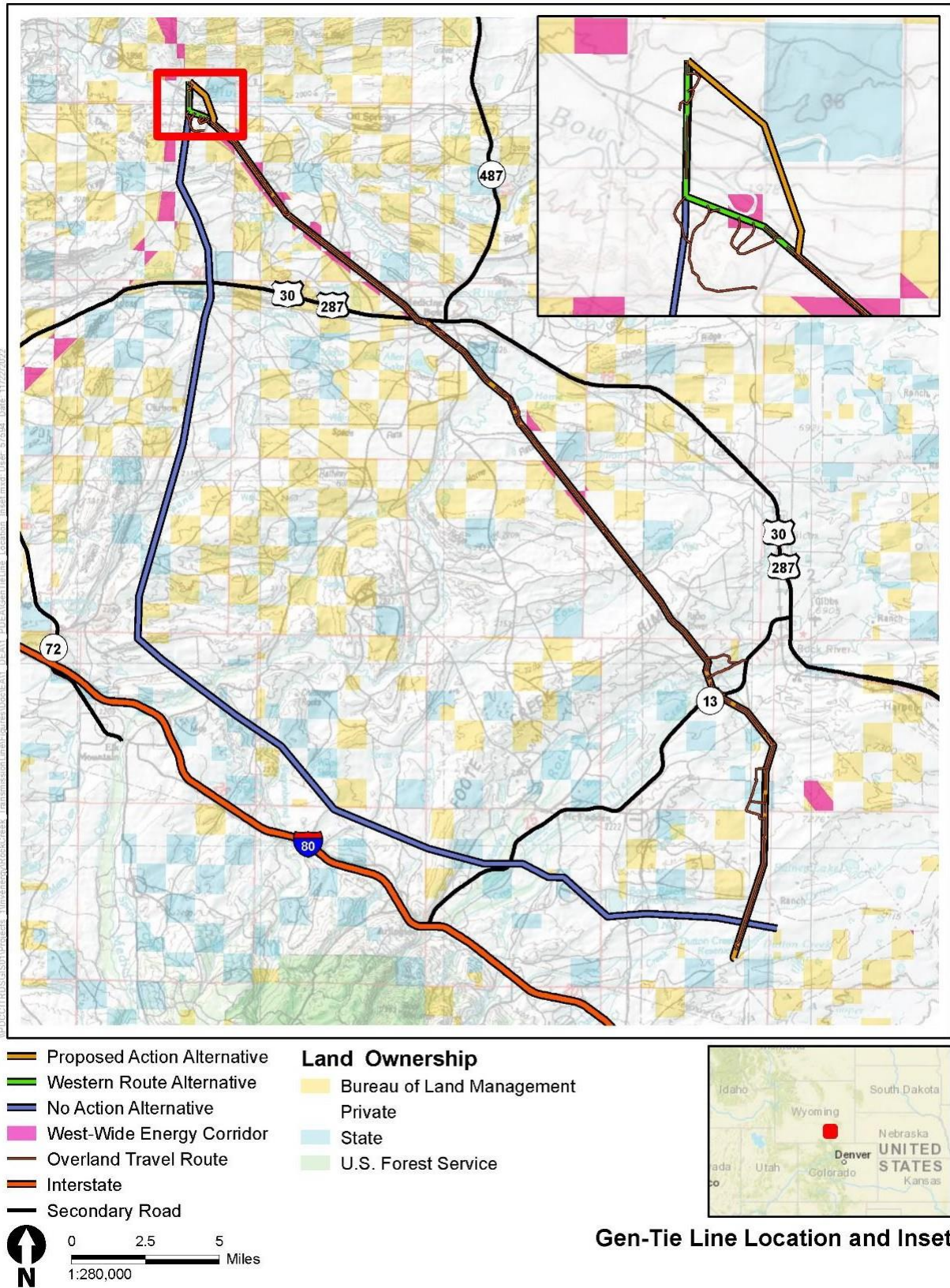


Figure 2-3. Gen-Tie Line Western Route Alternative

## 2.3 No Action Alternative (Non-Federal Alternative)

Under the No Action Alternative, the BLM would deny the ROW application for the construction, operation, maintenance, and eventual decommissioning of the proposed 4.7-mile portion of the Gen-Tie Line on BLM-administered Federal land, and no impacts would occur on Federal land. Under this alternative, Rock Creek would pursue other feasible gen-tie line routes on non-federal lands to meet Rock Creek's objective to reliably deliver up to 400 MW of renewable energy produced from the proposed Rock Creek Wind Facility on private land to the existing Aeolus Substation.

Based on a preliminary assessment, a possible non-federal alternative gen-tie line route would be approximately 44 miles long and parallel an existing transmission line for 2.2 miles, including a 115-kV transmission line. This alternative would not cross BLM-administered land and would therefore not be in a designated WWEC corridor (See Figure 1-1/2-1). Construction, operation, maintenance, and decommissioning activities under the No Action Alternative would therefore result in no impacts on BLM-administered Federal lands, but impacts are anticipated to be roughly the same or greater as those for the Proposed Action on non-federal land.

In comparison to the Proposed Action, the No Action Alternative would result in similar, but potentially greater, impacts on non-federal land, including, but not limited to, the following:

- Approximately 44 miles long; 260 structures
- Parallels existing transmission line for 2.2 miles
- Is not located in a WECC corridor
- Estimated length of the corridor requiring new access is approximately 23 miles
- Length of corridor above 7,000 feet is approximately 32 miles
- Greater sage-grouse habitat – approximately 18 miles cross Priority Habitat Management Areas (PHMA), and 23 miles cross General Habitat Management Areas; co-location with an existing transmission line or in designated corridors through 0.1 mile of PHMA and 2.7 miles of General Habitat Management Area
- Crosses two rivers
- Crosses 0.9 mile of National Wetlands Inventory wetlands
- Crosses 0.4 mile of floodplain (Albany County only)
- Crosses 3.4 miles of the Wick/Beumee Wildlife Habitat Management Area
- Crosses five historic linear resources
- Bisects six known archaeological sites
- Crosses Foote Creek Rim Traditional Cultural District
- Crosses Carbon Basin Traditional Cultural Landscape

## 2.4 Alternative Routes Considered, but Not Analyzed in Detail

Rock Creek considered other potential routes to the proposed Gen-Tie Line, including routes that would not cross BLM-administered Federal land. The routes were assessed based on publicly available resource data from Federal and state agencies and historic resource data (Invenergy 2021). This consideration of potential alternative routes took into account BLM's purpose and need for action (see Section 1.2, *The*

BLM's Purpose and Need for Action), as well as the basic policy objectives for the management of the area (see Section 1.6, *Conformance to the BLM Land Use Plan*, and Section 1.7, *Other Federal, State, and Local Agency Involvement*) which include:

- Concentrating growth near existing developed areas
- Maximizing use of existing infrastructure, such as access roads
- Maximizing use of federally or locally designated utility corridors
- Co-locating with existing compatible ROWs (e.g., high-voltage transmission lines, railroads, highways, pipelines)
- Limiting environmental impacts on traditional land uses, humans, and wildlife
- Avoiding and minimizing impacts on sensitive environmental resources, such as greater sage-grouse

Alternative routes to the Proposed Action and Western Route Alternative were dismissed from further consideration because they failed to adequately meet the BLM's purpose and need for the action and/or basic policy objectives for the area. The BLM determined that alternative routes did not warrant detailed analysis in this EA. The BLM has addressed unresolved resource conflicts associated with the Proposed Action as part of project design and environmental commitments.

## **2.5 Non-Federal Action (Rock Creek Wind Facility)**

Rock Creek plans to construct, operate, and maintain a 129-turbine, 590-MW wind facility on private land in Carbon and Albany counties, Wyoming (non-federal action). The project would consist of two phases, including Rock Creek I (190 MW) and Rock Creek II (400 MW). The project is spread over approximately 32,620 acres in Albany County and 14,900 acres in Carbon County, for a total of 47,520 acres. At the Rock Creek II Wind Facility, 400 MW would interconnect to the proposed Gen-Tie Line associated with the Proposed Action.

In addition to the proposed Gen-Tie Line route, Rock Creek has identified other possible gen-tie line routes on private lands. As such, the BLM has concluded that construction, operation, and maintenance of the Rock Creek Wind Facility on private land could proceed without BLM approval of the requested ROW grant. Because the non-federal action of the wind energy-generating facility cannot be prevented by BLM decision making, nor can its effects be modified by BLM decision making, the effects of the Rock Creek Wind Facility are not included as part of the Proposed Action, but are analyzed as part of the cumulative effects analysis of this EA. Section 2.3, *Alternative Routes Considered, but Not Analyzed in Detail*, includes a description of a possible non-federal gen-tie line route and why this route was dismissed from detailed analysis.

## **2.6 Applicant-Committed Environmental Protection Measures**

Rock Creek would apply the following applicant-committed environment protection measures across the entire Gen-Tie Line, as well as measures to reduce and minimize the potential for impacts on biological resources, cultural resources, paleontological resources, and soil and water resources. These measures are included as part of the Proposed Action and Western Route Alternative and analyzed as such in Chapter 3, *Affected Environment and Environmental Consequences*, of this EA.



## 2.6.1 General Measures

The following measures will be applied during construction and operation of the Gen-Tie Line:

- All construction-vehicle movement outside the ROW would be restricted to pre-designated access, contractor acquired access, or public roads.
- Construction sites, material storage yards, and access roads used to support project construction would be kept in an orderly condition throughout the construction period. Construction activities would not occur when weather or other conditions, such as during heavy rains, increase potential impacts to unacceptable levels.
- There may be temporary road closure during construction and if needed, flaggers would be supplied to promote safe work practices and communication. Any public road closures would be coordinated with the relevant county/state agencies. Rock Creek would submit any required permit applications and/or public notices if required by applicable authority.
- Prior to construction, Rock Creek would supply an Emergency Response Plan that identifies fire, medical, and law enforcement support services and locations.
- Prior to construction, Rock Creek would also complete a Health and Safety Plan that would be implemented across the Gen-Tie Line area. All site personnel would be required to complete a new-hire orientation, which would address site-specific safety, health, and environmental concerns of the project. Appropriate signage would be placed in high-visibility areas to warn employees and visitors of all potential hazards. Appropriate traffic controls and signage would be put in place to ensure safe operation of vehicles on access roads, and any signage required to be placed on BLM-administered lands would go through the appropriate clearance and approval process with the agency.
- The real limits of construction activities would be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate survey or construction activity limits.
- In construction areas where re-contouring is not required, vegetation would be left in place wherever possible, and original contour maintained to avoid excessive root damage and allow for re-sprouting.
- In construction areas (e.g., laydown yards and structure sites) where ground disturbance occurs or where re-contouring is required, surface restoration would occur as required by the landowner or the BLM. The method of restoration would consist of returning disturbed areas back to their natural contour, reseeding (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches.
- Structures and/or ground wire would be marked with high-visibility devices where required by governmental agencies.

Prior to construction, all supervisory construction personnel would be instructed on the protection of cultural and ecological resources. To assist in this effort, the construction contract would address:

- Federal and state laws regarding antiquities and plants and wildlife, including collection and removal; and
- The importance of these resources and the purpose and necessity of protecting them.
- Rock Creek would apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing ROW, to the mutual satisfaction of the parties involved.

- All construction and maintenance activities would be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial streambanks. In addition, dust-control measures during construction in sensitive areas. Culverts would be installed where necessary. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the Gen-tie Line. Structures would be sited outside of streams.
- To prevent potential effects to livestock grazing, Rock Creek would do the following:
  - Coordination between Rock Creek and the livestock-grazing permittees would occur throughout the construction and reclamation process.
  - Fences, gates, and grazing/range improvements would be repaired or replaced immediately to their original pre-disturbed condition as required by the landowner or the BLM if construction activities affect them. Temporary gates would be installed only with the permission of the landowner or the land management agency, with restoration to the original pre-disturbed condition following construction.
  - Vehicle speed restrictions would be enforced to reduce the potential for collisions with livestock and generation of dust. Dust on roads used to support construction would be further controlled through the application of water to road surfaces.
- The Gen-tie Line would be designed to limit the audible noise due to corona effects. Tension would be maintained on all insulator assemblies to ensure positive contact between insulators, thereby avoiding sparking. Caution would be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona effects to occur.
- During operation of the Gen-tie Line, the ROW would be maintained free of non-biodegradable debris. Slash would be left in place or disposed of in accordance with requirements of the land management agency.
- Fuels, oil, and solvents would not be drained onto the ground or into streams or drainage areas. Totally enclosed containment would be provided for all trash. All construction waste including trash and litter, garbage, other solid waste, petroleum products, and other materials would be removed to a disposal facility authorized to accept such materials.
- Power line design and construction would conform to the recommendations described in the Suggested Practices for Avian Protection on Power Line: The State of the Art in 2006 (APLIC 2006). In addition, an Avian Protection Plan would be prepared if requested by the BLM.

### **2.6.2 Selective Measures**

The following measures would be selectively applied during construction and operation of the Project, where appropriate.

- The alignment of any overland travel would follow the designated area's landform contours where possible, providing that such alignment does not additionally affect resource values. This would minimize ground disturbance and/or reduce scarring (visual contrast).
- Modified structure design or alternate structure type would be used to minimize ground disturbance, operational conflicts, visual contrast, and/or avian conflicts.
- Structures would be placed to the extent practicable so as to avoid sensitive features, such as, but not limited to, wetland and riparian areas, perennial surface water, and cultural sites, and/or to allow

conductors to clearly span the features, within limits of standard structure design. Additional restrictions on avoidance of sensitive features would apply to BLM-administered land.

- Standard structure design would be modified to correspond with spacing of existing transmission-line structures where feasible and within limits of standard structure design. The normal span would be modified to correspond with existing structures, but not necessarily at every location. This would reduce visual contrast and/or potential operational conflicts.
- Non-specular conductors would be used, where specified by the authorized officer, to reduce visual impacts.
- With the exception of emergency repair situations, ROW construction, restoration, maintenance, and termination activities would be modified or discontinued during sensitive periods (e.g., nesting and breeding periods) for candidate, proposed threatened and endangered, or other sensitive animal species. Sensitive periods, species affected, and areas of concern would be designated by the authorized officer in advance of construction or maintenance.
- Construction and/or post-construction monitoring and treatment in selective areas would occur in accordance with Section 106 of the NHPA, Paleontological Resources Protection Act, Section 7 of the Endangered Species Act, or as specified by the BLM and the applicable state or county authority.
- To minimize disturbance to timber resources and reduce visual contrast, clearing of trees in and adjacent to the ROW would be minimized to the extent practicable to satisfy conductor-clearance requirements (National Electric Safety Code and 10 years of timber growth). Trees and other vegetation would be removed selectively (e.g., edge feathering) to blend the edge of the ROW into adjacent vegetation patterns, as practicable and appropriate.

### **2.6.3 Weeds and Invasives**

- Prior to the start of construction, Rock Creek would have an approved Weed Management Plan that adheres to Rawlins RMP standards for BLM-administered lands, which include zero noxious weed infestation and invasives not exceeding 10 percent of preconstruction presence. Included in the Weed Management Plan would be stipulations regarding construction, restoration, and operation (e.g., use of weed-free materials, washing of equipment).
- Written approval from the BLM would be obtained prior to the use of approved herbicides on BLM-administered lands. Herbicide applications on BLM land would follow the standard operating procedures listed in Appendix A of the ROD for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States (BLM 2007). In 2016, the BLM added aminopyralid, fluroxypyr, and rimsulfuron to the list of approved chemicals for use on public lands, increasing the number of approved chemicals from 18 to 21. Any herbicides applied would be used in strict accordance with label use restrictions. The approach to herbicide application would be detailed in Rock Creek's approved Weed Management Plan.
- The approved Weed Management Plan would include by-species accounts highlighting characteristics relevant for control and a spectrum of treatment options for each noxious weed mapped in Gen-Tie Line area. Herbicides would only be used in accordance with their registered use and be administered by a qualified applicator according to federal and state laws and regulations.
- Revegetate disturbed areas
  - Minimize ground disturbance and revegetate disturbed areas when possible.
  - Develop a weed-resistant seed mix for restoration of temporarily disturbed areas by using a combination of native grasses and forbs; incorporate pollinator plant species.

- Use certified weed-free mulch.
- Minimize transport of noxious weeds
  - Employees and subcontractors would be required to clean equipment, machinery and vehicles that disturb soil or vegetation prior to entry to the Project. Cleaning is defined as removal of all dirt, grease, plant parts, and material that may carry seeds or plant material from tires, tracks, belly plates, and undercarriages. Cleaning may occur at laydown yard areas, designated cleaning station locations, or commercial car wash facilities.
  - Delineate large noxious weed infestations near construction areas to prevent disturbance.
  - Where practicable, avoid or minimize travel through or parking in areas infested with noxious weeds to avoid spreading seeds or plant parts.
  - Maintain portable wash stations for vehicles and equipment; strategically place them at staging areas or designated entrance/exit locations.
  - To prevent invasive species seeds from leaving the site, the contractor would inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site. Equipment, including rubber-tire trucks driving overland, would be washed after leaving a weed-infested area, as defined in Rock Creek's approved Weed Management Plan.
- Use weed-free topsoil
  - Preferentially salvage topsoil only for locations dominated by native vegetation; avoid known noxious weed infestation areas when salvaging topsoil to the maximum extent practicable.
  - Store salvaged topsoil in a manner to discourage weed establishment, (e.g., by covering, mulching, or stabilizing with weed-free seed).
  - Cleared vegetation that contains weeds would not be removed from the construction site. Topsoil contaminated with weeds would be flagged and tracked in conjunction with the delineation of infested areas. Contaminated topsoil would be stockpiled separately from clean topsoil. Topsoil stockpiles would be stabilized and revegetated when they are being salvaged to prevent contamination with noxious weeds during construction. If topsoil became contaminated, then it would not be used in reclamation.
  - Where practicable, use locally sourced topsoil if additional topsoil is needed.
- Monitor and treat noxious weeds during construction
  - Train on site staff to identify noxious weed species for successful long-term vegetation management.
  - Discourage weed establishment during construction through regular site inspections and targeted herbicide application as needed.
  - Herbicide application would be by State of Wyoming qualified applicators using approved herbicides.
  - Herbicide application would follow all instructions on the label including application rates and preparation and application requirements

#### **2.6.4 Biological Resource Measures**

Pre-construction surveys for plants and wildlife species designated as sensitive or of concern would be conducted in areas of known occurrence or habitat, including noxious weed surveys as stipulated by the

BLM in coordination with the U.S. Fish and Wildlife Service (USFWS) during the development and approval of Rock Creek's Plan of Development.

In addition to the general biological resources measures committed to above, Rock Creek would adhere to the following resource-specific stipulations from the Rawlins RMP. These stipulations would be applied to activities on BLM-administered lands. Rock Creek could seek an exception from the BLM to the application of certain stipulations, which the BLM would review and consider based on site-specific environmental considerations and review of detailed engineering and mitigation plans. Exceptions would be considered consistent with Rawlins RMP Appendix 9, *Exception, Modification, and Waiver Criteria*.

- Wetlands, Riparian Areas, and Surface Waters
  - Surface-disturbing activities on BLM-administered land would avoid identified 100-year floodplains and remain 500 feet from perennial surface water and/or wetland and riparian areas and 100 feet from ephemeral channels. Rock Creek and the BLM would review and coordinate, based on the specific on-the-ground conditions identified during onsite reviews, on appropriate site-specific engineering and mitigation plans should activities be required within avoidance areas.
- Ute ladies' tresses
  - Rock Creek would conduct two additional years of surveys in accordance with BLM and USFWS guidelines to verify the presence or absence of Ute ladies'-tresses in locations where three years of data are not currently available. In the event that Ute ladies' tresses occurrence is identified, the permittee would modify operational plans to include facility design modifications to avoid this species and its habitat.
- Migratory birds
  - If clearing, grubbing, or tree/limb removal occurs between April 10 and July 10, then Rock Creek would employ a qualified biologist to conduct a migratory-bird nest search of all vegetation within the 10 days prior to ground-disturbing activities. Vegetation may be removed if it has been surveyed, and no active bird nests are present. If active nests cannot be avoided, then the contractor would notify the BLM to evaluate the situation. During the nonbreeding season (July 11– April 9), vegetation removal is not subject to this restriction.
  - If active bird nests are identified within the Gen-Tie Line boundary, then construction activities would avoid disturbing any active nest. Avoidance areas, if necessary, would be marked in the field with temporary fencing or T-posts with flagging by the approved biologist. The engineer would confer with the BLM to determine the appropriate avoidance strategies until the nestlings have fledged from the nest, and the nest is no longer active.
- Raptors
  - To protect important raptor nesting habitat, surface use would not be allowed within 1,200 feet of active ferruginous hawk nests and 825 feet of all other active raptor nests. Distance may vary depending on factors such as natural topographic barriers, and line-of-sight distances. Rock Creek would coordinate with the BLM regarding nest-specific conditions during construction.
  - A portion of the powerline that crosses BLM-managed lands is located within 1,200-feet of two ferruginous hawk nests located on private land; therefore, the following would be required by the BLM: (1) Five (5) years, or as determined by the BLM, of post construction monitoring by a BLM-approved, Operator-financed biologist; (2) the application of mitigation measures, such as artificial structures, as determined by the BLM; (3) the submission of a final report to the BLM by October 1 of each year to allow the BLM wildlife biologist to determine specific impacts to

- the nest (i.e., nest abandonment, fledgling death) and residual impacts, and (4) the application of additional mitigation measures if the original mitigation has not been effective.
- Surface disturbance and activities potentially disruptive to nesting raptors would not occur within a one-mile buffer for golden eagles and ferruginous hawks, and a three-quarter-mile buffer for all other raptors during the following time periods.
  - February 1–July 15: Golden eagle, red-tailed hawk.
  - March 1–July 31: Ferruginous hawk.
  - Mountain plover
    - To protect the identified mountain plover-occupied habitat, transmission structures would include a perch-inhibitor in their design when within one-half mile of the identified mountain plover-occupied habitat.
    - To minimize destruction of nests and disturbance to breeding mountain plovers, no reclamation activities or other ground-disturbing activities would occur from April 10–July 10, unless surveys consistent with the Plover Guidelines or other USFWS-approved methods find that no plovers are nesting in the area.
    - To protect the identified mountain plover-occupied habitat, seed mixes and application rates for reclamation would be designed to produce stands of sparse, low-growing vegetation suitable for plover nesting.
  - Greater sage-grouse
    - Surface-disturbing activities or occupancy would not occur on nor within one-quarter mile of the perimeter of an occupied greater sage-grouse or sharp-tailed grouse lek.
    - Rock Creek would avoid surface-disturbing and disruptive activities in suitable greater sage-grouse and sharp-tailed grouse nesting and early brood rearing habitat within two miles of the perimeter of an occupied greater sage-grouse lek, and within one mile of the perimeter of a sharp-tailed grouse lek, or in identified greater sage-grouse and sharp-tailed grouse nesting and early brood-rearing habitat, from March 15 to June 30.
  - Mule deer and pronghorn
    - Surface-disturbing and disruptive activities within big-game crucial winter range would not be allowed during the period of November 15 to April 30.
  - White-tailed prairie dog
    - Surface-disturbing and disruptive activities in white-tailed and black-tailed prairie dog towns would be avoided to the greatest extent practicable
    - If prairie dog towns/complexes suitable as black-footed ferret habitat are present, then attempts would be made to avoid locating surface-disturbing activities within 164 feet (50 meters) of a town. If a black-footed ferret non-block cleared town/complex cannot be avoided, then a black-footed ferret survey would be performed.
    - Motorized vehicle use within white-tailed prairie dog towns would be limited to either designated roads and vehicle routes or existing roads and vehicle routes, depending on the land-ownership pattern in the area of specific white-tailed prairie dog complexes.
    - Placement of power poles within prairie dog towns would be avoided; however, in the event that power poles are required to be placed within these towns or within ¼-mile, raptor anti-perch devices would be installed.

- Black-footed Ferret Non-essential Experimental Population
  - If prairie dog towns/complexes suitable as black-footed ferret habitat are present, attempts would be made to avoid locating surface disturbing activities within 164 feet (50 meters) of a town.
- Northern Leopard Frog
  - For the protection of amphibian species and their habitats, surface disturbing and disruptive activities would be avoided in the following areas: (1) identified 100-year floodplains; (2) areas within 500 feet of perennial waters, springs, wells, and wetlands, and (3) areas within 100-feet of the inner gorge of ephemeral channels.
- Persistent Sepal Yellowcress
  - Avoid intermittent habitat along riverbanks & shorelines on sandy soils near the high-water line, reservoirs & playas at 4,300-6,800 feet in elevation.

### **2.6.5 Cultural Resource Measures**

The Gen-tie Line would be sited and designed to avoid impacts on cultural resources to the maximum extent practicable. Cultural resources would continue to be considered during post-NEPA phases of project implementation per any mitigation plans developed in consultation with BLM and the State Historic Preservation Office (SHPO), to minimize impacts on historic properties to the extent any are identified in pre-construction surveys or during construction. Such avoidance and mitigation plans may include project modifications to avoid adverse impacts, monitoring of construction activities, and data recovery studies. In addition, an Unanticipated Discovery Plan for cultural and paleontological resources would be developed for the project.

In the event that previously unreported cultural resources are encountered during ground-disturbing activities, all work would immediately cease within 30 meters (100 feet) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the NRHP. The BLM (if on BLM-administered land), relevant county agency (if on private land), and/or applicable tribes would be notified within 24 hours of the find. Work would not resume in this area without relevant agency approval.

If human remains are encountered during ground-disturbing activities, then all work would immediately cease within 30 meters (100 feet) of the encounter. The BLM (if on BLM-administered land), relevant county agency or local law enforcement (if on private land), SHPO, and/or appropriate tribes would be notified of the discovery within 24 hours (following agency protocol). All discoveries would be treated in accordance with the Native American Graves Protection and Repatriation Act (Public Law 101-601; 25 U.S.C. 3001–3013) or Wyoming burial laws (Wyoming Statutes 7-4-106), and work would not resume in this area without proper authorization.

The following measures would reduce indirect impacts on historic properties.

- Materials and surface treatments would repeat and/or blend with the existing form, line, color, and texture of the landscape.
- Transmission structures would be self-weathering wooden structures of appropriate coloration that allows for blending in with the landscape with non-specular conductors, to reduce visual contrast with the existing skyline.
- Native seed mix would be applied to fill slopes to minimize contrast with existing landscape.
- Visual impact mitigation objectives and activities would be discussed with equipment operators before construction activities begin to ensure compliance with the establishment of seeded vegetation.



- Existing rocks, vegetation, and drainage patterns would be preserved to the maximum extent possible.

### **2.6.6 Paleontological Resource Measures**

In the event that previously unreported paleontological resources are encountered during ground-disturbing activities, all work would immediately cease within 30 meters (100 feet) until a qualified paleontologist has documented the discovery. The BLM (if on BLM-administered land), applicable county agency (if on private land), and/or applicable tribes would be notified within 24 hours of the find. Work would not resume in this area without approval of the BLM.

### **2.6.7 Soil and Water Resource Measures**

- Grading and clearing activities would be minimized and disturbances stabilized as soon as practicable.
- Permanent or temporary soil erosion-control measures for all slopes, channels, ditches, disturbed land area, and soil stockpiles would be implemented as soon as practicable after final grading or the final earth disturbance has been completed. Where earth-disturbing activity temporarily ceases, temporary erosion-control measures would be implemented as soon as practicable, as would be detailed in the Storm Water Pollution Prevention Plan (SWPPP).
- Once ground-disturbing activities are complete, during the appropriate season, the disturbed area would be reseeded per BLM or surface landowner specifications and subsequently monitored to confirm that the reseeding was successful.
- Vehicle speed restrictions would be enforced to reduce the potential for accidents and generation of dust. To further limit the emission of fugitive particulate matter, best management practices (BMPs) would be employed, as appropriate, to include using wind breaks and barriers, applying water frequently, applying soil additives, controlling vehicle access and flow routes, covering soil stockpiles, using gravel at site exit points, washing equipment at the end of each workday and prior to site removal, reestablishing ground cover, and stopping work.
- All BMPs would be inspected and maintained on site, as required. Sediment-control logs, brush barriers, and rock logs used during construction would be maintained in place, as needed, until vegetation is established to the required density.

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### 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter contains the impacts analysis for the Proposed Action, Western Route Alternative, and No Action Alternative, organized by resource issue. Section 3.2, *Resources Considered for Analysis*, describes all resources considered in the evaluation of the Proposed Action and No Action Alternatives and their treatment in the EA. Each resource section begins with a description of the existing conditions within a specified analysis area, followed by an analysis of the potential direct, indirect, and cumulative impacts that could result from the project.

An assessment of the construction, operations, maintenance, and eventual decommissioning of the proposed Gen-Tie Line is provided under each resource section. As described in Section 2.2, *No Action Alternative (Non-Federal Alternative)*, the No Action Alternative states that no impacts would occur on public lands administered by the BLM. Although it is anticipated under the No Action Alternative that Rock Creek would pursue a non-federal gen-tie line route to interconnect the Rock Creek Wind Facility, details regarding a specific route are unknown at this time. The consideration of cumulative impacts for the No Action Alternative includes a high-level assessment of a non-federal route as a reasonably foreseeable future action to a BLM decision to deny Rock Creek's application for a ROW grant. Rock Creek would be required to seek applicable Federal, state, and local environmental approvals for any future non-federal gen-tie line route.

Section 3.3.4, *Past, Present, and Reasonably Foreseeable Future Actions*, provides an overview of past, present, and reasonably foreseeable future actions that could have a cumulative impact with the Proposed Action, Western Route Alternative, and/or No Action Alternatives (i.e., would cumulatively affect a resource of concern within the geographic scope and the timeframe of the analysis). As described in Section 2.6, *Applicant Committed Environmental Protection Measures*, this includes the construction, operations, and maintenance of the Rock Creek Wind Facility and other reasonably foreseeable future actions.

#### 3.1 Types of Effects

In this document, the terms *effect* and *impact* are used synonymously. Effects fall into three categories.

- **Direct:** caused by the action, occurring at the same time and place
- **Indirect:** caused by the action, but later in time or further in distance, but are still reasonably foreseeable
- **Cumulative:** caused by incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions, regardless of what agency (Federal or non-federal) or person undertakes such other actions

For the purpose of this analysis, the *duration* of the impact is defined as follows.

- **Short-term:** impacts that would occur during construction (approximately 840 working days)
- **Long-term:** impacts that would occur during 10 years from construction completion

For the purpose of this analysis, *intensity* or *severity* of the impact is defined as follows.

- **Negligible:** changes would not be detectable and/or measurable. The resource would be essentially unchanged or unaltered.
- **Minor:** changes would be detectable, localized, and/or measurable. The resource would be slightly changed or altered.
- **Moderate:** changes would be clearly detectable, measurable, and/or have an appreciable effect on the resource. The resource would be notably changed or altered.
- **Major:** changes would be highly noticeable, substantial, readily apparent, and measurable well beyond the footprint of the action. Objects, or some elements of the objects, would be permanently altered on-site, as well as affected over a larger portion of the project area. No severe impacts are anticipated to result from the Gen-Tie Line or Proposed Action.

For the purpose of this analysis, the type of impact is defined as follows.

- **Adverse:** impacts that would have a detrimental effect to a resource
- **Beneficial:** impacts that would have a positive effect to a resource

## 3.2 Resources Considered for Analysis

Table 3-1 includes a list of all resources considered in the evaluation of the alternatives. The resources that may be potentially affected by the Gen-Tie Line have been carried forward for analysis in this EA and are discussed further in this chapter. The resources that are not present or found to not be affected by the Gen-Tie Line are not further discussed in this EA.

**Table 3-1. Resources Considered in the Evaluation of the Proposed Action and Alternatives**

Determination	Resource	Rationale for Determination
NI	Air Quality	The Gen-Tie Line would be in an area that is in attainment or unclassified with respect to all criteria pollutants; therefore, general conformity does not apply, and no emission inventory would be needed to determine conformance. Construction activities would be temporary and transitory, and operational emissions would be minimal. Therefore, the Gen-Tie Line construction and operation would be unlikely cause or contribute to an exceedance of ambient air quality standards.
NP	Areas of Critical Environmental Concern (ACECs)	No ACECs are in the Gen-Tie Line area or Gen-Tie Line area vicinity. The nearest ACEC is approximately 16 miles away from the Gen-Tie Line area at the nearest point.
NP	Cave and Karst	No cave or karst resources are in the Gen-Tie Line area or Gen-Tie Line area vicinity. The nearest caves are the Shirley Mountain Caves and the Cave Creek Cave ACEC, which are approximately 16 miles northwest of the Gen-Tie Line area at the nearest point.
PI	Cultural Resources	Cultural resources are present in the Gen-Tie Line area, and the Gen-Tie Line area on BLM-administered land has been subject to intensive pedestrian inventory. Surface disturbance could physically affect historic properties, and the Gen-Tie Line could result in visual, atmospheric, or auditory effects to historic properties for which setting and feeling are character-defining aspects of the property.
NP	Environmental Justice	The only community in the Gen-Tie Line area vicinity is Medicine Bow, Wyoming, which is approximately 0.5 mile from the route of the Proposed Action. There are no identified environmental justice communities in Medicine Bow, and the Proposed Action is not anticipated to result in any disproportionate impacts on environmental justice communities.
NI	Farmlands (Prime or Unique)	Total Gen-Tie Line area (150-ROW): Approximately 90 acres on BLM-administered surface. Farmland of statewide importance if irrigated = 5.5 acres Non-prime farmland = 84.5 acres Surface disturbance associated with the construction of the Gen-Tie Line may result in impacts on the up to 5.5 acres of farmlands. However, the farmlands are not irrigated, nor are they actively farmed. In addition, soil handling (i.e., topsoil stripping and stockpiling), reclamation practices, and other design features and best management practices would eliminate potential impacts on farmlands.
NP	Floodplains	The proposed Gen-Tie Line structures would not be constructed in floodplains. The proposed Gen-Tie Line would not span any floodplains in the Gen-Tie Line area.
NI	Fuels/Fire Management	The proposed Gen-Tie Line is in a designated utility corridor, with three-quarters of the route paralleling existing transmission lines. The BLM's stated fuels and fire management is to suppress wildland fires in identified areas including industrial interface areas which would include the Gen-Tie Line area and vicinity. Therefore, no impacts would be anticipated to BLM's fuels and fire management practices for the resource management planning area.
NI	Geology/Mineral Resources/Energy Production	The proposed Gen-Tie Line is in a designated utility corridor and parallels existing transmission lines for 2.2 miles of the route. These utility corridors were designated by the BLM as preferred routes for energy infrastructure based in part on the limited potential for impacts on resources within the corridors. In addition, the Gen-Tie Line is not expected to create any new impacts on geology, minerals, or energy production due to the existing developed nature of the corridor. As a result, the Gen-Tie Line is not expected to result in new impacts on geology, minerals, or energy production.
NI	Greenhouse Gas Emissions	Construction activities would be temporary and transitory and operational emissions would be minimal. The construction and minimal operational greenhouse gas emissions would be less and would not notably contribute to climate change effects. As a result, the Gen-Tie Line is not expected to notably contribute to greenhouse gas emissions or climate change.

Determination	Resource	Rationale for Determination
NI	Health and Safety	Construction, operations, and maintenance activities would be subject to approved Emergency Response and Health and Safety Plans. These plans will dictate hazard signage and other measures to protect the public, safety training for project personnel and other industry-standard measure to limit health and safety hazards. Application of approved Emergency Response and Health and Safety Plans to project activities is expected to protect health and safety.
NI	Invasive Species/Noxious Weeds	Weeds may be present within the Gen-Tie Line area or Gen-Tie Line area vicinity. Surface disturbance from structure construction, laydown areas, and site access could increase the spread of weeds. Gen-Tie Line design elements and best management practices to reduce the spread of weeds will be implemented including conducting a weed inventory and creating a weed management plan in accordance with BLM standards. Equipment will be washed to remove weed seeds. Post-construction monitoring will ensure control of weeds and re-establishment of native species.
NP/NI	Lands/Access	The proposed Gen-Tie Line is in a designated utility corridor and is parallel to existing transmission lines for three-quarters of the route. As a result, there would be no change to land use within the Gen-Tie Line area. These utility corridors were designated by the BLM as preferred routes for energy infrastructure based in part on the limited potential for impacts on resources within the corridors.  The Gen-Tie Line would use existing access routes where possible. Where structure sites are not immediately accessible from existing roads, short routes of non-graded overland access may be necessary in order to access the site. However, because the proposed Gen-Tie Line is in a designated utility corridor, no change to access within the Gen-Tie Line or vicinity is anticipated, and the Gen-Tie Line would not affect access to BLM-administered lands by proximate landowners or public land users.
NP	Lands with Wilderness Characteristics	There are no inventoried Lands with Wilderness Characteristics in the Gen-Tie Line or the vicinity.
NI	Livestock Grazing	The Gen-Tie Line crosses the North Area grazing allotment, which consists of 12,605 public land acres. All lands within the allotment are currently permitted for grazing. Surface disturbance associated with the Gen-Tie Line would be minimal and in areas of previous disturbance. Following construction, reclamation activities would be conducted to reestablish vegetation along the ROW to allow for continued livestock grazing, resulting in 0.2 acre of public land long-term surface disturbance that would be unavailable for grazing. In addition, best management practices and mitigation would be applied to minimize potential impacts on grazing such as immediately repairing any damaged range improvements to their pre-disturbed condition. As a result, the Gen-Tie Line is not expected to result in impacts on livestock grazing.
NP	National Conservation Areas	There are no National Conservation Areas in the State of Wyoming.
NP	National Historic Trails (NHTs)	There are no NHTs within 0.25 mile of the Gen-Tie Line. and the closest NHT is approximately four miles away from the Gen-Tie Line at the nearest point.
NP	National Recreational Trails	There are no National Recreational Trails in the Gen-Tie Line or the vicinity.
PI	Tribal Resources and Native American Religious Concerns	There may be Traditional Cultural Properties and resources of potential concern to Native American tribes in the Gen-Tie Line and its immediate vicinity. Surface disturbance could physically affect those resources, if present, and the Gen-Tie Line could result in visual, atmospheric, or auditory effects on those resources.
PI	Paleontology	Under the Proposed Action, the Gen-Tie Line would cross geologic units on BLM land with low to high potential for paleontological resources, including 9.42 acres in Potential Fossil Yield Class (PFYC) 2, 75.7 acres in PFYC 3, and 0.1 acre in PFYC 4. Previously recorded paleontological occurrences are within one mile of the Gen-Tie Line.
NI	Rangeland Health Standards	The Gen-Tie Line would result in short-term effects to soils and vegetation during construction. Due to the short-term nature of the construction impacts and the existing developed nature of the route, the Gen-Tie Line is not anticipated to affect soils, vegetation, riparian or wetland areas, or other ecological characteristics to a degree that would affect the BLM's ability to meet rangeland health standards.

Determination	Resource	Rationale for Determination
NI	Recreation	The Gen-Tie Line is in the Eastern Extensive Recreation Management Area. There are no developed or undeveloped recreation sites in the Gen-Tie Line or the vicinity. The Gen-Tie Line and the vicinity are used for dispersed recreation activities such as hunting, fishing, hiking, and off-highway vehicle use. As noted in the Rawlins RMP, development areas in the Eastern Extensive Recreation Management Area likely do not retain quality dispersed recreation opportunities and settings (BLM 2008b). Although construction activities would primarily occur during spring through fall, when recreationists could be present in the Eastern Extensive Recreation Management Area, the proposed Gen-Tie Line would be in a designated utility corridor, parallel to an existing transmission line, and would be not expected to result in material impacts on recreational settings and opportunities in the area.
NI	Socio-Economics	Construction, operation, and maintenance of the proposed Gen-Tie Line would create a temporary increase in employment and a potential need for temporary housing for employees during construction. However, these impacts would be minimal and short-term in nature and are not anticipated to materially affect social and economic conditions in the region.
PI	Soils	The Gen-Tie Line includes approximately 5 miles of gen-tie line on BLM-administered surface with a 150-foot-wide construction ROW (around 90 acres on BLM surface). Surface disturbance associated with construction of the proposed Gen-Tie Line would result in impacts on soil resources, including loss of soils, compaction of soils, and an increase in the potential for erosion. The proponent would apply best management practices and implement a reclamation plan to stabilize and rehabilitate disturbed soils to the maximum extent practicable. The Gen-Tie Line would also utilize the WWEC-designated utility corridor and would parallel two existing 115-kV transmission lines for 2.2 miles of the route, which would minimize new impacts on soil resources in the Gen-Tie Line due to the existing developed nature of the corridor.
PI	Special Status Plants	BLM sensitive plant species (e.g., persistent sepal yellowcress) have potential to occur in the Gen-Tie Line or vicinity. Special status plant surveys will provide additional information on existing conditions and occurrences of these species and the potential for impacts.
PI	Vegetation	Temporary and permanent impacts on sagebrush, grasslands, and shrub-steppe communities would occur during construction and operation of the Gen-Tie Line. Permanent loss of vegetation would be limited to the footprint of structures (up to 279 structures with three to six-foot diameter foundation). The proponent would implement a reclamation plan that would apply all practical efforts to increase the chances of vegetation reestablishment in disturbed areas and would also apply applicant-committed measures to limit impacts on vegetation, such as leaving vegetation in place where recontouring is not required. In addition, the Gen-Tie Line is within a designated utility corridor and parallels two existing transmission lines for part of the route, which would minimize new impacts on vegetation in the Gen-Tie Line due to the existing developed nature of the corridor.
NI	Visual Resources	The Gen-Tie Line is in a designated utility corridor with a Visual Resource Management (VRM) of Class IV. Class IV generally allows activities that result in major modifications to the existing character of the landscape. The level of change to the landscape can be high. The management activities may dominate the view and may be the major focus of viewer attention. Every attempt would be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic visual elements of form, line, color, and texture. Because the proposed Gen-Tie Line would parallel an existing transmission line, there would be no change in the visual character of the existing landscape, nor change to BLM's VRM classification for this area.
NI	Wastes (Hazardous or Solid)	No chemicals subject to Superfund Amendments and Reauthorization Act (SARA) Title III in amounts greater than 10,000 pounds would be used. No hazardous substances defined in 40 CFR 355 and threshold planning quantities would be used. Trash generated during construction of the proposed Gen-Tie Line would be disposed of at appropriate waste collection facilities. The proponent will also apply a variety of applicant-committed measures to reduce potential impacts on resources from wastes, such as using fully enclosed containment for all trash generated at the Gen-Tie Line site.
PI	Water Resources/Quality (Drinking/Surface/Ground)	The Gen-Tie Line would cross an estimated seven intermittent streams on BLM-administered land and two perennial rivers not on BLM-administered land. One aqueduct is between the towns of Arlington and Rock River. Impacts in high-risk flood zones could be avoided through Gen-Tie Line design, or if unavoidable, floodplain development permits may be required. Groundwater permitted for domestic and stock use in the general vicinity is found at depths ranging from approximately 10 to 200 feet below ground surface. The placement of transmission pole structures would be avoided in floodplains.

Determination	Resource	Rationale for Determination
PI	Wetlands/Riparian Zones	The Gen-Tie Line area crosses freshwater emergent wetlands on BLM-administered land and lands under other ownership, which were identified through a wetland delineation. The Gen-Tie Line would be designed to avoid delineated wetlands where practicable. Rivers and streams would be spanned, minimizing impacts within riparian zones.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the Gen-Tie Line or vicinity.
NP	Wilderness/Wilderness Study Areas (WSA)	There are no Wilderness areas or WSAs in the Gen-Tie Line or the vicinity.
NP	Wild Horses	There are no wild horse management units in the Gen-Tie Line or the vicinity.
PI	Wildlife and Fish	Pronghorn, deer, and elk winter and yearlong habitats are present in the Gen-Tie Line, including mule deer and pronghorn crucial winter range. The Gen-Tie Line would cross an estimated seven intermittent streams on BLM-administered land, two perennial rivers not on BLM-administered land, and emergent wetlands that could result in impacts on fish and amphibians.
PI	Wildlife – Greater Sage-Grouse	The Gen-Tie Line does not overlap greater sage-grouse Core Habitat Area. The closest occupied lek is approximately 1.9 miles from the Gen-Tie Line at the closest point. During helicopter flights along the proposed Gen-Tie Line corridor, no leks were observed. There could, however, be impacts on greater sage-grouse if the presence of new transmission structures in the existing utility corridor were to cause birds to avoid the area.
PI	Wildlife – Migratory Birds	Habitat for migratory birds, including BLM-sensitive loggerhead shrike, sage trasher, Brewer's sparrow, and sage sparrow may occur in the Gen-Tie Line and vicinity. Active nests would be identified during preconstruction surveys and avoided according to seasonal timing and spatial requirements. Impacts on nesting and foraging habitats would be minimized by collocating the Gen-Tie Line along existing ROWs and in disturbed areas.. Noise and human activity may disturb migratory birds but would be temporary during construction. Collision impacts during operation are anticipated to be minimal due to the small scale of the Gen-Tie Line, limited height and width of structures, static nature of structures, and existing features in the area. Furthermore, the Gen-Tie Line design incorporates Avian Power Line Interaction Committee recommendations to minimize avian electrocution risk. Electrocution risk at power lines primarily occurs at lower voltages (e.g. between 2.4 and 60kV) than the proposed transmission line, further minimizing the risk of electrocutions from the proposed Gen-Tie Line (Loss et al. 2014)
PI	Wildlife – Special Status (not Threatened Ecological Communities [TEC])	BLM sensitive species, such as white-tailed prairie dog, mountain plover, ferruginous hawk, burrowing owl, and northern leopard frog may occur in the Gen-Tie Line and vicinity. Active nests and pygmy rabbit habitat occupation areas would be identified during preconstruction surveys and avoided according to seasonal timing and spatial requirements. Impacts on nesting and foraging habitats would be minimized by constructing the Gen-Tie Line along existing ROWs and reclaiming disturbed areas with native vegetation. Noise and human activity would be temporary during construction.
PI	Wildlife Threatened and Endangered (T&E) and Candidate Plant Species	Ute ladies' tresses may occur in wetland habitat; however, they have not been identified during surveys and there are no Wyoming Natural Diversity Database occurrences. Water depletions could affect western prairie fringed orchids downstream of the project area.
PI	Wildlife T&E and Candidate Animal Species	Piping plover, whooping crane, and pallid sturgeon are unlikely to occur due to location outside of range or lack of habitat; however water depletions could affect these species. Suitable habitat occurs in the in the Gen-Tie Line for black-footed ferret.
NP	Woodland/Forestry	There are no forested lands in the Gen-Tie Line or the vicinity.

Notes: NP = not present in the area affected by the proposed or alternative actions; NI = present, but not affected to a degree that detailed analysis is required; PI = present with potential for relevant impact that need to be analyzed in detail in the EA; NC = (Determinations of NEPA Adequacy [DNAs] only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.



### 3.3 Cumulative Impacts

CEQ regulations define a cumulative impact as one that “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (CFR Title 40, Part 1508.7). To estimate the potential for cumulative impacts, the effects of each alternative are considered in conjunction with past and present actions and those of the reasonably foreseeable actions (see Section 3.3.4, *Past, Present, and Reasonably Foreseeable Future Actions*, for a list of all reasonably foreseeable actions considered in the cumulative analysis).

#### 3.3.1 Geographic Scope

The BLM NEPA Handbook H-1790-1 (BLM 2008a) recommends that geographic and temporal boundaries be established for cumulative effects analysis. The geographic scope of cumulative effects was determined based on the ROW width of the Gen-Tie Line. A width of 150 feet for the ROW alignment was used to estimate direct impacts on resources. Indirect impacts were estimated in a larger context, depending on the particular resource area.

#### 3.3.2 Timeframe of Effects

The BLM NEPA Handbook H-1790-1 (BLM 2008a) also recommends that temporal boundaries be established for cumulative effects analysis. The cumulative effects analysis is considered over the past, current, and reasonably foreseeable (future five years) time period.

#### 3.3.3 Cumulative Impacts Analysis Area

Cumulative impact analysis areas (CIAAs) are defined to delineate the geographic scope of the analysis for each resource analyzed in detail in this EA. The CIAA for each resource can be different than the analysis area for direct and indirect impacts and the geographic scope may extend beyond the construction and operation area of the Gen-Tie Line. Table 3-2 presents the CIAAs for the resources analyzed in detail in this EA.

**Table 3-2. Cumulative Impact Analysis Areas**

Resource	CIAA	CIAA Description and Rationale
Cultural Resources	Gen-Tie Line APE	The CIAA for Cultural Resources is the APE associated with the Gen-Tie Line, which includes land within a 200-foot buffer around the proposed transmission line and a 100-foot buffer around the access roads and staging areas.
Tribal Resources and Native American Religious Concerns	Gen-Tie Line APE	The CIAA for Native American religious concerns is the APE, which includes land within a 200-foot buffer around the Gen-Tie Line and a 100-foot buffer around the access roads and staging areas.
Paleontological Resources	Gen-Tie Line Boundary	The CIAA for paleontological resources is the Gen-Tie Line boundary and the requested ROW, which includes a 200-foot buffer around the transmission line and a 100-foot buffer around the access roads and staging areas.
Soils	Gen-Tie Line Boundary	The CIAA for soils is the Gen-Tie Line route and the requested 150-foot-wide ROW (i.e., 75 feet on either side of center line).
Special Status Plants	Gen-Tie Line Boundary	The CIAA for special status plants is the Gen-Tie Line route and the requested 150-foot-wide ROW (i.e., 75 feet on either side of center line).

Resource	CIAA	CIAA Description and Rationale
Vegetation	Gen-Tie Line Boundary	The CIAA for vegetation is the Gen-Tie Line route and the requested 150-foot wide ROW (i.e., 75 feet on either side of center line).
Water Resources	HUC 12 sub-watersheds	The CIAA for water resources comprises 10 HUC 12 sub-watersheds, including Bluff Ditch-Rock Creek, Coalbank Creek, East Allen Lake-Medicine Bow River, Horne Lake-Medicine Bow River, Lower Dutton Creek, Lower First Sand Creek, Lower Foote Creek, Pierce Reservoir-Rock Creek, Pine Draw, and Threemile Creek.
Wetlands/Riparian Zones	Gen-Tie Line Boundary	The CIAA for wetlands/riparian zones is the Gen-Tie Line route and the requested 150-foot-wide ROW (i.e., 75 feet on either side of center line).
Wildlife (Including Special Status Species, Raptors, and Migratory Birds)	Herd unit for Big Game Gen-Tie Line Boundary + 10 miles	The CIAA for wildlife is the herd unit for big game and the proposed Gen-Tie Line Boundary, plus a 10-mile buffer for other wildlife, including special status species and migratory birds. This is the reflects the extent of the baseline survey area for project-specific data.

APE = area of potential effects; CIAA = cumulative impact analysis areas; HUC = hydrologic unit code; ROW = right of way.

### 3.3.4 Past, Present, and Reasonably Foreseeable Future Actions

Past, present, and reasonably foreseeable future actions are analyzed to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the Gen-Tie Line and/or alternatives may have an additive relationship to those effects and could contribute to cumulative effects.

#### 3.3.4.1 Past and Present Actions

In order to understand the contribution of past actions to the cumulative effects of the Gen-Tie Line and the alternatives, this analysis relies on current environmental conditions as proxies for the impacts of past actions. Existing conditions described in the affected environment sections of this chapter reflect the aggregate impact of prior actions and natural events that have affected the environment and could contribute to cumulative effects.

The cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. By looking at current conditions, the residual effects of past human actions and natural events are captured, regardless of which particular action or event contributed those effects. The CEQ issued an interpretive memorandum on June 24, 2005, regarding analysis of past actions, which states, “agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.” Past actions in the area include grazing, agriculture, development of the road network, an irrigation canal system, and existing transmission lines. The Gen-Tie Line is within an existing BLM-designated energy-transmission corridor and WWEC. Within this corridor, two existing 115-kV transmission lines parallel the Proposed Action for approximately 2.2 miles of the Gen-Tie Line route.

#### 3.3.4.2 Reasonably Foreseeable Future Actions

*Reasonably foreseeable future actions* are actions that have existing decisions, funding, or formal proposals or that are highly probable and whose effects could occur within the same geographic and temporal scope of effects of the Proposed Action and alternatives analyzed in this EA, resulting in cumulative effects. These actions are not directly connected to the Proposed Action and the alternative analyzed in this EA, and the decisions associated with the Proposed Action and alternative in this EA

would not affect these projects. They are projections being made so that future effects, cumulative and otherwise, can be estimated, as required by NEPA.

As presented in Table 3-3 and depicted on Figure 3-1, the BLM identified several reasonably foreseeable future action whose geographic and temporal scope of effects could overlap those of the Proposed Action and alternative and could contribute to cumulative effects.

**Table 3-3. Ongoing and Reasonably Foreseeable Future Actions Considered in the Cumulative Impacts Analysis**

Project Name	Project Description	Distance to Rock Creek Transmission Line (at the closest point)
Rock Creek Wind Facility	Rock Creek plans to construct, operate, and maintain a 590-MW wind facility on private land in Carbon and Albany Counties, Wyoming (non-federal action), that would interconnect to the proposed Gen-Tie Line. The Rock Creek Wind Facility is broken into two phases based on their point of interconnection, Rock Creek I and Rock Creek II. At the Rock Creek II Wind Facility associated with the Proposed Action, 400 MW would interconnect to the proposed Gen-Tie Line associated with the Proposed Action. The Proposed Action is spread over approximately 32,620 acres in Albany County and 14,900 acres in Carbon County, for a total of 47,520 acres.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Ekola Flats Wind Energy Project	The Ekola Flats Wind Energy Project is a utility-scale wind project that includes 250 MW of power generated by 58 turbines in Carbon County, Wyoming. The project was commissioned in 2020.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Lucky Star Wind Energy Project	The Lucky Star Wind Project is a proposed, but not yet constructed, utility-scale wind project. Phase I includes 188 to 460 MW of power generated by 74 turbines, and Phase II includes 313 to 682 MW of power generated by 110 turbines in Carbon and Albany Counties, Wyoming.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Energy Gateway South Transmission Line Project	The Energy Gateway South Transmission Line is an approved high-voltage transmission line that has started construction. The project is composed of a 500-kV overhead transmission line extending 400 miles from Aeolus Substation in southeastern Wyoming into the Clover Substation near Mona, Utah.	0.2 mile (see Figure 3-1)
Energy Gateway West Transmission Line Project	The Energy Gateway West Transmission Line is an approved high-voltage transmission line that has started construction. The Windstar to Populus Segment stretches 488 miles, starting at the Windstar substation near Glenrock, Wyoming, proceeding south to Medicine Bow and then across southern Wyoming to the Populus substation near Downey, Idaho.	0.4 mile (see Figure 3-1)
Last Mile Transmission Line Project	The Last Mile Transmission Line is an approved, but not yet constructed, 34.5-mile, 230-kV transmission line between the Freezeout Substation in Carbon County, Wyoming, and the proposed Boswell Springs substation 14 miles northeast of Rock River in Albany County, Wyoming.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Dunlap Wind Project	The Dunlap Wind Project consists of 111 MW of power generated by 74 turbines in Carbon County, Wyoming. Commissioned in 2010, repowered in 2020 (USFWS 2022a).	5.5 miles
TB Flats Wind Energy Project	The TB Flats Wind Energy Project consists of 500 MW of power generated by 132 turbines near Medicine Bow, Wyoming. Commissioned in 2020.	7.1 miles
Rock River I Wind Repowering Project	The Rock River I Wind Repowering Project is a 53-MW, utility-scale wind project in Carbon County, Wyoming.	2.0 miles

Project Name	Project Description	Distance to Rock Creek Transmission Line (at the closest point)
Foote Creek Wind Energy Project	The Foote Creek Wind Energy Project consists of 41.4 MW of power generated by 69 turbines in Carbon County, Wyoming. The project was commissioned in 1999 and repowered in 2021.	6.4 miles
High Plains and McFadden Ridge Wind Project	The High Plains and McFadden Ridge Wind Project consists of 157 MW of power generated by 88 wind turbines in Carbon and Albany counties. The project has been in operation since 2009.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Medicine Bow Wind Project	The Medicine Bow Wind Project consists of 6.3 MW of power generated by 9 wind turbines in Carbon County, Wyoming. The project has been in operation since 1998 and has been repowered.	3.1 miles
Seven Mile Hill Wind Project	The Seven Mile Hill Wind Project consists of 118.5 MW of power generated by 79 wind turbines in Carbon County, Wyoming. The project has been in operation since 2009.	Intersected by the Gen-Tie Line Route (see Figure 3-1)
Seminole Pumped Storage Project Pipeline	The Seminole Pumped Storage Project Pipeline consists of a 900-MW, pumped hydro energy-storage project currently being permitted in Carbon County, Wyoming. Energy for pumping and power generated by the project will be delivered through a new, 30-mile transmission line connecting the project with PacifiCorp's existing Aeolus Substation, near Medicine Bow, Wyoming.	The pipeline for the project terminates at the Aeolus substation which is where the Gen-Tie Line also interconnects (see Figure 3-1)
Two Rivers Wind Project	The Two Rivers Wind project is a proposed, but not yet constructed, utility-scale wind project. Phase I-III of the Project is designed to support 60 wind turbine generators with a generating capacity of 140 to 314 MW. Phase IV would have 19 wind turbine generators with a potential capacity of 48 to 106 MW of renewable energy in Carbon and Albany counties, Wyoming.	Intersected by the Gen-Tie Line Route (see Figure 3-1)

kV = kilovolts; MW = megawatts.



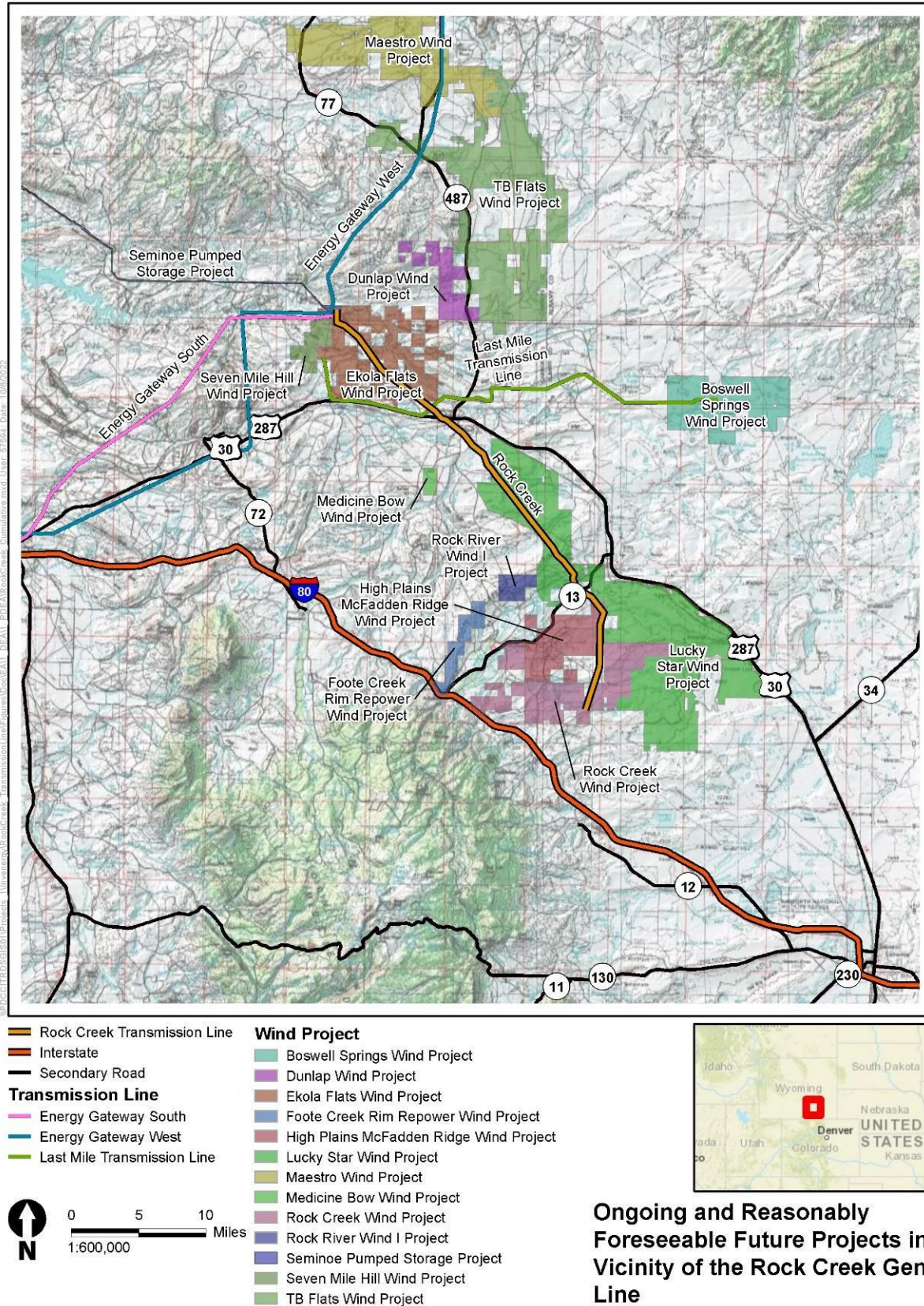


Figure 3-1. Ongoing and Reasonably Foreseeable Future Projects

### 3.3.4.3 *Ongoing and Reasonably Foreseeable Future Actions Considered, but Dismissed from Analysis*

In addition to the reasonably foreseeable future actions described above whose effects would overlap the same geographic and temporal scope of effects of the Proposed Action and alternatives, the BLM considered a variety of other ongoing and reasonably foreseeable future actions to determine if they were relevant to consider in the cumulative effects analysis, as presented in Table 3-4. The BLM determined that the environmental effects associated with these projects would not overlap the geographic or temporal scope of effects from the Proposed Action and alternatives and thus would not contribute to cumulative effects. As a result, these projects are not further considered in the cumulative effects analysis.

**Table 3-4. Ongoing and Reasonably Foreseeable Future Actions Considered, but Dismissed from Analysis**

Project Name	Project Description	Distance to Rock Creek Transmission Line (at the closest point)
Boswell Springs Wind Project	The Boswell Springs Wind Project is an approximately 330-MW wind project on private land that has been approved, but not yet constructed.	12 miles (see Figure 3-1)
Maestro Wind Energy Project	The Maestro Wind Project is a proposed utility-scale wind project composed of 92 wind turbines on 35,774 acres of BLM-administered lands in the Rawlins FO and 2,581 acres of lands owned by the State of Wyoming in Carbon County, Wyoming.	16.3 miles
Chokecherry and Sierra Madre Wind Energy Project	The Chokecherry and Sierra Madre Wind Project is an approved, but not yet constructed, utility-scale wind project. The project includes approximately 600 wind turbines with a capacity of more than 3,000 MW in Carbon County, Wyoming.	33.7 miles
Rocky Mountain Power Energy Vision 2020 Repower Project	This initiative by Rocky Mountain Power includes installing new, larger wind turbine blades at nearly all of the company's existing wind projects in Wyoming.	Variable
TransWest Express Transmission Line Project	The TransWest Express Transmission Line Project has been approved, but not yet constructed, and consists of 732 miles of high-voltage transmission line, including a 600-kV segment with the northern terminal converter station near Sinclair, Wyoming (BLM 2016).	43.3 miles

BLM = Bureau of Land Management; FO = Field Office; MW = megawatts

## 3.4 Cultural Resources

### 3.4.1 Affected Environment

The *Area of Potential Effect* (APE) is defined as the geographic area or areas within which a project may directly or indirectly cause change of character or use of historic properties (i.e., archaeological sites, traditional cultural properties, and/or built environment resources). For the purposes of this analysis, the APE consists of a 200-foot buffer around the Gen-Tie Line's Proposed Action transmission line and Western Route Alternative and a 100-foot buffer around access roads and staging areas. Existing roads with no planned improvements are not part of the APE. The APE encompasses up to 183 acres of BLM-managed lands across Albany and Carbon counties.

Archaeologists performed a formal Class I file search from the Wyoming SHPO via WyoTrack on July 26, 2022, to identify previously documented archaeological and historic built resources within the APE. The Wyoming SHPO cultural records office keeps a file of all cultural resource records and reports for Wyoming. Results of this Class I file search indicated that cultural resource inventories for 27 previous

investigations have been performed within the APE. These studies were initiated mainly as a result of constructing transmission lines and access roads paralleling the majority of the APE, but also as a result of telephone and utility development, fiber optic cable installation, county road improvements, wind-energy development, land exchanges, and oil and gas pipeline expansion. These previous investigations cover 28 miles of the 37-mile APE, and all but 126.9 acres of BLM land within the APE have been previously investigated. A Class III cultural resources inventory was conducted in October 2022 to inventory these 126.9 acres of BLM land.

These previous investigations identified 52 cultural resources within the APE, 32 of which are on BLM land. Of the 52 sites, 28 are labeled as historic, 21 are prehistoric, and 3 sites are labeled as unknown. All historic sites are associated with historic transmission line or road segments. One historic site is a traditional cultural property and classified as a district. The three sites labelled as unknown site type are also identified as segments of the historic Lincoln Highway. The Class III cultural resources inventory recorded one newly identified multicomponent site on BLM land.

Of the 52 previously identified cultural resources in the APE, 12 have been found to be eligible for the National Register of Historic Places (NRHP) or are contributing elements to a NRHP-eligible site, such as a transmission line or historic roadway. Ten of the 12 NRHP-eligible cultural resources are on BLM land, and Wyoming SHPO has concurred with all 10 of these eligibility determinations. Nine of these NRHP-eligible sites on BLM land are eligible under Criterion A, and seven are also eligible under Criterion C. The Wyoming SHPO data for one NRHP-eligible site on BLM land and the two NRHP-eligible sites not on BLM land do not list which criterion the sites are eligible under. Nine sites are listed as unevaluated for the NRHP, or the SHPO data does not provide their eligibility status. Unevaluated sites are treated as if they are eligible for the NRHP until further testing can be conducted and an eligibility determination made. The multicomponent site inventoried during the Class III cultural resources survey is recommended as not eligible for the NRHP.

### **3.4.2 Environmental Effects: Proposed Action**

#### **3.4.2.1 Direct and Indirect Impacts**

##### ***Issue: How would the Gen-Tie Line directly affect historic properties?***

Based on the Class I and Class III cultural resource inventories, the proposed Gen-Tie Line crosses 21 historic properties or unevaluated cultural resources, 16 of which are on BLM land. Of these 21 resources, 14 are historic linear resources or segments of linear resources, and 7 are prehistoric sites. Direct effects to cultural resources would occur during surface-disturbing activities, such as construction of transmission structures. Potential indirect effects associated with the Gen-Tie Line may include changes in erosion patterns caused by overland access, construction, soil compaction, or vegetation removal.

In total, the Proposed Action would result in 8.3 acres of temporary disturbance and 0.02 acre of permanent disturbance on BLM-administered land resulting from the construction and installation of transmission structures. The entire Gen-Tie Line would result in 107.7 acres of temporary disturbance and 0.2 acre of permanent disturbance resulting from transmission structures and a 15-acre laydown area (Table 2-2). Minimal grading over surficial soil layers would be performed to establish the laydown area. The highest potential for disturbance of cultural resources would occur during construction of gen-tie structure foundations, which are anticipated to range from three to six feet in diameter and 12 to 30 feet in depth. These surface disturbances could result in the vertical and horizontal displacement of soil containing cultural resources and the resulting loss of integrity, loss of information, and alteration of a site's setting.



To minimize direct impacts on cultural resources, Rock Creek would primarily use existing transmission line access roads because the proposed Gen-Tie Line would parallel the existing WAPA 115-kV transmission line. The estimated length of the Gen-Tie Line corridor that has existing access available is 23 miles. Direct impacts on cultural resources would be avoided where feasible during construction by placing poles to avoid identified cultural resources and implementation of AECs (Section 2.6, *Applicant Committed Environmental Protection Measures*). Overland access using rubber-tire trucks would occur during construction. This overland access would not involve grading or vegetation clearance and would, therefore, not be anticipated to result in impacts on subsurface cultural resources. Direct adverse impacts on historic properties are expected to be negligible.

Rock Creek will continue to coordinate with the BLM and the SHPO to develop an appropriate plan to avoid impacts on identified historic properties on BLM land. If avoidance of a historic property is not feasible, then specific operating procedures, stipulations, or mitigation measures would be developed in consultation with the BLM and Wyoming SHPO, with the goal of reducing or eliminating effects to the identified historic property.

***Issue: How would the Gen-Tie Line indirectly affect historic properties through changes in the visual, atmospheric, and auditory environment?***

Potential indirect effects to cultural resources resulting from the Gen-Tie Line include the introduction of visual, atmospheric, and auditory elements that could diminish the integrity of a historic property's character-defining historic features, including setting and feeling. These effects could result from construction (short term) and introducing modern structures into an otherwise rural or natural setting (long term).

The Gen-Tie Line would be sited within the existing WVEC corridor and parallel the WAPA 115-kV transmission line for part of its route. Moreover, the Gen-Tie Line would be near multiple other existing high-voltage transmission lines and substations for the remainder of the route, as it approaches the Aeolus Substation, to which multiple high-voltage electrical lines connect. As a result, the visual setting of the area has existing utilities. Most of the Gen-Tie Line would not be visible to potential viewers due to its distance from accessible viewing points and intervening terrain. The line would be most visible in the portions crossing U.S. Highway 287 on the outskirts of Medicine Bow and Wyoming Highway 13. In this portion of the route, the proposed line would look generally the same as the other high-voltage lines in the area, but would be most noticeable where it is separated from the existing lines.

A minor increase in noise levels would result from the construction and maintenance of the Gen-Tie Line. During construction, noise would be generated from equipment used for grading (e.g., staging areas, structure sites), construction activities, overland access with rubber-tire trucks, and other vehicle movement along the corridor. Additionally, noise would be generated during post-construction restoration. These noise levels would be temporary in nature and isolated to areas of construction. Some low levels of residual audible noise may result from the conductors, a phenomenon referred to as *corona-generated noise*. However, Rock Creek would implement design measures to prevent and minimize corona-generated noise. Such noise is highly localized and not expected to be discernable outside of the established ROW. Therefore, indirect adverse impacts on historic properties are anticipated to be negligible.

**3.4.2.2 *Cumulative Impacts***

The CIAA for cultural resources encompasses the APE, which consists of a 200-foot buffer around the Gen-Tie Line's proposed transmission line route and a 100-foot buffer around access roads and staging



areas. Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Ekola Flats Wind Project, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden wind project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3).

Effects of past, ongoing, and reasonably foreseeable future projects in the CIAA have and will continue to result in the potential loss of known and undiscovered historic properties resulting from surface-disturbing activities, as well as the discovery of new historic properties on Federal lands through pre-construction cultural resource surveys, through Section 106 consultation during the permitting processes, and during the course of construction activities. Cultural resource surveys, as well as documentation and recovery efforts for these historic properties determined to be adversely affected through the NHPA Section 106 process, have contributed to a repository of cultural resource data that informs the public understanding of human occupation within the region. Historic properties have also likely been cumulatively affected by road development, maintenance of infrastructure in the CIAA, erosion, and alteration of the visual and auditory setting due to the presence of transmission lines and wind energy projects along the CIAA. Some of the ongoing and reasonably foreseeable future projects occur on private lands and may not be subject to compliance requirements to identify and mitigate potential impacts on historic resources which may result in impacts on these resources on private land in the CIAA.

There are no anticipated direct cumulative effects to cultural resources; however, the Proposed Action, in combination with the ongoing and reasonably foreseeable actions, could contribute to cumulative impacts on the visual, atmospheric, and auditory elements that diminish the integrity of a historic property's historic features, including setting and feeling in the APE. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility corridor, and the proximity to other transmission lines and large wind-development projects, the incremental contribution to cumulative cultural resource effects from the Proposed Action are expected to be minor.

### **3.4.3 Environmental Effects: Western Route Alternative**

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not directly affect any additional historic properties and would not result in noticeable changes to the visual, atmospheric, and auditory environment that would alter indirect effects.

### **3.4.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the project would not be constructed on BLM-administered land, and cultural resources on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## **3.5 Tribal Resources and Native American Religious Concerns**

### **3.5.1 Affected Environment**

Native American groups inhabited the Gen-Tie Line area for thousands of years before European contact. Although no tribal trust lands, reservation lands, or tribally owned properties currently exist in the immediate area, numerous tribes over thousands of years of human occupation have ties to the area as their ancestral lands, and some tribes may have been associated with events that occurred within the APE. These tribes include what are now known as the Cheyenne River Sioux Tribe, the Oglala

Lakota Nation, the Rosebud Sioux Tribe, the Fort Peck Sioux Tribe, the Standing Rock Sioux Tribe, the Lower Brule Sioux Tribe, the Yankton Sioux Tribe, the Sisseton–Wahpeton Oyate, the Crow Creek Sioux Tribe, the Santee Sioux Tribe on Nebraska, the Northern Cheyenne Tribe, the Northern Arapaho Tribe, the Crow Tribe, the Eastern Shoshone Tribe, and the Three Affiliated Tribes.

Historically, these Northern Plains tribes would migrate seasonally with the bison, which moved based on the availability of vegetation and water in the rivers and upper drainages. During the fall and winter, Northern Plains tribes typically lived in dispersed, politically autonomous bands. During spring and summer, the bands would gather into large, organized tribal camps, during which times they would conduct traditional ceremonies that often culminated in a buffalo hunt. Tribal society was organized by kinship and based on family units. After the introduction of the horse, Plains Indians depended on them for hunting, warfare, and transportation, and horses were considered of great value.

Rock Creek contacted Native American tribes with a potential interest in the Gen-Tie Line and historical ties to the Gen-Tie Line area to inform them of the project and request any comments or information they would like to provide.

### **3.5.2 Environmental Effects: Proposed Action**

#### **3.5.2.1 *Direct and Indirect Impacts***

##### ***Issue: How would the Gen-Tie Line affect Traditional Cultural Properties and other resources of potential concern to Native American tribes?***

There are no known tribal resources within the Gen-Tie Line route or the APE. However, surface disturbance associated with development of the Gen-Tie Line could inadvertently result in direct effects to unknown important tribal sacred or religious sites, settings, or other important tribal values or resources. Implementation of the Gen-Tie Line would result in temporary surface disturbance and permanent surface disturbance (see Table 2-2) associated with the installation of transmission structures and one laydown area. Minimal grading over surficial soil layers would be performed to establish the laydown area. Furthermore, overland access of rubber-tire trucks during construction activities is not anticipated to result in ground disturbance beyond potential compression of vegetation. Thus, neither of these activities would result in impacts on subsurface tribal cultural resources.

All disturbed areas associated with the Proposed Action would be reclaimed following the 30-year life of the Proposed Action. Therefore, adverse impacts on traditional cultural properties or other resources of potential concern to Native American tribes are expected to be negligible.

#### **3.5.2.2 *Cumulative Impacts***

The CIAA for tribal resources consists of a 200-foot buffer around the Gen-Tie Line's proposed transmission line route and a 100-foot buffer around access roads and staging areas. Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Ekola Flats Wind Project, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3).

Effects of past, ongoing, and reasonably foreseeable future projects in the CIAA have and will continue to result in loss of potential known and undiscovered historic properties that may be of interest to tribes resulting from surface-disturbing activities, as well as the discovery of new historic properties of tribal interest on Federal lands through pre-construction cultural resource surveys, through Section 106

consultation and tribal consultation during the permitting processes, and during the course of construction activities. Cultural resource surveys, as well as documentation and recovery efforts for these historic properties determined to be adversely affected through the NHPA Section 106 process and tribal consultation process, have contributed to a repository of cultural and tribal resource data that inform the public understanding of human occupation within the region, including tribal histories. Tribal resources may also be cumulatively affected by road development, maintenance of infrastructure in the CIAA, erosion, and alteration of the visual and auditory setting due to the presence of transmission lines and wind energy projects along the CIAA. Some of the ongoing and reasonably foreseeable future projects occur on private lands and may not be subject to compliance requirements to identify and mitigate potential impacts on tribal resources, which may result in impacts on these resources on private land in the CIAA.

There are no anticipated direct cumulative effects to tribal resources and religious concerns; however, the Proposed Action, in combination with the ongoing and reasonably foreseeable actions could contribute to cumulative impacts on the visual, atmospheric, and auditory elements that diminish the integrity of tribal resources, including setting and feeling of landscapes. However, given the relatively small scale of the Project, the location of the Gen-Tie Line within an existing utility-corridor, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative tribal resource effects from the Project are expected to be minor.

### **3.5.3 Environmental Effects: Western Route Alternative**

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. As under the Proposed Action, there are no known tribal resources within the route or the APE that could be affected by the Gen-Tie Line project. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, the potential for effects to subsurface artifacts from temporary surface disturbance and permanent surface disturbance would not be noticeably different.

### **3.5.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the project would not be constructed on BLM administered land and tribal resources on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## **3.6 Paleontology**

### **3.6.1 Affected Environment**

The likelihood that a geologic unit contains paleontological resources is referred to as its *paleontological potential* or *paleontological sensitivity*. The fossil-yielding potential of a geologic unit depends on the geologic age (typically greater than 10,000 years old), origin of the unit, and the processes it has undergone, both geologic and anthropogenic.

Table 3-5 identifies the PFYC rank and potential fossil resources of sedimentary geologic units in the Gen-Tie Line (listed in order of PFYC rank), based on the BLM's national PFYC dataset (BLM 2022). Table 3-5 also identifies the acreage of each geologic unit within the paleontological resource study area, which encompasses the 38.3-mile transmission line route and the 150-foot-wide ROW. The geologic units in the Gen-Tie Line have low to very high potential to contain paleontological resources (PFYC 2, 3, 4 and 5). Low sensitivity (PFYC 2) indicates that localities containing important

paleontological resources may exist, but are occasional and should be managed on a case-by-case basis. Moderate sensitivity (PFYC 3) indicates moderate or infrequent occurrence of paleontological resources. High sensitivity (PFYC 4) indicates that the probability for paleontological resources is moderate to high, and is dependent on a proposed action. Very high sensitivity (PFYC 5) indicates that the probability for affecting paleontological resources is high.

**Table 3-5. Probable PFYC for Geologic Units in the Gen-Tie Line Boundary for the Proposed Action and Western Route Alternative**

Geologic Unit Name	Map Symbol	PFYC Rank	Acres in Study Area Western Route	Acres in Study Area Proposed Action	Fossil Resource Description
Gravel, Pediment, and Fan Deposits	Qt	2	70.4	70.4	Mostly locally derived clasts. Includes some glacial deposits along east flank of Wind River Range. Locally includes some Tertiary gravels. Fossils very rare.
Alluvium and Colluvium	Qa	2	53.3	45.9	Clay, silt, sand, and gravel in flood plains, fans, terraces, and slopes. Younger than 10,000 years; therefore, low potential for fossils.
Alluvium, Colluvium, Terrace, and Pediment	Qac	2	4.4	6.2	Fossils very rare.
Alluvium	Qal	2	2.3	4.5	Fossils very rare.
Steele Shale	Ks	3	288.9	287.6	Gray, soft, marine shale containing numerous bentonite beds and thin, lenticular sandstone (age about 78 to 82 Ma). Fossils widely scattered.
Mesaverde Formation (N) or Mesaverde Group (S)	Kmv	3	102.8	102.8	Mesaverde Formation: Light-colored massive- to thin-bedded sandstone, gray sandy shale, and coal beds. In Jackson Hole, locally contains gold-bearing quartzite conglomerate. North of North Fork Powder River east of the Bighorn Mountains.
Lewis Shale	Kle	3	44.1	44.1	Gray marine shale containing many gray and brown lenticular concretion-rich sandstone beds (age about 68 Ma). Common invertebrate/plants intermittent.
Medicine Bow Formation	Kmb	3	5.8	5.8	Brown and gray sandstone and shale; thin coal and carbonaceous shale beds. Fossils widely scattered.
Frontier Formation and Mowry and Thermopolis Shales	Kft	4	15.2	15.2	Frontier Formation-northern Yellowstone area: Yellowish- to medium-gray sandstone, tuffaceous and carbonaceous in lower part; north and south Wyoming-Gray sandstone and sandy shale. Mowry Shale (age 94 to 98 Ma): Silvery-gray hard siliceous shale. Common invertebrate/ plants intermittent.
Niobrara Formation	Kn	4	20.4	21.3	Light-colored limestone and gray- to yellow-speckled limy shale (age about 83 Ma)
Wind River Formation (at base, locally includes equivalent of Indian Meadows Formation)	Twdr	5	38.5	38.5	Northwest Wyoming (Jackson Hole): Variegated red and white claystone and siltstone; largely non-tuffaceous except near the top; lenticular coal unit in middle. At base, locally includes equivalent of Indian Meadows Formation. Fossils documented and occur regularly.
Hanna Formation	Tha	5	50.5	50.5	Brown and gray sandstone, shale, conglomerate, and coal; giant quartzite boulders near Medicine Bow Mountains. Fossils documented and occur regularly.

Source: BLM 2022.

Four geologic units in the study area, the Frontier Formation and Mowry and Thermopolis Shales, Niobrara Formation, Wind River Formation, and Hanna Formation, are classified as having high to very high potential to contain paleontological resources (PFYC 4 and 5; BLM 2022). Four geologic units in the study area, Steele Shale, Mesaverde Formation, Lewis Shale, and Medicine Bow Formation, have moderate potential to contain paleontological resources (PFYC 3; BLM 2022). The remaining units have a low potential to contain paleontological resources (PFYC 2).

In coordination with the BLM, Rock Creek conducted a paleontological resources survey on BLM land on areas of moderate to high sensitivity (PFYC 3 and 4) and is developing a paleontological monitoring and mitigation plan to be implemented during the Gen-tie line’s construction. One new uncommon vertebrate fossil locality and two common invertebrate occurrences were discovered during the pedestrian survey. The uncommon vertebrate has since been collected. The locality included more than 100 shell fragments, a shark tooth, and fish bone fragments and were found within the Frontier Formation (PFYC 3), mapped as undivided within the Thermopolis Shale (PFYC 4). These specimens were collected and will be curated at the Tate Geological Museum. The two common fossil occurrences were bivalve shell fragments found within the Frontier Formation (PFYC 3), mapped as undivided with the Thermopolis Shale (PFYC 4) and inoceramid and baculites found within the Steele Shale (PFYC 3).

### 3.6.2 Environmental Effects: Proposed Action

#### 3.6.2.1 Direct and Indirect Impacts

***Issue: How would the Gen-Tie Line affect paleontological resources in the PFYC Class 2, Class 3, and Class 4 areas and the previously recorded paleontological occurrences within one mile of the Gen-Tie Line?***

Direct effects to paleontological resources would occur during surface-disturbing activities, such as construction of transmission structures. Potential indirect effects associated with the Gen-Tie Line may include changes in erosion patterns caused by overland access, construction, soil compaction, or vegetation removal.

Table 3-6 provides the acres of PFYC rank and land ownership within a 150-foot corridor along the Gen-Tie Line (75 feet on either side). Based on the records review, 564.9 total acres of geologic units are present in the study area that have moderate to very high sensitivity for paleontological resources (PFYC 3 through 5; Table 3-6), meaning that a moderate to very-high potential exists for paleontological resources to be present. No geological units with very-high potential (PFYC 5) overlap BLM land. However, 75.7 acres of BLM land are underlain by moderate potential (PFYC 3) and 0.1 acre of BLM land are underlain by high potential (PFYC 4) geologic units.

**Table 3-6. PFYC and Land Ownership within the Gen-Tie Line Boundary**

PFYC Rank	Acres on BLM Land	Acres on State Land	Acres on Private Land	Acres on Undetermined Land	Total Acres
1	0	0	0	0	0
2	9.4	4.4	111.6	1.6	127.0
3	75.7	18.3	346.4	0	440.3
4	0.1	0	36.4	0	35.6
5	0	12.2	76.8	0	89.0
Total Acres	85.2	34.9	571.2	1.6	692.8

The Proposed Action would result in 8.3 acres of temporary disturbance and 0.02 acre of permanent disturbance on BLM-administered land. The entire Gen-Tie Line would result in 107.7 acres of temporary disturbance and 0.2 acre of permanent disturbance (Table 2-2) across all land ownership types. The highest potential for disturbance of paleontological resources would occur during construction of transmission structure foundations, which are anticipated to range from three to six feet in diameter and 12 to 30 feet in depth. These surface disturbances could result in the vertical and horizontal displacement of soil containing paleontological resources and the resulting loss of integrity, loss of information, and alteration of a site's setting. Minimal grading over surficial soil layers would be performed to establish the laydown area.

To minimize direct impacts on paleontological resources, Rock Creek would primarily use existing transmission line access roads because the proposed Gen-Tie Line would parallel the existing WVEC corridor and WAPA 115-kV transmission line. The estimated length of the Gen-Tie Line corridor that has existing access available is 23 miles. Overland access using rubber-tire trucks would occur during construction. This overland access would not involve grading or vegetation clearance and would, therefore, not be anticipated to result in impacts on subsurface paleontological resources.

Direct impacts on paleontological resources would be avoided where feasible during construction by avoiding the placement of poles in locations with known paleontological resources, and by implementation of Applicant-Committed Environmental Protection Measures (Section 2.6, *Applicant-Committed Environmental Protection Measures*) and the paleontological monitoring and mitigation plan. These measures include ceasing work if unreported paleontological resources are encountered, promptly notifying the BLM and other appropriate entities, documenting the discovery by a qualified paleontologist, and not resuming work without approval of the BLM. With the incorporation of avoidance and minimization measures, adverse impacts on paleontological resources are anticipated to be minor.

### **3.6.2.2 Cumulative Impacts**

The CIAA for paleontological resources consists of a 200-foot buffer around the Gen-Tie Line's proposed transmission line route and a 100-foot buffer around access roads and staging areas. Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Ekola Flats Wind Project, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3).

Effects of past, ongoing, and reasonably foreseeable future projects in the CIAA have and will continue to result in the potential loss of known and undiscovered paleontological resources from surface-disturbing activities, as well as the discovery of paleontological resources on Federal lands through pre-construction paleontological surveys and during the course of construction activities. Paleontological resource surveys, as well as documentation and recovery efforts for these resources have contributed to a repository of paleontological resource information that helps inform an understanding of the fossil history in the area. Paleontological resources may also be cumulatively affected by road development, maintenance of infrastructure in the CIAA, and erosion. Some of the ongoing and reasonably foreseeable future projects occur on private lands and may not be subject to the same pre-construction surveys and avoidance and mitigation measures, which may result in impacts on these resources on private land in the CIAA.

The Project could incrementally contribute to direct cumulative effects to paleontological resources from surface-disturbing activities if fossil resources are destroyed or damaged during construction of the transmission structures and subsurface footings. Potential indirect effects associated with the Gen-Tie Line may include changes in erosion patterns caused by overland access, construction, soil compaction, or vegetation removal that uncover previously covered resources and subjects them to erosion, deterioration,

and vandalism. However, given the relatively small scale of the project, the location of the Gen-Tie Line within an existing utility-corridor, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative paleontological resource effects from the Project are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures and the paleontological monitoring and mitigation plan would reduce incremental contributions to cumulative effects by ceasing work if unreported paleontological resources are encountered, promptly notifying the BLM and other appropriate entities, documenting the discovery by a qualified paleontologist, and not resuming work without approval of the BLM.

### 3.6.3 Environmental Effects: Western Route Alternative

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action but with a slightly greater potential to impact paleontological resources. Selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, and the Western Route Alternative would cross 1.2 additional acres land with moderate potential to contain paleontological resources (PFYC 3), one acre of which is on BLM land (Table 3-7). However, the acres of land with high to very high sensitivity for paleontological resources (PFYC 4 and 5) is the same under the Western Route Alternative as the Proposed Action, and effects on these sensitive areas would be the same as described under that alternative.

**Table 3-7. PFYC and Land Ownership within the Western Route Alternative Gen-Tie Line Boundary**

PFYC Rank	Acres on BLM Land	Acres on State Land	Acres on Private Land	Acres on Undetermined Land	Total Acres
1	0	0	0	0	0
2	13.2	1.8	113.7	1.6	130.3
3	76.7	16.0	348.8	0	441.5
4	0.1	0	35.5	0	35.6
5	0	12.2	76.8	0	89.0
Total Acres	90.1	30.0	574.7	1.6	696.4

Source: BLM 2022.

Note: Sum of individual values may not equal total due to rounding.

### 3.6.4 Environmental Effects: No Action Alternative

Under the No Action Alternative, the project would not be constructed on BLM-administered land, and paleontological resources on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## 3.7 Soil Resources

### 3.7.1 Affected Environment

The Gen-Tie Line area comprises a diverse topography, including rolling high-elevation plains, alluvial fans, mesas, cliffs, canyons, and floodplains. Approximately 68 percent of the Gen-Tie Line boundary has publicly available soil data mapped by the Natural Resource Conservation Service (NRCS). Depending on the alternative selected, a total of between 226.5 acres and 222.9 acres of the Gen-Tie Line has no digital data available. Within the mapped areas of the site, 40 different soil map units have been

identified. The five most-prominent soil units within mapped areas of the Gen-Tie Line are Anchutz sandy loam (between 6.9 percent and 7.6 percent), Absher–Stylite complex (between 4.9 percent and 7.3 percent), Browtine very gravelly fine sandy loam (between 4.8 percent and 7.2 percent), Kiltabar–Tismid complex (between 4.4 percent and 6.4 percent), and Luhon–Edlin–Rock outcrop complex (between 4.2 percent and 6.2 percent). These soil types tend to be very deep, well-drained soils that formed in alluvium (USDA 2022).

The BLM uses specific criteria to identify areas with Limited Reclamation Potential (LRP). LRP areas and sensitive soils are sites that are particularly difficult to restore due to highly sensitive physical, biological, or chemical characteristics (BLM 2012). Areas of LRP can be found within the Gen-Tie Line boundary in areas with 25 percent slopes or greater. Table 3-8 presents total acreages with slopes greater than 25 percent within the Gen-Tie Line corridor.

**Table 3-8. Total Acres of Slopes Greater than 25 percent within Gen-Tie Line Boundary for the Proposed Action and Western Route Alternative**

Topographic Slope	Total Acres Proposed Action	Total Acres Western Route Alternative
Less than 25%	686.0	687.7
More than 25%	6.8	8.7

Topography is predominately flat to rolling across the area, with limited areas with LRP (Table 3-8). Elevation generally decreases from south to north in the Gen-Tie Line, ranging from approximately 7,850 to 6,450 feet above mean sea level. Approximately 14 miles of the Gen-Tie Line is above 7,000-foot elevation.

### 3.7.2 Environmental Effects: Proposed Action

#### 3.7.2.1 Direct and Indirect Impacts

***Issue: How many acres of surface would be disturbed by the Gen-Tie Line?***

***Issue: How would surface disturbance affect soil resources, including loss of soils, compaction of soils, and an increase in the potential for erosion?***

The Gen-Tie Line would affect soils and topography by temporarily and permanently disturbing soils along the line, until final reclamation is completed. As seen in Table 2-2, the Gen-Tie Line would result in a total of 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. Minimal grading would occur on site; thus, soil effects would include shallow soil-horizon mixing during construction. This could result in the removal or relocation of organic matter and nutrients to depths where they would be unavailable for restoration. Soil-horizon mixing could also cause less-desirable inorganic compounds, such as carbonates, salts, or weathered materials, to be relocated and affect revegetation by reducing soil productivity. Construction and overland access with rubber-tire trucks could also affect the soil by temporarily altering soil structure, which could reduce infiltration rates, increase erosion, and/or result in compaction. Any temporary two-track that results from overland access would be reseeded with a BLM-approved seed mix as soon as practicable to alleviate long-term soil impacts.



Prior to issuance of the Notice to Proceed, Rock Creek would prepare an SWPPP to identify specific erosion control measures and BMPs to reduce stormwater discharges and the accidental release of petroleum products. The SWPPP would also set forth a schedule for regular inspections of appropriate controls at the construction site and would be developed in accordance with the requirements of the Wyoming Pollutant Discharge Elimination System (WYPDES) Large Construction General Permit. A copy of the SWPPP would be provided for BLM review and input prior to issuance of the Notice to Proceed. With minimal surface disturbance and implementation of the SWPPP, adverse impacts on soil resources would be minor.

The potential for direct and indirect impacts on soils would be minimized by the Applicant-Committed Environmental Protection Measures described in Section 2.6, *Applicant-Committed Environmental Protection Measures*. For example, Rock Creek will implement temporary and permanent soil erosion-control measures for all slopes, channels, ditches, disturbed areas, and soil stockpiles as soon as practicable after the surface-disturbing activities have occurred and grading and clearing activities will be minimized and disturbed areas will be stabilized as soon as practicable.

***Issue: How would soils and vegetation be reclaimed following construction of the Gen-Tie Line to restore these areas in accordance with BLM reclamation objectives and management objectives in the Proposed Action Area?***

Reclamation of disturbed areas would be conducted in accordance with the BLM Wyoming Reclamation Policy (BLM 2012), including provisions for segregating and marking stockpiles and protecting stockpiled material from erosion, contamination, and degradation. Rock Creek would apply soil-handling BMPs to the surface-disturbing activities associated with the Gen-Tie Line, in accordance with the SWPPP. Rock Creek would also control surface runoff and erosion in areas exposed to surface-disturbing activities by reconstructing the landscape to maintain soil stability. Interim reclamation would proceed as soon as practicable for areas that would not be re-disturbed during operations and maintenance and for all other areas following decommissioning. This includes reseeding any temporary two-track which results from overland access during construction with a BLM-approved seed mix.

Areas of LRP can be found throughout the Gen-Tie Line boundary relating to areas with 25 percent slopes or greater, which may be associated with rock outcrops. Sensitive soil conditions also can be found within greasewood-dominated vegetation communities. Areas identified as very shallow, saline, lowland, sands, clayey or badlands within the Gen-Tie Line would also be considered sensitive soil conditions (USDA 2022). Site-specific reclamation procedures and BMPs would be developed in coordination with the BLM. Rock Creek would avoid areas of LRP. Where avoidance is not practicable, BMPs and other strategies designed to address site-specific conditions (e.g., topsoil amendments, soil remediation, weed control) would be implemented to increase reclamation success.

A BLM Reclamation Plan will be prepared for the Proposed Action in accordance with the BLM RFO Reclamation Plan template (BLM 2011b). Reclamation success on BLM-administered lands would be measured against the standards set out in the BLM RFO RMP (BLM 2008b) and the BLM Wyoming Reclamation Policy (2012). These reclamation success standards address soil handling, drainage and erosion control, revegetation, invasive plants and noxious weeds, and landscape reconstruction.

Adverse impacts on soil and vegetation resources during reclamation are anticipated to be negligible.

### **3.7.2.2 *Cumulative Impacts***

The CIAA for soils is the Gen-Tie Line route and the requested 150-foot ROW (75 feet on either side of centerline of the Gen-Tie Line). Reasonably foreseeable future actions that occur within the CIAA and

that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Ekola Flats Wind Project, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3).

Past, ongoing, and reasonably foreseeable projects in the CIAA have and will continue to result in cumulative effects on soil resources including removal of soil and vegetation, exposure of bare soils, soil compaction, and undesirable mixing of soil horizons. These impacts could subsequently result in a loss of soil productivity, increased susceptibility of soil to wind and water erosion, increased sedimentation and surface runoff, elevated salt loads in affected water resources, and the spread of invasive species and noxious weeds (also see Section 3.10, *Vegetation*). These types of cumulative effects would generally persist until successful reclamation of soils and vegetation is complete.

The Proposed Action would incrementally contribute to cumulative effects on soils due to the 107.7 acres of temporary surface disturbance and 0.2 acres of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acres of permanent disturbance on BLM-administered land. In addition, the Proposed Action could contribute to cumulative soil effects through overland travel used to access and maintain the Gen-Tie Line. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility-corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative soil resource effects from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative effects as indicated above in the analysis of direct and indirect impacts on soils.

### **3.7.3 Environmental Effects: Western Route Alternative**

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance – including in LRP areas – and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not change anticipated effects from loss of soils, compaction of soils, or the potential for erosion. The Western Route Alternative would not change the approach to soils and vegetation reclamation following construction from that described under the Proposed Action.

### **3.7.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed on BLM administered land and soil resources on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## **3.8 Special Status Plants**

### **3.8.1 Affected Environment**

The USFWS Information for Planning and Consultation (IPaC) list identifies two plant species listed under the ESA with potential to occur in the requested ROW for the Gen-Tie Line or that may be affected by the project outside of the Gen-Tie Line area, including Ute ladies'-tresses (*Spiranthes diluvialis*) and western prairie fringed orchid (*Platanthera praeclara*). As described in the Rawlins RMP, BLM sensitive species that have the potential to occur in the Gen-Tie Line boundary include persistent sepal yellowcress (*Rorippa calycina*). Information regarding the habitat associations of these species is provided in Table 3-9 below.

**Table 3-9. Special Status Plant Species with Potential to Occur within the Gen-Tie Line Boundary**

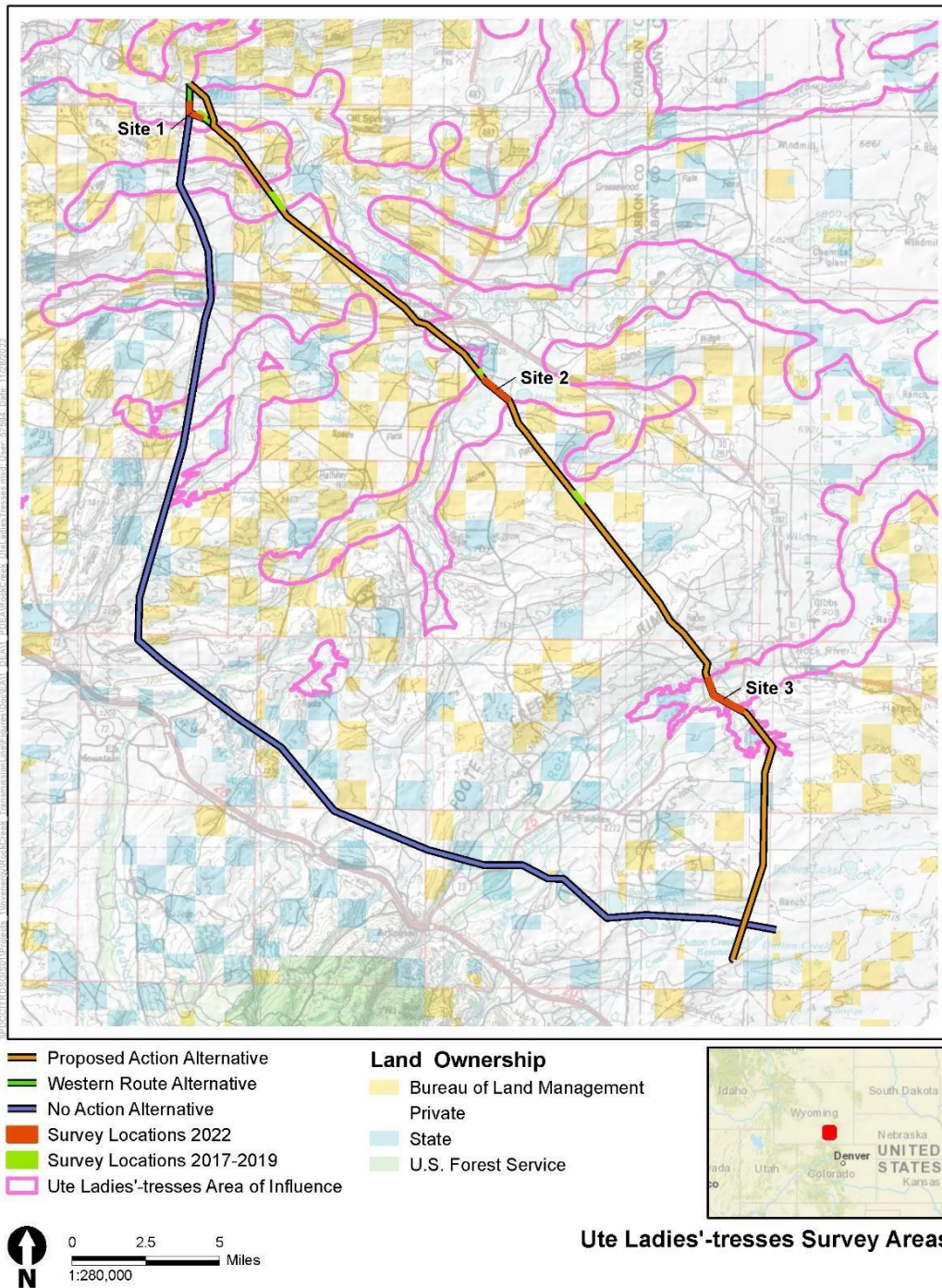
Common Name (Scientific Name)	Regulatory Status	Habitat Association
Ute Ladies'-Tresses ( <i>Spiranthes diluvialis</i> )	FT	Occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist-to-wet meadows along perennial streams. It typically occurs in stable wetland and seep areas associated with old landscape features within historical floodplains of major rivers. It also is found in wetland and seep areas near freshwater lakes and springs. <sup>1</sup>
Western Prairie Fringed Orchid ( <i>Platanthera praeclara</i> )	FT	Occurs in unplowed, calcareous prairies and sedge meadows; has also been observed in successional communities such as borrow pits, old fields, and roadside ditches. This species is known to occur in the Platte River ecosystems in Nebraska downstream of the Gen-Tie Line. This species is not known to occur in Wyoming; however, is included by USFWS for downstream impacts on the Platte River <sup>2</sup>
Persistent Sepal Yellow-Cress ( <i>Rorippa calycina</i> )	SS	Occurs in seasonally inundated river and wetland settings. Typical habitat is described as stock ponds and human-made reservoirs near the high-water line, but it is also known from shallow swales and dry washes. <sup>3</sup>

Sources: <sup>1</sup> Ogle and St. John 2009; <sup>2</sup> USFWS 1996; <sup>3</sup> BLM 2008a.  
Notes: FT = Federally Threatened; SS = BLM Sensitive Species.

Based on a review of known species ranges and each species' habitat requirements, Ute ladies'-tresses and persistent sepal yellowcress were identified as having potential to occur in the Gen-Tie Line boundary. According to the Wyoming Natural Diversity Database-mapped habitat, the Gen-Tie Line is outside Ute ladies'-tresses suitable habitat; however, the area is within the USFWS-designated Area of Influence for the species (UWYO 2022). There are no known persistent sepal yellowcress populations in the requested ROW for the Gen-Tie Line; however, potential habitat for this species occurs within the boundary. The closest mapped occurrence for this species is approximately 1.5 miles to the NE of the Gen-Tie Line, directly north of the town of Medicine Bow (Fertig and Welp 1998).

In August 2022, Western EcoSystems Technology, Inc. (WEST) performed Ute ladies'-tresses presence/absence field surveys on behalf of Rock Creek in most of the requested Gen-Tie Line boundary. Prior to 2022, Ute ladies'-tresses surveys were completed in 2017, 2018, and 2019. Surveys in 2022 consisted of areas that were not surveyed previously, but were subsequently identified as suitable habitat based on a desktop review and field verification. Figure 3-2 illustrates survey areas and years surveyed for this species in the Gen-tie Line boundary. Surveys were timed to coincide with the flowering period of Ute ladies'-tresses in August and included parallel pedestrian transects in suitable habitat, spaced 10 feet apart. No Ute ladies'-tresses were detected during surveys in 2017 to 2019, and 2022 (WEST 2022a). Rock Creek would be required to complete additional years of surveys in affected suitable habitat where three years of data are not available to confirm presence or absence.

Suitable habitat for persistent sepal yellowcress in the Gen-Tie Line boundary includes inundated areas along intermittent and perennial water courses and reservoirs, including the Medicine Bow River, Foote Creek, Dutton Creek and Dutton Creek Reservoir and other intermittent waterways along the Gen-Tie Line route; however, there are no records for this species in the Gen-Tie Line area.



Source: WEST 2022a.

**Figure 3-2. Ute Ladies'-Tresses Survey Areas and Years Surveyed**

### **3.8.2 Environmental Effects: Proposed Action**

#### **3.8.2.1 Direct and Indirect Impacts**

***Issue: How would the Gen-Tie Line affect special status plant species in the vicinity of the Gen-Tie Line, such as the persistent sepal yellowcress and Ute ladies'-tresses?***

The Gen-Tie Line could result in direct impacts on special status plant species during clearing, blading, overland access, and temporary construction activities associated with transmission structures. Direct impacts on special status species plants, if present, may include the loss of habitat, crushing and removal from construction activities and overland construction access, and removal of seed banks in suitable habitats. The Gen-Tie Line would result in 107.7 acres of temporary disturbance from construction activities within the corridor, 8.3 acres of which would be on BLM-administered land. A total of 0.2 acre (0.02 acre on BLM-administered land) would be permanently affected by structures associated with the Gen-Tie Line. The majority of disturbance would occur within the existing and previously disturbed WAPA 115-kV transmission line corridor. There is no direct habitat disturbance to persistent sepal yellowcress on BLM-administered land.

Direct impacts would be short to long term, depending on the species' life history and ability to recolonize or reestablish in disturbed areas. Indirect short-term impacts may include the introduction of non-native species resulting from surface disturbance and increased construction traffic along the ROW. Applicant-Committed Environmental Protection Measures, such as equipment washing and weed inspections prior to entering and exiting the Gen-Tie Line area would be implemented to reduce the potential for nonnative species to establish in the area (Section 2.6, *Applicant Committed Environmental Protection Measures*). A Weed Management Plan will be implemented to ensure that weed infestations are managed in the ROW in an effective and timely manner. Short-term construction may also result in the generation of dust which could affect vegetation photosynthesis.

Information on Ute ladies'-tresses habitat suitability findings is provided in Table 3-10. Suitable habitat in the survey area for this species includes wetlands that were formally delineated in the field by WEST in 2022. No Ute ladies'-tresses were observed during field surveys (WEST 2022a); however, the 2022 surveys represented the first year of three consecutive survey years that are required by the USFWS for this species and do not include the entire Proposed Action route (USFWS 1992). Approximately 1.4 miles of the Proposed Action occurs in Ute Ladies'-tresses AOI that was not surveyed in 2022. However, a nearby crossing of this AOI was surveyed for the Western Route Alternative (Site 1, Medicine Bow River), and conditions and findings in this adjacent parcel are likely to be similar and likely consists of freshwater emergent wetlands along the river corridor.

Proposed Action components would be sited to avoid potential Ute ladies' tresses habitat to the greatest extent practicable. Temporary impacts on suitable habitat may result from driving over wetlands on wood mats using rubber-tired vehicles. Direct impacts resulting from this activity may include crushing existing vegetation, including individual Ute ladies'-tresses, if present, and compaction of soils, and therefore, seed beds. Shading wetland vegetation with mats may also result in reduced photosynthesis in areas covered by wood mats. With the implementation of siting avoidance measures and best management practices described above, impacts on the federally threatened Ute ladies'-tresses are expected to be minor and short term.

**Table 3-10. Ute Ladies'-Tresses Survey Locations, Habitat Suitability, and Survey Results (2022)**

Survey Location	Elevation	Description	Habitat Suitability	Survey Result
Site 1 (Medicine Bow River)*	6,500 ft	Herbaceous wetlands occurred along the low terrace of the river and featured relatively dense vegetation. Dominant species included three-square ( <i>Schoenoplectus pungens</i> ), common spikerush ( <i>Eleocharis palustris</i> ), and foxtail barley ( <i>Hordeum jubatum</i> ). Species commonly observed within the wetlands, but not dominant, included Canada thistle ( <i>Cirsium arvense</i> ), cocklebur ( <i>Xanthium strumarium</i> ), poverty rush ( <i>Juncus tenuis</i> ), prairie cordgrass ( <i>Spartina pectinata</i> ), and silverweed cinquefoil ( <i>Argentina anserina</i> ). Soil textures were sandy, and the site was heavily grazed	There are 0.35 acre of suitable wetland habitat in this survey site, all of which are on BLM lands.	Negative
Site 2 (Medicine Bow River)	6,600 ft.	Site extends across a broad floodplain and oxbow channels adjacent to river corridor and irrigated hay meadows. Wetlands on terraces and oxbows contained Rocky Mountain iris, creeping bentgrass ( <i>Agrostis stolonifera</i> ), salt spring checkerbloom ( <i>Sidalcea neomexicana</i> ), meadow lousewort ( <i>Pedicularis crenulata</i> ), clustered field sedge ( <i>Carex praegracilis</i> ), marsh arrowgrass ( <i>Triglochin palustris</i> ), and scouringrush horsetail ( <i>Equisetum hyemale</i> var. <i>affine</i> ). Portions of hay meadows were recently cut; uncut areas were dominated by dense creeping meadow foxtail ( <i>Alopecurus arundinaceus</i> ). Baltic rush ( <i>Juncus balticus</i> ), Rocky Mountain iris ( <i>Iris missouriensis</i> ), and povertyweed ( <i>Iva axillaris</i> ) were commonly observed in the hay meadows	There are 5.4 acres of suitable wetland habitat in this survey site. All habitat is on private land.	Negative
Site 3 (Rock Creek)	6,900 ft	Wetlands at this site included herbaceous and woody wetlands along Rock Creek, irrigated hay meadows, and seepage wetlands below an irrigation canal on a hillslope above the floodplain. Creeping meadow foxtail was the dominant species within hay meadows and along the high terraces adjacent to Rock Creek. Portions of the hay meadows on the floodplain had been recently cut and could not be surveyed. Narrow bands of riparian forest, dominated by plains cottonwood ( <i>Populus deltoides</i> ssp. <i>monilifera</i> ) and riparian scrub, dominated by willows ( <i>Salix</i> spp.), were observed along Rock Creek and its associated floodplain. Seepage wetlands below an upslope irrigation canal at the north end of the site. The herbaceous wetlands spanned a broad swale and were composed of numerous, commonly occurring species including creeping bentgrass, tufted hairgrass ( <i>Deschampsia cespitosa</i> ), Rocky Mountain iris, marsh arrowgrass, Nebraska sedge ( <i>Carex nebrascensis</i> ), common spikerush, foxtail barley, clustered field sedge, and Mertens' rush ( <i>Juncus mertensianus</i> ).	Elevations at this site are close to the upper end of that preferred by this species. There are 16.7 acres of wetlands in this survey site that are suitable habitat for this species. All habitat is on private land.	Negative
Site 4 (Dutton Creek)	7,200 ft	Herbaceous wetlands occurred on the low terrace adjacent Dutton Creek, in old oxbows on the floodplain, and in hay meadows irrigated by several ditches on the floodplain. Wetlands along the low terrace of Dutton Creek and within the meadow and old oxbows to the north of the creek were relatively diverse and dominated by creeping meadow foxtail, foxtail barley, creeping bentgrass, and Baltic rush. Additional species	Elevations at this site exceed the known elevational range for this species. There is 0.8 acre of suitable wetland habitat on private lands in this survey area.	Negative

Survey Location	Elevation	Description	Habitat Suitability	Survey Result
		observed included silverweed cinquefoil, Rocky Mountain iris, common spikerush, clustered field sedge, and marsh arrowgrass. Hay meadows to the south of Dutton Creek were mostly composed of upland species including smooth brome ( <i>Bromus inermis</i> ), Kentucky bluegrass ( <i>Poa pratensis</i> ), slender wheatgrass ( <i>Elymus trachycaulus</i> ), and western wheatgrass ( <i>Pascopyrum smithii</i> ), but also included some wetland species (e.g., creeping meadow foxtail and foxtail barley).		

\*Site 1 (Medicine Bow River) overlaps suitable habitat that would be crossed by the Western Route Alternative and is around 0.6 miles away from the crossing location of the Medicine Bow River under the Proposed Action. Both crossings contain freshwater emergent wetlands, and conditions and findings at both crossing locations are likely similar.

Impacts to the federally threatened western prairie fringed orchid may result from water depletions in the Platte River watershed. Water depletions during construction may affect the availability of water downstream of the Proposed Action in areas where this species is known to occur, resulting in habitat loss or reduction in habitat quality.

Direct impacts on the BLM-sensitive persistent sepal yellowcress may include crushing or removal of individuals during construction and maintenance if activities are conducted in or near riverbanks and shorelines with sandy soils. Rock Creek would identify suitable habitat in coordination with the BLM within the ROW and conduct field surveys to verify habitat suitability and any potential occurrence of the persistent sepal yellowcress. Rock Creek would avoid areas of occupied suitable habitat to the extent practicable. If areas cannot be avoided, Rock Creek would site project components to minimize disturbance in the identified habitat or occupied areas. Temporary impacts on suitable habitat may result from driving over wetlands on wood mats using rubber-tired vehicles. Direct impacts resulting from this activity may include crushing existing vegetation, including individual plants, if present, and compaction of soils, and therefore, seed beds. Shading wetland vegetation with mats may also result in reduced photosynthesis in areas covered by wood mats. With the implementation of siting avoidance measures and habitat and presence/absence surveys, and the implementation of best management practices described above, impacts on the persistent sepal yellowcress are expected to be minor.

### 3.8.2.2 Cumulative Impacts

The CIAA for special status plant species is the Gen-Tie Line boundary and suitable habitat or sensitive plant population crossed by the Gen-Tie Line route. Reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Lucky Star Wind Project, the Ekola Flats Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3). These projects could contribute to cumulative impacts on special status plants where they result in direct disturbance in the same area the Gen-Tie Line route (see Figure 3-1). The types of cumulative impacts on special status due to ongoing and reasonably foreseeable future projects would be similar to the direct and indirect impacts described above.

The Proposed Action would incrementally contribute to cumulative impacts on special status plants due to the 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. In addition, the Proposed Action could contribute to cumulative effects on special status plants from overland travel used to access and maintain the Gen-Tie Line. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing



utility-corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative impacts on special status plants from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative impacts as indicated above in the analysis of direct and indirect impacts on special status plants.

### 3.8.3 Environmental Effects: Western Route Alternative

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not change anticipated effects on special status plant species. The entire Western Route Alternative was surveyed in 2022, and no Ute ladies'-tresses were observed (Table 3-10).

### 3.8.4 Environmental Effects: No Action Alternative

Under the No Action Alternative, the Gen-Tie Line would not be constructed on BLM-administered land, and special status plants on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## 3.9 Special Status Wildlife Species

### 3.9.1 Affected Environment

The USFWS IPaC list identifies five wildlife and fish species listed under the ESA with potential to occur in the Gen-Tie Line boundary or downstream of the proposed project that may be affected by water depletions (USFWS 2022b): black-footed ferret (*Mustela nigripes*), Canada lynx (*Lynx canadensis*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), and pallid sturgeon (*Scaphirhynchus albus*). Canada lynx, a USFWS threatened species, occurs in moist boreal forests, which do not occur in the Gen-Tie Line area; therefore, this species was not carried forward for analysis in this EA. Eight BLM sensitive wildlife species have the potential to occur in the Gen-Tie Line boundary: fringed myotis (*Myotis thysanodes*), long-eared myotis (*Myotis evotis*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat, swift fox (*Vulpes velox*), white-tailed prairie dog (*Cynomys leucurus*), Brewer's sparrow (*Spizella breweri*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), mountain plover (*Charadrius montanus*), sagebrush sparrow (*Artemisiospiza nevadensis*), sage thrasher (*Oreoscoptes montanus*), ferruginous hawk (*Buteo regalis*), and greater sage-grouse (*Centrocercus urophasianus*). All ESA-listed species and BLM sensitive species with potential to occur in the Gen-Tie Line boundary are listed in Table 3-11, below. The Project also contains habitat for raptor species and migratory birds, which are discussed further in this section.

**Table 3-11. Sensitive Wildlife and Fish Species with Potential to Occur within the Gen-Tie Line Boundary**

Common Name (Scientific Name)	Regulatory Status	Habitat Association and Potential to Occur
<b>Mammals</b>		
Black-Footed Ferret ( <i>Mustela nigripes</i> )	EXPN	Habitat is restricted to prairie dog colonies that are large, contiguous and preferably with a high burrow density. Prairie dog colonies use existing burrows for cover and prairie dogs as their main food source.



Common Name (Scientific Name)	Regulatory Status	Habitat Association and Potential to Occur
Fringed Myotis ( <i>Myotis thysanodes</i> )	SS	Occurs in dry habitats, such as grasslands, deserts, and shrublands, especially with inclusions of pine, pinyon-juniper, or oak woodlands. Maternity colonies occur in caves, abandoned mines, cliffs, human-made structures, and large trees.
Long-eared myotis ( <i>Myotis evotis</i> )	SS	Occurs primarily in coniferous forest and woodlands between 5,000 and 9,800 feet. Roosts in buildings, rock crevices, and hollow trees.
Spotted Bat ( <i>Euderma maculatum</i> )	SS	Occurs in a variety of habitats, including desert shrublands, pinyon-juniper woodlands, subalpine meadows, and coniferous forests. Roosts in cliffs with cracks or crevices near permanent water and open areas for foraging.
Swift Fox ( <i>Vulpes velox</i> )	SS	Typical swift fox habitat consists of short-grass and mid-grass prairies with flat or gently sloping topography. Suitable habitat for this species occurs in the Gen-Tie Line Boundary.
Townsend's Big-Eared Bat ( <i>Corynorhinus townsendii</i> )	SS	Typically found in a wide variety of habitats, but roosts only in caves or cave-like places, such as abandoned mines.
White Tailed Prairie Dog ( <i>Cynomys Leucurus</i> )	SS	Typically found in semi-arid and arid grassland, desert grassland, and shrubland habitats with low to moderate slopes. Colonies are found in areas with open plant communities. The species requires deep and well-drained soils in which to develop burrow systems. This species has been observed in the Gen-Tie Line boundary.
<b>Birds</b>		
Piping Plover ( <i>Charadrius melodus</i> )	FT	Found on bare shorelines and beaches of rivers, lakes, and coasts with little vegetation or disturbance. Suitable breeding habitats are generally wider than 20 meters. This species is not known to occur in the Gen-Tie line boundary. Piping plover occurs in the Platte River Basin. Water depletions proposed for the project may impact this species downstream of the Proposed Action area.
Whooping Crane ( <i>Grus americana</i> )	FE	Migrating individuals feed in croplands and roost in shallow, freshwater wetlands. This species is not known to occur in the Gen-Tie line boundary and vicinity. The whooping crane occurs in the Platte River Basin. Water depletions proposed for the project may impact this species downstream of the Proposed Action area..
Brewer's Sparrow ( <i>Spizella breweri</i> )	SS	Sagebrush-obligate species generally associated with habitats dominated by big sagebrush. Suitable habitat for this species occurs in the Gen-Tie line boundary.
Burrowing Owl ( <i>Athene cucularia</i> )	SS	Open terrain, such as grasslands, prairies, shrub-steppe, and deserts, preferring well-draining or gently sloping areas with low vegetation and a high percentage of bare ground. Requires burrows for nesting, escape cover, prey caching, and vigilance and prefers areas with a high density of available burrow in close proximity. Suitable habitat for this species occurs in the Gen-tie Line boundary.
Ferruginous Hawk ( <i>Buteo regalis</i> )	SS	Occupies open lower-elevation grassland, shrub steppe, and desert habitats and tends to avoid croplands, forests, and narrow canyons. Nesting substrates used in Wyoming include trees and shrubs, artificial nesting platforms, windmills, power poles, and energy-development structures. The Gen-Tie line boundary contains suitable habitat for this species. This species is known to nest within one mile of the Gen-Tie Line boundary
Greater Sage-Grouse ( <i>Centrocercus urophasianus</i> )	SS	Sagebrush-obligate species that depends on large areas of contiguous sagebrush that include a variety of semiarid shrub-grassland (shrub steppe) habitats, especially big sagebrush. The Gen-Tie line boundary is not in greater sage-grouse core area. There are no known leks in the Gen-Tie line boundary.
Loggerhead Shrike ( <i>Lanius ludovicianus</i> )	SS	Nests in dense shrubs or trees and forages in nearby herbaceous or shrubland areas.
Mountain Plover ( <i>Charadrius montanus</i> )	SS	Best considered a sparsely vegetated desert species rather than a short-grass prairie species, although it does use sparsely vegetated prairie, as well as active agricultural fields and recently burned grasslands. Suitable habitat for this species has been mapped in the Gen-Tie line boundary.
Sagebrush Sparrow ( <i>Artemospiza nevadensis</i> )	SS	Found in large and undisturbed tracts of tall, dense sagebrush.

Common Name (Scientific Name)	Regulatory Status	Habitat Association and Potential to Occur
Sage Thrasher ( <i>Oreoscoptes montanus</i> )	SS	Considered a sagebrush obligate species but may occur in desert shrubland habitats.
<b>Amphibians</b>		
Northern Leopard Frog ( <i>Lithobates pipiens</i> )	SS	Found in permanent water sources with wetland vegetation.
<b>Fish</b>		
Pallid Sturgeon ( <i>Scaphirhynchus albus</i> )	FE	Bottom-oriented, large, river-obligate fish inhabiting the Missouri and Mississippi Rivers and some tributaries from Montana to Louisiana. The pallid sturgeon occurs in the Platte River Basin. Water depletions proposed for the project may impact this species downstream of the Proposed Action area.

Sources: <sup>1</sup> USFWS 2014, 2022b.

Note: FE = Federally Endangered; FT = Federally Threatened; SS = BLM Sensitive Species; EXPN = Federal Experimental, Non-Essential Population.

In August 2022, WEST performed biological field surveys on behalf of Rock Creek to document eagle and raptor nests within a one-mile buffer of the Western Route Alternative (Raptor Nest Study Area [RNSA]), to delineate suitable mountain plover habitat within a 150-foot buffer (Mountain Plover Study Area [MPSA]), and to delineate prairie dog colonies within a 175-ft buffer (Prairie Dog Study Area [PDSA]; WEST 2022b). Portions of the Proposed Action were not available during the appropriate survey window to be included in this EA - the northern 1.4-mile portion of the Proposed Action was not included in the MPSA or PDSAs; however, this alignment was included in the RSNA. Previous surveys conducted for wildlife include aerial nest surveys conducted in May 2022. These surveys align with recommendations from the BLM and the Wyoming Game and Fish Department (WGFD) to survey areas of proposed disturbance in relation to these species and to support the identification of measures to avoid and minimize impacts on these sensitive species if they occur in areas of proposed disturbance.

### 3.9.1.1 *Black-footed Ferret*

Based on a review of known species ranges and each species' habitat requirements, the black-footed ferret, an experimental, non-essential population, has potential to occur in the Gen-Tie Line boundary. The Federal Experimental, Non-Essential Population designation accounts for populations that have been established within their historical range under ESA Section 10(j) to aid recovery of the species, but which are not necessary for the continued existence of the species (USFWS 2022b). Therefore, there are no requirements for the black-footed ferret population under ESA Section 7(a)(2).

The proposed Gen-Tie Line is in the southern portion of the Shirley Basin/Medicine Bow Management Area, where a known black-footed ferret population occurs. The Gen-Tie Line boundary contains active prairie dog colonies that may provide foraging habitat for this species. Prairie dog colonies crossed by the project may be large enough to support individual breeding black-footed ferrets (e.g., more than 200 acres in size). Two colonies surveyed in 2022 exhibited the preferred size and burrow density preferred by this species, both of which are partially on BLM-managed lands. No black-footed ferret sign was observed during prairie dog surveys conducted for the Gen-Tie Line; however, no protocol black-footed ferret surveys were conducted.

### 3.9.1.2 *Platte River Species*

The piping plover, whooping crane, and pallid sturgeon are species that occur in the Platte River basin downstream of the Gen-Tie Line and may be affected by water depletions associated with the project. None of these species have the potential to occur in the Gen-Tie Line area.

### 3.9.1.3 *Raptors*

An aerial flight was conducted in May 2022 to assess the presence of raptor nests, which included identification of nest structures within the RNSA. In addition, the BLM RFO provided WEST with historical raptor nest records in July 2022. WEST compared the aerial survey results with the BLM Rawlins FO database to determine whether the historical nests were still present (WEST 2022b). WEST conducted a field verification on August 22 and 23, 2022 (WEST 2022b). Ground surveys were conducted by a team of two WEST biologists at all unconfirmed raptor nest records within the RNSA, where land access was granted. During the survey, biologists searched the nest location and all suitable nest substrate within 100 meters of the proposed transmission line. Because the survey was conducted outside of the breeding season, nests were approached and spatial locations were updated where applicable, because the objective of this survey was to document nest locations. Any new nests discovered were also recorded. Nests were determined to be destroyed only if no nest material or substrate (e.g., fallen tree) was found and confirmed by two biologists.

Twenty-six raptor nests identified during biological surveys are within one mile of the proposed Gen-Tie Line. Five of these nests are on BLM lands; however, none of these are within 825 feet, which is the RMP-designated, no-surface-use avoidance area for all raptor species other than ferruginous hawks, for which the RMP designates a 1,200-foot, no-surface-use avoidance area (BLM 2008b). No ferruginous hawk nests are on BLM lands within 1,200 feet of the proposed Gen-Tie Line or towers. Three ferruginous hawk nests are on private lands within 1,200 feet of portions of the Gen-Tie Line on BLM-managed land, two of which were active in 2022. Table 3-12 presents the results of the raptor nest surveys (WEST 2022b).

**Table 3-12. Presence and Condition of Raptor Nests within 1-mile of the Gen-Tie Line under the Proposed Action and Western Route Alternative**

Species	Original Recorder	Nest Present (?)	Condition	Substrate	2022 Activity	Proximity to Proposed Action (ft)	Proximity to Western Alternative (ft)
Bald Eagle	BLM/SWC A	Yes	Good	Deciduous tree	Inactive	3,496	3,496
Burrowing Owl	BLM/SWC A	No	Not Located	Burrow	Inactive	6,239	4,822
Ferruginous Hawk	SWCA	Yes	Excellent	Ground hillside	Inactive	2,505	2,505
Ferruginous Hawk	SWCA	Yes	Good	Ground hillside	Inactive	2,552	2,552
Ferruginous Hawk	SWCA	Yes	Excellent	Ground hillside	Active	2,761	2,761
Ferruginous Hawk	SWCA	Yes	Good	Human-made structure	Active	261	261
Ferruginous Hawk	BLM	No	Destroyed	Rock/cliff	Unknown	372	372
Ferruginous Hawk	BLM/SWC A	Yes	Good	Rock/cliff	Active	180	180
Ferruginous Hawk	BLM	Yes	Good	Rock/cliff	Unknown	202	202
Ferruginous Hawk	BLM	No	Destroyed	Rock/cliff	Unknown	5,226	3,290
Ferruginous Hawk	BLM	Yes	Poor	Juniper	Unknown	5,177	5,176
Ferruginous Hawk	WEST	Yes	Good	Human-made structure	Unknown	300	300

Species	Original Recorder	Nest Present (?)	Condition	Substrate	2022 Activity	Proximity to Proposed Action (ft)	Proximity to Western Alternative (ft)
<b>Golden Eagle</b>	<b>SWCA</b>	<b>Yes</b>	<b>Good</b>	<b>Rock/cliff</b>	<b>Inactive</b>	<b>3,801</b>	<b>3,801</b>
<b>Golden Eagle</b>	<b>SWCA</b>	<b>Yes</b>	<b>Good</b>	<b>Rock/cliff</b>	<b>Active</b>	<b>3,831</b>	<b>3,831</b>
Golden Eagle	BLM	Yes	Good	Ponderosa Pine	Unknown	3,326	3,325
Golden Eagle	BLM	No	Destroyed	Rock/cliff	Unknown	2,742	2,741
Golden Eagle	WEST	Yes	Good	Ponderosa Pine	Unknown	3,129	3,129
Red-Tailed Hawk	BLM	No	Unknown	Deciduous tree	Unknown	3,139	3,138
Unknown	SWCA	Yes	Good	Deciduous tree	Inactive	<b>2,022</b>	2,022
Unknown	SWCA	Yes	Good	Deciduous tree	Inactive	<b>688</b>	688
Unknown	SWCA	Yes	Good	Ground hillside	Inactive	<b>352</b>	352
Unknown	SWCA	Yes	Excellent	Rock/cliff	Inactive	<b>314</b>	314
Unknown	SWCA	Yes	Fair	Rock/cliff	Inactive	<b>180</b>	180
<b>Unknown</b>	<b>SWCA</b>	<b>Yes</b>	<b>Fair</b>	<b>Rock/cliff</b>	<b>Inactive</b>	1,281	<b>1,281</b>
<b>Unknown</b>	<b>SWCA</b>	<b>Yes</b>	<b>Fair</b>	<b>Rock/cliff</b>	<b>Inactive</b>	1,490	<b>1,490</b>
<b>Unknown</b>	<b>SWCA</b>	<b>Yes</b>	<b>Fair</b>	<b>Rock/cliff</b>	<b>Inactive</b>	1,462	<b>1,462</b>

Source: WEST 2022b.

Bold and highlighted cells = nests on BLM lands within one mile of the proposed Gen-tie Line.

BLM = Bureau of Land Management; SWCA = SWCA Environmental Consultants; WEST = Western EcoSystems Technology, Inc.

### 3.9.1.4 *Migratory Birds*

Migratory birds are protected under the Migratory Bird Treaty Act. The proposed ROW contains habitat that may support a variety of migratory bird species, including grassland- and shrubland-nesting species. Some migratory birds are also considered BLM Sensitive Species and are addressed further in this section.

### 3.9.1.5 *BLM-Sensitive Bat Species*

The fringed myotis, long-eared myotis, spotted bat, and Townsend’s big-eared bat are BLM-Sensitive Species. No bat surveys were conducted for the Gen-Tie Line project. Their potential to occur is based on the presence of suitable foraging habitat in the Gen-Tie Line boundary. Suitable foraging habitat in the Gen-Tie Line boundary for these species include shrublands. Perennial waterways inside the ROW and in the vicinity also provide potential foraging habitat for these species. There is no suitable roosting habitat in the Gen-Tie Line because of the absence of caves, abandoned mines, cliffs with crevices, and abandoned buildings; however, these elements may occur in the region.

### 3.9.1.6 *BLM-Sensitive Swift Fox*

The swift fox is a BLM Sensitive Species. No species-specific surveys were conducted for swift fox. Their potential to occur is based on the presence of suitable habitat in the Gen-Tie Line boundary. Suitable habitat for this species includes grasslands and prairies with flat or gently sloping topography. This species is closely tied to available prey base, such as white-tailed prairie dogs. In the proposed ROW, swift fox may occur near prairie dog colonies or in open shrub or grassland inclusions in sagebrush steppe cover types.

### **3.9.1.7 BLM-Sensitive White-Tailed Prairie Dog**

The white-tailed prairie dog is a BLM Sensitive Species. Point observations of prairie dog colonies were recorded during the May 2022 aerial survey for raptor nests. WEST used this data as a starting point to delineate prairie dog colonies within the PDSA. Desktop-delineated colonies were verified in the field on August 22 to 23, 2022 (WEST 2022b). Boundaries were adjusted from ground-based observations. The status of the colony (active or inactive) was also determined based on the presence of at least one individual and burrow conditions (e.g., open burrows, fresh scat, diggings); otherwise, the colony was classified as inactive. Individuals observed were recorded and identified to species (WEST 2022b). According to field surveys completed by WEST, 48 discrete colonies are within the ROW, 16 of which occur on BLM lands. The total mapped acres of colonies measured approximately 318 acres, 60 acres of which are on BLM lands (WEST 2022b). Approximately 1.4 miles of the northernmost portion of the Proposed Action were not surveyed for prairie dog colonies in the field. In addition, there are 8 discrete prairie dog colonies that occur on the Western Route Alternative, comprising approximately 4.8 acres, in areas that do not overlap the Proposed Action route.

### **3.9.1.8 BLM-Sensitive Burrowing Owl**

The burrowing owl is a BLM Sensitive Species. No species-specific burrowing owl surveys were conducted in the ROW. The potential for this species to occur is based on the presence of suitable habitat in the Gen-Tie Line area. Suitable habitat for this species includes grasslands and prairies, low-stature shrublands, and prairie dog colonies. This species requires available burrows for nesting substrate. In the proposed ROW, burrowing owls may occur in prairie dog colonies. Approximately 60 acres of suitable burrowing owl habitat are on BLM lands within the proposed ROW, comprising prairie dog colonies, grasslands, and low sagebrush/shrubland habitat types.

### **3.9.1.9 BLM-Sensitive Brewer's Sparrow, Sagebrush Sparrow, Sage Thrasher, and Loggerhead Shrike**

The Brewer's sparrow, sagebrush sparrow, and sage thrasher are sagebrush-obligate songbird species and BLM Sensitive Species. The loggerhead shrike occurs in shrubland and grassland habitats. No species-specific surveys were conducted for these species. Their potential to occur is based on the presence of suitable habitat in the proposed ROW. Suitable habitat for these species includes sagebrush land cover types, including big sagebrush shrubland and steppe and low sagebrush shrubland and steppe and other shrubland and grassland habitat types for the loggerhead ~~shrike~~[shrike](#).

### **3.9.1.10 BLM-Sensitive Greater Sage-Grouse**

The greater sage-grouse is a sagebrush-obligate game bird species that is closely associated with big sagebrush communities. Sage-grouse use a mosaic of sagebrush habitat types seasonally. Male greater sage-grouse display on leks during the breeding season, which are generally in openings of low shrub or herbaceous cover in nesting habitat. Nesting habitat consists of sagebrush with an understory of native forbs and grasses. Following brood-rearing in the early summer, greater sage-grouse will move to more mesic areas (e.g., riparian areas or wet meadows) to forage in the late summer and fall. Over the winter, this species uses areas of sagebrush exposed above the snow for foraging and cover (WGFD 2017a).

The greater sage-grouse is a BLM Sensitive Species and WGFD Species of Greatest Conservation Need and is also managed by WGFD as a game bird (BLM 2010; WGFD 2017a). WGFD has established Core Habitat Areas for this species, which are those areas that WGFD has determined to contain the majority of Wyoming's greater sage-grouse population, leks, and most suitable habitat. WGFD defines suitable habitat as habitats with five percent or greater sagebrush canopy, riparian, or wet meadow areas with

suitable forbs within 275 meters of sagebrush habitat, reclaimed habitat with five percent or greater sagebrush canopy with desirable grass and forb cover or natural and human-made wetlands in stream or wetland valleys further than 275 meters from sagebrush habitat if proof of greater sage-grouse is provided (EO 2019-3). On lands managed by the BLM Rawlins FO, this species is managed in accordance with the BLM Rawlins RMP and the 2015 Approved RMP Amendment for Greater Sage-Grouse (BLM 2015), which designates PHMAs for the species. In Wyoming, PHMAs are the same as Core Areas as designated by WGF D.

The proposed ROW does not include PHMAs /Core Areas as identified by the State of Wyoming or the BLM. According to lek data collected by WGF D, there are no known leks within the proposed ROW. There are two leks within 2 miles of the proposed transmission line, neither of which occur on lands managed by the BLM. One of these leks is an occupied lek and the other is an unoccupied lek, which is considered abandoned/inactive (WGF D 2022). There are no occupied or active leks within ¼ to 1 mile of the proposed transmission line (WGF D 2022).

Greater sage-grouse may occur in the Gen-Tie Line area in big sagebrush habitats and adjacent riparian meadows habitat. There are no known leks in the ROW (WGF D 2022). Foraging and brood rearing habitat may occur in the ROW within 2 miles of the known active lek. The species may forage or disperse in sagebrush habitats in the ROW outside of the known lek and the 2-mile boundary.

### **3.9.1.11 BLM-Sensitive Mountain Plover**

The mountain plover is a BLM Sensitive Species. WEST conducted a desktop delineation of potential mountain plover breeding habitat using variables known to influence mountain plover habitat selection (areas with a slope of less than 3 percent, sparse vegetation including grasslands and barren ground). Methods were reviewed with the BLM. WEST conducted a field verification August 22 to 23, 2022, to determine the extent of suitable habitat (WEST 2022b). According to field surveys conducted by WEST, there is approximately 256.4 acres of mountain plover habitat within the survey area, 40.5 acres of which occurs on lands managed by the BLM. No mountain plovers were observed during field surveys conducted in 2022.

### **3.9.1.12 BLM-Sensitive Northern Leopard Frog**

The northern leopard frog is a BLM Sensitive Species. No species-specific surveys were conducted for the northern leopard frog. The potential for this species to occur in the ROW is based on the presence of approximately 2 acres of perennial water and surrounding vegetation that may provide habitat for this species.

## **3.9.2 Environmental Effects: Proposed Action**

### **3.9.2.1 Direct and Indirect Effects**

#### **Issue: How would the Gen-Tie Line affect BLM sensitive species, raptors, and migratory birds?**

Impacts on BLM-Sensitive bats, raptors, and other migratory birds from project development on BLM lands were addressed and disclosed in the Rawlins RMP Final Environmental Impact Statement (FEIS; BLM 2008b), which is hereby incorporated by reference. The Rawlins RMP FEIS (2008b), page 4-453, states,

ROW-approved actions for power lines, communication sites, and wind turbines would increase the potential of injury and death to bats, raptors, and other migratory birds as a result of collisions. Appropriate mitigation measures, such as adjusting the location, height, spacing, coloration, and density of

development, would avoid or reduce disturbance to migration routes, wintering areas, and other sensitive habitats.

### ***Black-footed Ferret***

Direct impacts on black-footed ferret would include the alteration of up to 4.1 acres of temporary disturbance and 0.04 acre of permanent disturbance in prairie dog colonies large enough to support black-footed ferrets. On BLM-managed lands, impacts would include the alteration of up to 2 acres of temporary disturbance in prairie dog colonies that are large enough to support the species. The proposed project would result in the permanent loss of less than 0.001 acre of prairie dog colonies on BLM-managed lands. When compared to the availability of suitable habitat in the vicinity, this represents a negligible change in habitat for this species. Direct impacts on black-footed ferret may also include avoidance of construction areas due to the increase in human presence and noise, resulting in negligible, short-term impacts on individuals.

### ***Platte River Species***

Impacts to Platte River Species may result from water depletions associated with the re-appropriation of an existing water right to be used for construction. The BLM RFO undertook formal consultation with the USFWS to assess impacts on Platte River Species downstream of the Proposed Action area.

### ***Raptors***

Effects to raptors could include the temporary loss of up to 107.7 acres foraging habitat, 8.3 acres of which are on lands managed by the BLM. The proposed action would result in the permanent loss of up to 0.2 acres of foraging habitat, 0.02 acre of which is on BLM-administered lands. Some habitat loss would be sustained over the life of the Proposed Action until final decommissioning and reclamation activities are complete, and vegetation has been reestablished. Increases in noise and human presence during construction may cause raptors to avoid the immediate vicinity of the Gen-Tie Line. Disturbance related to increased human presence and noise could cause individual raptors to avoid nesting or abandon nests if they are in proximity of construction activities occur during the nesting season. Rock Creek would conduct pre-construction surveys within the vicinity of the ROW to identify active nests during the nesting window for raptor species known to occur in the Proposed Action area. There are no known nests within BLM-designated No Surface Use buffers of the Proposed Action. Additionally, with the implementation of pre-construction surveys, No Surface Use areas, and timing limitations, disturbance to nesting raptors would be minimized, and impacts on nesting raptors would be negligible to minor.

During construction, there would be a greater risk for vehicular collisions with large equipment and vehicles along Highways 30/287 and 487. Personnel would be instructed on safe driving techniques and would be instructed to drive speed limits to avoid collision with wildlife. Raptors with large wingspans also face increased risk of electrocution from transmission structures. Overhead transmission line design incorporates APLIC recommendations to minimize this risk, and Rock Creek would mark the Gen-Tie Line with bird flight diverters to reduce collision risk. With application of these measures, direct impacts on raptors resulting from electrocution or collision would be minimized.

### ***Migratory Birds***

Direct impacts on migratory birds may include the alteration of nesting and foraging habitat, including up to 107.2 acres of temporary disturbance 0.2 acre of permanent disturbance in the proposed ROW. The proposed project would result in the alteration of up to 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acres of permanent disturbance on BLM-administered land. A pre-construction migratory bird survey would be conducted between April 1 and July 15 in the proposed

ROW to identify migratory bird nests and implement protection measures to avoid removal of migratory bird nests. Indirect impacts on migratory birds may include the avoidance of the project area during construction due to the increased presence of humans and construction noise. Impacts resulting from the alteration of habitat and from increased human presence and noise would be negligible and short-term.

### ***BLM Sensitive Bat Species***

Direct impacts on BLM Sensitive bat species may include the alteration of foraging habitat, including up to 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acres of permanent disturbance on BLM-administered land. When compared to the availability of suitable habitat in the vicinity, this represents a negligible change in habitat for this species. Direct impacts on BLM-sensitive bat species may include avoidance of construction areas due to human presence and noise, if construction activities were scheduled to occur during the nighttime when individual bats may be active. These impacts are expected to be negligible and short-term.

### ***BLM-Sensitive Swift Fox***

Direct impacts on swift fox on BLM-managed lands would include the alteration of up to 2 acres of temporary disturbance in prairie dog colonies. The proposed project would result in the permanent loss of less than 0.001 acre of prairie dog colonies on BLM-managed lands. When compared to the availability of suitable habitat in the vicinity, this represents a negligible change in habitat for this species. Direct impacts on swift fox may also include avoidance of construction areas due to the increase in human presence and noise, resulting in negligible, short-term impacts on individuals.

### ***BLM-Sensitive White-tailed Prairie Dog***

Due to the presence of active prairie dog colonies in the vicinity of the Proposed Action, direct impacts on prairie dogs may include displacement by construction activities, which could fragment habitat, limit dispersal, and increase potential for vehicle collisions and mortality. There are 10 proposed towers in existing prairie dog colonies on lands managed by the BLM. Direct impacts may include the temporary disturbance of up to 2.5 acres of colonies and the permanent loss of up to 0.001 acre of colonies on BLM lands. Direct impacts may also include mortality due to crushing or entrapment in burrows during construction. Indirect impacts on prairie dogs may result from increased predation pressure from raptors and corvids due to the construction of transmission poles that could provide additional roosting and perching opportunities for hunting. Rock Creek would adhere to Avian Power Line Interaction Committee (APLIC) standards, which would include the use of perch deterrents in prairie dog colonies to minimize the risk of opportunistic predation by raptors. Per the ROD and Approved Rawlins RMP (BLM 2008b), Rock Creek would be required to install anti-raptor-perching devices on above-ground facilities within prairie dog colonies.

### ***BLM-Sensitive Burrowing Owl***

Direct impacts on burrowing owls on BLM-managed lands would include the alteration of up to 2.5 acres of temporary disturbance in prairie dog colonies. The proposed project would result in the permanent loss of less than 0.01 acre of prairie dog colonies on BLM-managed lands. When compared to the availability of suitable habitat in the vicinity, this represents a negligible change in habitat for this species. Direct impacts on burrowing owl may also include avoidance of construction areas due to the increase in human presence and noise, resulting in negligible, short-term impacts on individuals. Migratory bird nesting surveys would be conducted in construction areas if construction is planned for the migratory bird nesting season, April 1 to July 15. If active migratory bird nests are found, Rock Creek would coordinate with the BLM Rawlins Field Office to determine any avoidance or minimization



measures during construction. For the burrowing owl, these measures would include an 825-foot no surface use area, and implementation of timing limitations between April 15 and September 15 within 0.75-mile.

### ***BLM-Sensitive Brewer's Sparrow, Loggerhead Shrike, Sagebrush Sparrow, and Sage Thrasher***

Direct impacts on sagebrush-obligate bird species on BLM-managed lands would include the alteration of to up to 5.3 acres of temporary disturbance in sagebrush habitats. The proposed project would result in the permanent loss of 0.02 acre of sagebrush habitat on BLM-managed lands. When compared to the availability of sagebrush habitat in the vicinity, this represents a negligible change in sagebrush landcover. Direct impacts on sagebrush-obligate birds may also include avoidance of construction areas because of the increase in human presence and noise, resulting in negligible, short-term impacts on individuals. Sagebrush-obligate bird nests may be removed because of vegetation removal. Migratory bird nesting surveys would be conducted in construction areas if construction is planned for the migratory bird nesting season, April 10 to July 10. If active migratory bird nests are found, Rock Creek would coordinate with the BLM Rawlins FO to determine any avoidance or minimization measures during construction.

### ***BLM-Sensitive Greater Sage-Grouse***

All project components are sited outside of the one-quarter to one mile buffer as described in the BLM RMP, which describes the buffer applied to high-profile structures, such as towers, to avoid impacts on lekking greater sage-grouse outside of Core Areas/PHMAs. Six towers are proposed on BLM-managed lands within two miles of an active lek, according to WGFD data (WGFD 2022). Rock Creek would apply timing limitations to construction of these components between March 15 and June 30 per ROD and Approved Rawlins RMP (BLM 2008b) requirements.

Direct impacts on greater sage-grouse would include the alteration of to up to 107.7 acres of temporary disturbance in greater sage-grouse habitats, approximately 8.3 acres of which would occur on lands managed by the BLM. The proposed project would result in the permanent loss of 0.2 acre of habitats, 0.02 acre of which occurs on BLM-managed lands. When compared to the availability of sagebrush habitat in the vicinity, this represents a negligible change in sagebrush landcover. Direct impacts on greater sage-grouse may also include avoidance of construction areas due to the increase in human presence and noise. With the implementation of timing limitations for habitats near active known leks, these impacts would be negligible. Indirect impacts on greater sage-grouse may include increased predation pressure due to the construction of towers and could provide additional perching opportunities for hunting. Rock Creek has sited transmission towers outside of required buffers on leks for this species to avoid or minimize impacts from high profiles structures, which includes increased predation. There could, however, be impacts on greater sage-grouse if the presence of new transmission structures or from vibration or noise from operational transmission lines in the existing utility corridor causes birds to avoid the area. Therefore, indirect impacts on this species may be negligible to minor.

### ***BLM-Sensitive Mountain Plover***

Nine proposed towers are in mountain plover habitat on lands managed by the BLM. Direct impacts on mountain plover include the temporary loss of up to 2.3 acres of habitat and permanent loss of less than 0.01 acre of habitat resulting from construction of proposed towers. When compared to the available mountain plover habitat in the vicinity, this represents a negligible change. Direct impacts on this species would also include temporary displacement due to the increase in human noise and disturbance caused by construction activities. Nesting individuals may be more sensitive to disturbance and noise impacts. Nests, if present, could be destroyed by construction activities. Individual mountain plovers may be killed

or injured by construction equipment or vehicles. Indirect impacts on mountain plovers may include habitat fragmentation and increased predation pressure due to the construction of towers and that could provide additional perching opportunities for hunting.

Impacts to mountain plovers would be minimized through adherence to BLM timing stipulations, which limits construction activities in suitable mountain plover habitat during the breeding season, April 10 to July 10 (BLM 2008b). Additionally, migratory bird nesting surveys would be conducted in construction areas if construction is planned for the migratory bird nesting season, April 1 to July 15. Any surveys would be conducted in accordance with the *Mountain Plover (Charadrius montanus) Exception Request Survey Protocol USDI- Bureau of Land Management, Rawlins Field Office (December 2021)* (BLM 2021). If active migratory bird nests are found, then Rock Creek would coordinate with the BLM Rawlins FO to determine any avoidance or minimization measures during construction. With the application of these measures, direct impacts on nesting mountain plovers resulting from noise or construction disturbance are expected to be negligible.

### ***BLM-Sensitive Northern Leopard Frog***

The Proposed Action is sited outside of the 500-foot buffer of perennial water sources and wetlands on BLM-managed lands per requirements in the ROD and Approved Rawlins RMP (BLM 2008b). No direct impacts on northern leopard frog are anticipated from construction of the Proposed Action. Indirect impacts on this species may include reduction in habitat quality from potential sedimentation or hazardous spills that may enter perennial waterways. Implementation of BMPs outlined in Section 2.6 *Applicant-Committed Environmental Protection Measures* would avoid and minimize potential impacts on soils and waters that could indirectly impact northern leopard frogs and their habitats. As a result, impacts on this species are expected to be negligible.

#### **3.9.2.2 Cumulative Impacts**

The CIAA for special status wildlife species is the Gen-Tie Line boundary plus a 10-mile buffer surrounding the Gen-Tie Line. Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Lucky Star Wind Project, the Ekola Flats Wind Project, the Dunlap Wind Project, the Boswell Springs Wind Project, the Medicine Bow Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, the Gateway South Transmission Line, the Gateway West Transmission Line, the Last Mile Transmission Line, and the Seminole Pumped Storage Project (Figure 3-1 and Table 3-3). The types of cumulative impacts on special status wildlife due to ongoing and reasonably foreseeable future projects would be similar to the direct and indirect impacts described above, but to a greater degree due to the extent of development across the CIAA.

The Proposed Action would incrementally contribute to cumulative effects on special status wildlife due to the 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. In addition, the Proposed Action could contribute to cumulative effects on special status wildlife from overland travel used to access and maintain the Gen-Tie Line. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility-corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative effects on special status wildlife from the Proposed Action are expected to be minor. In addition, Measures Applicant-Committed Environmental Protection would reduce incremental contributions to cumulative effects, as indicated above in the analysis of direct and indirect impacts on special status wildlife.

### **3.9.3 Environmental Effects: Western Route Alternative**

Impacts resulting from temporary or permanent habitat alteration or loss due to construction to the BLM-Sensitive mountain plover, white-tailed prairie dog, burrowing owl, and northern leopard frog on BLM-managed lands are the same as those described for the Proposed Action. For the BLM-sensitive bat species, swift fox, Brewer's sparrow, sagebrush sparrow, sage thrasher, loggerhead shrike, and greater sage-grouse, the Western Route Alternative would result in more temporary habitat alteration or loss on BLM-managed lands than for the Proposed Action: approximately 8.8 acres of temporary disturbance. Impacts to BLM-species resulting from increased human noise and disturbance during construction would be the same under each alternative.

### **3.9.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the project would not be constructed on BLM-administered land, and special status wildlife on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## **3.10 Vegetation**

### **3.10.1 Affected Environment**

#### **3.10.1.1 Native Vegetation**

The proposed Gen-Tie Line is within the Laramie Basin and Rolling Sagebrush Steppe Ecoregions of the Wyoming Basin (Chapman et al. 2004), which is characterized by regions of sagebrush steppe, sagebrush shrubland, grassland, and woodland vegetation communities.

According to the USGS LANDIRE geospatial database, approximately 82 percent of the vegetative cover within the Gen-Tie Line boundary is classified as shrubland, with riparian being the next-largest vegetation feature, accounting for seven percent of the Gen-Tie Line's vegetative cover. Inter-Mountain Basins Big Sagebrush Steppe community accounts for 36 percent of shrubland vegetation. This community consists mostly of perennial grasses and forbs with basin big sagebrush, Wyoming big sagebrush, and/or antelope bitterbrush dominating or co-dominating the open to moderately dense shrub layer. The Inter-Mountain Basins Big Sagebrush Shrubland accounts for 26 percent of shrubland, a community dominated by basin big sagebrush (*Artemisia tridentata ssp. tridentata*) and/or Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*), and may include scattered juniper (*Juniperus spp.*), greasewood (*Sarcobatus vermiculatus*), and saltbush (*Atriplex spp.*) in some stands. The majority of the remaining shrubland (23 percent) consists of Inter-Mountain Basins Montane Sagebrush Steppe (USGS 2016).

#### **3.10.1.2 Weeds and Invasives**

A baseline noxious weed inventory was conducted within the Gen-Tie Line boundary and a 300-foot buffer (referred to herein as the Study Area) by two WEST botanists with a working knowledge of Wyoming designated noxious weeds. The Study Area was surveyed on foot and by vehicle where practicable. Surveys were conducted September 12 to 16, 19 to 23, and 26 to 30, 2022. Botanists mapped weeds from state and county weed lists within the Study Area (WEST 2022e); small populations (less than one acre) were mapped with a Global Positioning System (GPS) unit and large populations (estimated at greater than or equal to one acre) were mapped by digitizing a polygon with aerial imagery-based field maps. Approximately 1.7 miles of the Proposed Action Alternative's route of the Gen-Tie Line on non-federal surface were not surveyed in the field in time for inclusion in this EA..

Six species on the State Designated Noxious Weed list (WWPC 2019a) and five species on the County Declared list (WWPC 2019b) were mapped within the Study Area (WEST 2022e). Plains prickly pear (*Opuntia polyacantha*) and Canada thistle (*Cirsium arvense*) were the most abundant noxious weeds observed (Table 3-13) Canada thistle also was the most widespread species, with 27 populations observed throughout the Study Area.

**Table 3-13. Noxious Weed Species Observed within the Gen-Tie Line Study Area, Carbon and Albany Counties, Wyoming**

Common Name	Scientific Name	Weed List <sup>1</sup>	Acres	Number of Populations
Plains Pricklypear	<i>Opuntia polyacantha</i>	Carbon County	281.9	2
Canada Thistle	<i>Cirsium arvense</i>	State	140.6	27
Halogeton	<i>Halogeton glomeratus</i>	Carbon County	41.1	4
Common Cocklebur	<i>Xanthium strumarium</i>	Carbon County	1.0	3
Cheatgrass	<i>Bromus tectorum</i>	Albany County	0.5	3
Dalmatian Toadflax	<i>Linaria dalmatica</i>	State	0.4	4
Diffuse Knapweed	<i>Centaurea diffusa</i>	State	0.2	7
Russian Olive	<i>Elaeagnus angustifolia</i>	State	<0.1	4
Locoweed	<i>Oxytropis sp.</i>	Albany County	<0.1	1
Common Burdock	<i>Arctium minus</i>	State	<0.1	1
Tamarisk	<i>Tamarix chinensis</i>	State	<0.1	1

<sup>1</sup> State = Wyoming Weed and Pest Council (WWPC) 2019a; Carbon and Albany counties = WWPC 2019b.

### 3.10.2 Environmental Effects: Proposed Action

#### 3.10.2.1 Direct and Indirect Impacts

***Issue: How would the Gen-Tie Line affect existing and desired vegetation communities in the vicinity of the Gen-Tie Line boundary including sagebrush, grasslands, and shrub-steppe vegetation communities?***

The Gen-Tie Line could result in direct impacts on existing vegetation during clearing, blading, overland access, and installation activities associated with transmission structures. Approximately 0.2 acre would be permanently affected by the locations of structures, with 0.02 of this acre on BLM-administered land. If impacts on vegetation were to occur, then the dominant land cover type is shrub/scrub; therefore, most effects to vegetation within the Gen-Tie Line boundary would occur in these cover types. Considering that 82 percent of vegetation within the Gen-Tie Line boundary is identified as shrubland, it is estimated that up to 0.16 acre out of the 0.2 acre of total permanent impacts could be within shrubland.

Approximately 107.7 acres would be temporarily affected by temporary construction activities at structure sites and pull sites. Thus, with 82 percent of the area being shrubland, it is estimated that up to 88.3 acres of these temporary impacts would be within shrubland. The majority of disturbance would occur within the existing WWEC corridor and previously disturbed WAPA 115-kV transmission line corridor. Invasive species and noxious weed infestations can start in disturbed areas, and then travel outside of the disturbance, resulting in indirect effects. Post-reclamation monitoring would help identify new areas of noxious weed populations resulting from construction, allowing their management through chemical and mechanical means to prevent spread and control the existing population.

Short-term direct impacts may include crushing of vegetation due to overland access with rubber-tire vehicles during construction. Indirect short-term impacts may include a small amount of increased construction traffic along the ROW that could result in increased invasive species and noxious weeds

introduction and generation of dust that could affect vegetation photosynthesis. Invasive species and noxious weeds can have a variety of effects on vegetation communities, including reducing the diversity of native species, reducing forage availability and quality for wildlife and livestock, and increasing the frequency of wildfires. To reduce the potential for these adverse effects, noxious weed areas would be flagged based on geo-referenced data collected during the pre-construction survey to ensure avoidance of existing weed populations and limitation of the potential for their spread. Species accounts highlighting characteristics relevant for control of noxious weeds and a spectrum of treatment options would be provided in Rock Creek's Weed Management Plan. Herbicides would be used only in accordance with Rock Creek's Pesticide Management Plan and be administered by a qualified applicator according to Federal and state laws and regulations. Any temporary two-track that results from overland access would be reseeded with a BLM-approved, weed-free certified seed mix as soon as practicable to alleviate long-term vegetation impacts. Applicant-Committed Environmental Protection Measures, such as equipment washing and inspections prior to entering and exiting the Gen-Tie Line boundary, would be implemented to reduce the potential for construction activities to introduce non-native species to the area (Section 2.6). Indirect adverse impacts on vegetation are anticipated to be negligible, whereas direct adverse impacts are anticipated to be minor.

### **3.10.2.2 Cumulative Impacts**

The CIAA for vegetation is the Gen-Tie Line route and the requested 150-foot ROW (75 feet on either side of centerline of the Gen-Tie Line). Reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, and the Last Mile Transmission Line (Figure 3-1 and Table 3-3).

Past, ongoing, and reasonably foreseeable projects in the CIAA have and will continue to result in cumulative effects on vegetation from clearing and crushing of vegetation, surface disturbance, dust deposition, and overland travel. These impacts could subsequently result in a loss of vegetative productivity, increased susceptibility of soil to wind and water erosion that further degrades vegetation, and the spread of invasive species and noxious weeds that can outcompete native vegetation. These types of cumulative effects would generally persist until successful reclamation of soils and vegetation is complete.

The Proposed Action would incrementally contribute to cumulative effects on vegetation due to the 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. In addition, the Proposed Action could contribute to cumulative effects on vegetation from overland travel used to access and maintain the Gen-Tie Line. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility-corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative effects on vegetation from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative effects as indicated above in the analysis of direct and indirect impacts on vegetation.

### **3.10.3 Environmental Effects: Western Route Alternative**

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not change anticipated effects from loss of vegetation due

to clearing, blading, overland access, and installation activities associated with transmission structures or the impacts from crushing of vegetation due to overland access during construction. The Western Route Alternative would not change the approach to vegetation reclamation following construction or to the prevention of invasive species and noxious weed spread from that described under the Proposed Action.

### 3.10.4 Environmental Effects: No Action Alternative

Under the No Action Alternative, the project would not be constructed on BLM-administered land, and vegetation on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## 3.11 Water Resources

### 3.11.1 Affected Environment

The Gen-Tie Line lies within the North Platte watershed, the major hydrologic for the area. According to the USGS National Hydrography Dataset, the Gen-Tie Line would cross 55 surface water features, with seven crossings on BLM-administered lands. Table 3-14 identifies the type and number of surface-water features crossed by the Gen-Tie Line.

**Table 3-14. Surface-Water Crossings within the Gen-Tie Line Boundary**

Water Feature Type	Total Crossings	BLM Crossings
Artificial Path	6	1
Canal/Ditch	9	–
Pipeline: Pipeline Type = Aqueduct	1	–
Stream/River: Hydrographic Category = Intermittent	28	6
Stream/River: Hydrographic Category = Perennial	11	–
<b>Total</b>	<b>55</b>	<b>7</b>

Source: USGS 2022.

According to desktop analysis, the total number of surface-water features crossed by the Gen-Tie Line include nine named features and 46 unnamed features. The named features are Medicine Bow River, Rock Creek, Dutton Creek, Foote Creek, Coalbank Creek, Threemile Creek, Bosler Ditch Number 3, Symes and Deerlove Ditch, and Vandiver Ditch. Of the named features, Medicine Bow River, Rock Creek, Coalbank Creek, and Threemile Creek are classified as perennial. Seven unnamed features are classified as perennial. All other water features are intermittent, with seasonal flow supplied by spring snowmelt and surface runoff from precipitation events.

#### 3.11.1.1 Waters of the United States

WEST performed field delineations of potential Waters of the United States from September 12 to 16, 19 to 23, and 26 to 30, 2022 within a 300-foot buffer along the majority of the Gen-Tie Line (150 feet on either side of 36.4 miles of the 38.1-mile line). Approximately 1.7 miles of the Proposed Action Alternative route of the Gen-Tie Line were not surveyed in the field in time for inclusion in this EA; however, this portion of the Gen-Tie Line has been captured in National Hydrography Dataset (NHD) analyses.

Waterbodies within the Gen-Tie Line boundary and 300-foot buffer, including those identified in the NWI and NHD datasets, were examined by WEST for inclusion as potential Waters of the United States

and were delineated and documented in a similar manner as wetlands. The delineator determined if there was presence of an Ordinary High Water Mark. If present, the Ordinary High Water Mark of each feature was delineated with a GPS. In addition to evaluating the area for features that met waterbody definitions, the professional judgment of the WEST delineator was used to make a determination. The pre-2015 rules and information obtained from preliminary discussions with the USACE – Cheyenne District were applied to assign a determination. The delineator assigned a likely, unlikely, or unknown jurisdictional status to the delineated waterbodies based on these criteria. All waterbody determinations were informal because only USACE can make a formal jurisdictional determination (WEST 2022c).

Approximately 6.8 acres of perennial/intermittent streams or rivers and 1.4 acres of seasonal open water were identified during field surveys. Of these areas, approximately 5.2 acres of perennial/intermittent streams or rivers and 0.03 acre of seasonal open water were labeled by WEST as “likely jurisdictional” (Table 3-16; WEST 2022c).

### **3.11.1.2 Waters of the State**

The Medicine Bow River is also classified as Class 2AB surface waters under Wyoming’s Water Quality Rules and Regulation (WYDEQ 2020). Class 2AB waters are protected for drinking water and cold-water fisheries, where water quality can be lowered only in limited circumstances. The Gen-Tie Line crosses the Medicine Bow River in two locations. The Wyoming Department of Environmental Quality (WYDEQ) also identifies streams that do not meet designated beneficial uses due to water quality impairment. Wyoming’s 2020 *Integrated 305(b) and 3030(d) Report* (WYDEQ 2020) summarizes water-quality conditions in the State of Wyoming and fulfills the requirements of Clean Water Act Sections 305(b), 303(d), and 314(a)(1), which compel all states to assess and report the quality of waters within their state. None of the waterbodies within the Gen-Tie Line are currently listed as impaired by the WYDEQ (2020).

### **3.11.1.3 Proposed Water Use**

A minimal amount of water for concrete mixing, reclamation, vehicle washing, and fugitive dust control would be required for Gen-Tie Line construction (Table 2-4) and no water would be required during operations. Rock Creek would obtain water for construction from a temporary water use agreement between Rock Creek Wind, LLC, and Wheatland Irrigation District. By voluntarily purchasing water from an existing water rights holder, the Gen-Tie Line would not impact other existing water users.

BMPs would be implemented to ensure that construction activities in proximity to ephemeral washes and drainages do not create any surface water quality impacts. Rock Creek would also implement BMPs to prevent the release of diesel fuel, gasoline, oil, hydraulic fluid, or other fluids and substances from vehicles and equipment during construction into nearby washes and drainages or into the soil. These include using off-site fueling stations and maintenance areas to the extent possible; encouraging secondary containment, such as a drain pan or drop cloth, to catch spills/leaks; and training employees and subcontractors in proper fueling and cleanup procedures (Section 2.6, *Applicant-Committed Environmental Protection Measures*).

### **3.11.2 Environmental Effects: Proposed Action**

#### **3.11.2.1 Direct and Indirect Impacts**

***Issue: How would the Gen-Tie Line affect water quality and quantity due to project-related water use and the crossing of an estimated six intermittent streams on BLM-administered land and two perennial rivers not on BLM-administered land?***

Based on review of available data, aerial imagery, topographic maps, and National Hydrography Dataset data (24k), development of Gen-Tie Line components would require crossings of 28 intermittent waterbodies, 11 perennial waterbodies, and one aqueduct along the Gen-Tie Line route. Seven of these crossings would be on BLM-administered land. Field verification of water resources within the Gen-Tie Line boundary identified approximately 6.8 acres of perennial/intermittent streams or rivers and 1.4 acres of seasonal open water, with approximately 5.23 total acres likely to be jurisdictional. Existing access roads would be used to the extent possible for the majority of water crossings along the Gen-Tie Line route (USGS 2022). Where existing roads do not exist, overland access would occur via rubber-tire trucks. In these instances, drainages would be crossed at grade using wood matting. This type of temporary crossing and limited amount of disturbance would support effective reclamation following the crossing. All existing roads would be left in a condition equal to than their condition prior to the construction of the Gen-Tie Line.

Rock Creek would work with the BLM, WYDEQ, and USACE, as applicable, to identify the most effective and reasonable water crossing–improvement solution to minimize potential for sedimentation impacts on waterbodies. Although the Gen-Tie Line would traverse perennial and intermittent streams, disturbance would be minimized, and transmission poles would be placed in upland areas, thus avoiding impacts within the ordinary high-water marks of perennial waterbodies of Medicine Bow River, Rock Creek, Coalbank Creek, and Threemile Creek. No major diversions or long-term disturbance to drainages are expected as a result of the Gen-Tie Line.

The application of BMPs (see Section 2.6, *Applicant-Committed Environmental Protection Measures*) to prevent erosion and sedimentation would minimize effects to surface waters. Additionally, there would be no refueling areas within 500 feet of perennial or intermittent waterbodies, riparian areas, or wetlands. An SWPPP would be completed prior to issuance of the Notice to Proceed and would identify specific erosion measures and BMPs to reduce stormwater discharges and the accidental release of petroleum products in accordance with the requirements of the WYPDES Large Construction General Permit.

Gen-Tie Line construction would also comply with all BLM BMPs and requirements contained within the Rawlins FO RMP (BLM 2008b), as applicable. Resource protection measures include the avoidance of surface-disturbing activities on BLM-administered lands within identified 100-year floodplains, 500 feet from perennial surface water and/or wetland and riparian areas, and 100 feet from ephemeral channels. Additionally, implementation of the Gen-Tie Line SWPPP, BMPs, WYPDES Large Construction General Permit conditions, and Clean Water Act Section 404 permit conditions (e.g., NWP 12) would avoid and minimize water-quality impacts. Therefore, adverse impacts on water quality and quantity are anticipated to be minor.

#### **3.11.2.2 Cumulative Impacts**

The CIAA for water resources is the extent of the 10 HUC 12 sub-watersheds that intersect the Gen-Tie Line route, including Bluff Ditch-Rock Creek, Coalbank Creek, East Allen Lake-Medicine Bow River, Horne Lake-Medicine Bow River, Lower Dutton Creek, Lower First Sand Creek, Lower Foote Creek, Pierce Reservoir-Rock Creek, Pine Draw, and Threemile Creek. Ongoing and reasonably foreseeable



future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Lucky Star Wind Project, the Ekola Flats Wind Project, the Dunlap Wind Project, the Boswell Springs Wind Project, the Medicine Bow Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, the Gateway South Transmission Line, the Gateway West Transmission Line, the Last Mile Transmission Line, and the Seminole Pumped Storage Project (Figure 3-1 and Table 3-3).

The ongoing and reasonably foreseeable future projects in the CIAA have resulted in cumulative effects to water resources, including surface disturbance and associated increased erosion and sedimentation of soils and other materials into surface waters that may affect water quality. The ongoing and reasonably foreseeable future projects have also resulted in crossing of streams and ephemeral and intermittent washes that may have resulted in cumulative effects to water quality. The ongoing and reasonably foreseeable future projects in the CIAA have also likely required water from municipal sources or groundwater wells for construction and operational activities such as dust suppression, resulting in cumulative effects to water quantity. However, given the general limited volume of water required for construction and operation of transmission lines and wind projects, cumulative effects on water quantity due to these projects are likely negligible.

The Proposed Action would incrementally contribute to cumulative effects on water quality due to the 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. The surface disturbance would incrementally contribute to erosion and sedimentation that could be transported to surface water features and degrade water quality. In addition, construction of the Proposed Action would require the crossings of 28 intermittent waterbodies, 11 perennial waterbodies, and one aqueduct along the Gen-Tie Line route, including seven crossings on BLM-administered land. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility-corridor that has already been disturbed, the temporary nature of water crossings, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative effects on water resources from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative effects as indicated above in the analysis of direct and indirect impacts on water resources. The Proposed Action is not expected to result in new groundwater use or water depletions in the CIAA and, as such, would not incrementally contribute to cumulative effects on water quantity.

### **3.11.3 Environmental Effects: Western Route Alternative**

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not change the number of waterbody crossing or meaningfully change effects to water quality from sedimentation. The Western Route Alternative would not change the approach to construction near waterbodies or the applicant committed measures from those described under the Proposed Action.

### **3.11.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the project would not be constructed on BLM-administered land, and water resources on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

### 3.12 Wetlands/Riparian Zones

#### 3.12.1 Affected Environment

Wetland delineations for the Gen-Tie Line were performed by WEST September 12 to 16, 19 to 23, and 26 to 30, 2022 within a 300-foot buffer along the majority of the Gen-Tie Line (150 feet on either side of 36.4 miles of the 38.1-mile line). Approximately 1.7 miles of the Proposed Action Alternative route of the Gen-Tie Line were not surveyed in the field in time for inclusion in this EA; however, this portion of the Gen-Tie Line has been captured in NWI and NHD analyses. Wetlands that were delineated were done so in accordance with the *1987 Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* (Version 2.0; USACE 2010). The 1987 Manual outlines a three-parameter approach, which consists of hydrophytic plants (dominant vegetative cover), hydric soils, and wetland hydrology. All three parameters must be present and meet the wetland criteria of each parameter in order for an area to be considered a wetland.

Initial desktop review using the USFWS’s NWI and U.S. Geological Survey’s NHD revealed approximately 11.4 total acres of wetlands and waterbodies within the Proposed Action Alternative Gen-Tie Line boundary, with approximately 10.9 acres on private lands, 0.2 acre on State land, and 0.3 acres on BLM-administered land (Table 3-15). The Western Alternative boundary encompasses approximately 10.7 total acres of wetlands and waterbodies with 10.4 acres on private land, no acres on State land, and 0.3 acres on BLM-administered land (Table 3-16).

**Table 3-15. NWI and NHD Identified Wetland, Surface Water, and Riparian Areas within the Gen-Tie Line Proposed Action Alternative Boundary**

Wetland or Riparian Habitat Type	Proposed Action Acres on Private Land	Proposed Action Acres on BLM-administered Land	Proposed Action Acres on State Land	Proposed Action Total Acres
Freshwater Emergent Wetland	7.1	0.1	0.1	7.3
Freshwater Forested/Shrub Wetland	0.9	0	0	0.9
Perennial/Intermittent Stream or River	0.2	0	0.1	0.3
Open Water	2.7	0.2	0	2.9
<b>Total</b>	<b>10.9</b>	<b>0.3</b>	<b>0.2</b>	<b>11.4</b>

Source: NWI 2022; NHD 2022.

**Table 3-16. NWI and NHD Identified Wetland, Surface Water, and Riparian Areas within the Gen-Tie Line Western Alternative Boundary**

Wetland or Riparian Habitat Type	Western Alternative Acres on Private Land	Western Alternative Acres on BLM-administered Land	Western Alternative Acres on State Land	Western Alternative Total Acres
Freshwater Emergent Wetland	6.8	0.1	0	6.9
Freshwater Forested/Shrub Wetland	0.9	0	0	0.9
Perennial/Intermittent Stream or River	0.3	0	0	0.3
Open Water	2.4	0.2	0	2.6
<b>Total</b>	<b>10.4</b>	<b>0.3</b>	<b>0</b>	<b>10.7</b>

Source: NWI 2022; NHD 2022.

As discussed in Section 3.11.1.1, waterbodies within the Gen-Tie Line boundary and 300-foot buffer, including those identified in the NWI and NHD datasets, were examined by WEST for inclusion as potential Waters of the United States and were delineated and documented in a similar manner as wetlands.

Fifty-three wetlands and twenty waterbodies were delineated in the field-surveyed portions of the Gen-Tie Line boundary and buffer. Table 3-17 provides a summary of classifications and acreages of the wetlands and waterbodies found, including 43 palustrine emergent wetlands, eight palustrine shrub-scrub wetlands, two palustrine forested wetlands, five segments of named streams, two open water areas, and 13 irrigation ditches (WEST 2022c).

**Table 3-17. Field Verified Wetland, Surface Water, and Riparian Areas within the Gen-Tie Line Boundary**

Wetland or Riparian Habitat Type	Acres Likely Jurisdictional	Acres Unlikely Jurisdictional	Acres Unknown	Total Acres
Palustrine Emergent	5.5	6.0	9.6	21.0
Palustrine Forested	1.0	–	–	1.0
Palustrine Shrub-Scrub	11.0	–	–	11.0
Perennial/Intermittent Stream or River	5.2	–	1.6	6.8
Open Water (Seasonal)	0.03	1.4	–	1.4
<b>Total</b>	<b>22.8</b>	<b>7.4</b>	<b>11.2</b>	<b>41.3</b>

Source: WEST 2022c.

During field visits, WEST identified 41.3 total acres of wetlands and waterbodies in the surveyed portions of the Gen-Tie Line boundary and buffer. Of the wetlands and waterbodies identified, the delineator’s preliminary findings support that approximately 22.8 acres are likely jurisdictional, 7.4 acres are unlikely to be jurisdictional, and 11.2 acres are unknown whether they are jurisdictional (WEST 2022c).

BMPs would be implemented to ensure that construction activities in proximity to wetlands and riparian areas do not create any water quality impacts. Rock Creek would also implement BMPs to prevent the release of diesel fuel, gasoline, oil, hydraulic fluid, or other fluids and substances from vehicles and equipment during construction into nearby washes and drainages or into the soil. These include using off-site fueling stations and maintenance areas to the extent possible; encouraging secondary containment, such as a drain pan or drop cloth, to catch spills/leaks; and training employees and subcontractors in proper fueling and cleanup procedures (Section 2.6, *Applicant-Committed Environmental Protection Measures*).

### 3.12.2 Environmental Effects: Proposed Action

#### 3.12.2.1 Direct and Indirect Impacts

***Issue: How would the Gen-Tie Line affect wetlands and riparian zones, particularly emergent wetlands on BLM-administered land crossed by the Proposed Action?***

A total of 41.3 acres of wetlands and waterbodies were identified within the surveyed portion of the Gen-Tie Line boundary, with 7.4 acres potentially jurisdictional (WEST 2022c; Table 3-15). Existing access roads would be used to the extent possible for the majority of wetland and surface water crossings along the Gen-Tie Line route. Where existing roads do not exist, overland access would occur via rubber-tire trucks. In these instances, wetlands would be crossed using wood matting. Temporary impacts on wetland and riparian habitat may result from driving over wetlands on wood mats. Direct impacts resulting from

this activity may include crushing existing vegetation and compaction of soils, and therefore, seed beds. Shading wetland vegetation with mats may also result in reduced photosynthesis in areas covered by wood mats.

The Rawlins FO RMP requires that surface disturbing activities on BLM-administered land be at least 500 feet from perennial surface water and/or wetland and riparian areas, and 100 feet from ephemeral channels (BLM 2008b). Proposed Action structures would be sited consistent with these requirements. Should these buffer distances prove infeasible, Rock Creek could request an exception from the BLM based on the specific on the ground conditions identified during onsite reviews and appropriate site-specific engineering and mitigation plans. These plans would identify the most effective and reasonable water crossing–improvement solution to minimize potential for long-term impacts on wetlands and would include consultation with the BLM, WYDEQ, and USACE, as applicable. Depending on final engineering design, surface disturbance and structures on state and private land could be placed closer than 500 feet from perennial surface water and/or wetland and riparian areas and 100 feet from ephemeral channels.

The application of BMPs (see Section 2.6, *Applicant-Committed Environmental Protection Measures*) to prevent erosion and sedimentation would minimize effects to wetlands and surface waters. Erosion- and sediment-control measures under consideration include, but are not limited to, installation of rock-check dams to reduce water velocity and encourage sediment settling, installation of erosion-control fencing, where required, and implementation of other proven-effective measures. Additionally, there would be no refueling areas within 500 feet of perennial or intermittent waterbodies, riparian areas, or wetlands. A SWPPP would be completed prior to issuance of the Notice to Proceed and would identify specific erosion measures and BMPs to reduce stormwater discharges and the accidental release of petroleum products in accordance with the requirements of the WYPDES Large Construction General Permit.

With the implementation of siting avoidance measures and best management practices described above, impacts on wetlands and riparian zones are expected to be minor and long-term.

### **3.12.2.2 Cumulative Impacts**

The CIAA for wetlands/riparian zones is the Gen-Tie Line route and the requested 150-foot-wide ROW (75 feet on either side of center line). Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Ekola Flats Wind Project, the Lucky Star Wind Project, the Seven Mile Hill Wind Project, and the High Plains McFadden Wind Project (Figure 3-1 and Table 3-3). All of these projects have ongoing or reasonably foreseeable surface disturbance and other project-related activity that would occur in the same wetland areas affected by the Proposed Action.

The Proposed Action would incrementally contribute to cumulative effects on wetlands due to the placement of transmission poles and associated subsurface footings near wetland areas and through overland travel through wetlands for construction and operational activities. Given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative effects on wetlands/riparian zones from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative effects as indicated above in the analysis of direct and indirect impacts on wetlands/riparian zones.

### 3.12.3 Environmental Effects: Western Route Alternative

Direct, indirect, and cumulative impacts from the Western Route Alternative would be the same as those described under the Proposed Action. While selection of the Western Route Alternative would result in a slight increase in overall acres of surface disturbance and slight decrease in permanent structures (Table 2-5) compared to the Proposed Action, it would not change anticipated temporary effects on from the use of matting to cross selected wetlands during construction or the long-term effects from the placement of structures near wetland and riparian areas. On BLM-administered land, the Rock Creek would be required to avoid surface disturbance with 500 feet of wetland and riparian areas, and impacts would be the same as under the Proposed Action.

### 3.12.4 Environmental Effects: No Action Alternative

Under the No Action Alternative, the project would not be constructed on BLM-administered land. Wetlands and riparian zones on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.

## 3.13 Wildlife and Fish

### 3.13.1 Affected Environment

#### 3.13.1.1 Designated Big-Game Habitat

The Gen-Tie Line crosses big game hunt units for antelope, deer, and elk, including antelope Units 43, 46, and 47, deer Unit 70, and elk Unit 16 (WGFD 2017b) The following designated big-game habitat is present in the Gen-Tie Line boundary (WGFD 2021).

- Elk winter/yearlong range and yearlong range
- Moose winter/yearlong range
- Mule deer crucial winter/yearlong range, winter/yearlong range, and yearlong range
- Pronghorn crucial winter/yearlong range, winter/yearlong range, and yearlong range
- White-tailed deer winter/yearlong range and yearlong range

Approximately 69 percent of the Gen-Tie Line boundary lies within the pronghorn winter/yearlong crucial range, 46 percent is within the elk winter/yearlong range, 42 percent is within the mule deer winter/yearlong range, and 39 percent is within the moose winter/yearlong range (Table 3-18). The acreages of big-game habitat within the Gen-Tie Line boundary are reported in Table 3-18.

**Table 3-18. Designated Big-Game Habitat within the Gen-Tie Line Boundary for the Proposed Action and Western Route Alternatives**

Species	Range Season		Proposed Action		Western Route Alternative
		Acres	Percent	Acres	Percent
Elk	Winter/Yearlong Range	326.4	47.3	319.7	45.9
Elk	Yearlong Range	34.2	5.0	44.6	6.4
Moose	Winter/Yearlong Range	272.0	39.5	272.0	39.0

Species	Range Season		Proposed Action		Western Route Alternative
		Acres	Percent	Acres	Percent
Mule Deer	Winter/Yearlong Crucial Range	42.4	6.2	46.0	6.6
Mule Deer	Winter/Yearlong Range	292.0	42.4	292.0	42.2
Mule Deer	Yearlong	294.0	42.6	294.0	41.9
Pronghorn	Winter/Yearlong Crucial Range	475.6	69.0	479.2	68.8
Pronghorn	Winter/Yearlong Range	96.9	14.1	96.9	13.9
Pronghorn	Yearlong	120.2	17.4	120.2	17.3
White-Tailed Deer	Winter/Yearlong Range	22.6	3.3	22.6	3.2
White-Tailed Deer	Yearlong Range	20.8	3.0	20.8	3.0

Source: WGFD 2021.

### 3.13.1.2 *Fish and Amphibians*

The Gen-Tie Line boundary crosses perennial waterways, including the Medicine Bow River, Rock Creek, Coalbank Creek, and Threemile Creek and seven unnamed perennial stream reaches. There are no crossings of perennial waters on BLM-managed lands. Resource-specific surveys were not conducted for fish or amphibians the potential for these species to occur is based on the presence of perennial water in the Gen-Tie Line Boundary. There are no Blue Ribbon trout streams in the Gen-Tie Line boundary. Fish and amphibians may occur in perennial waters or intermittent waterways within the Proposed Action area.

## 3.13.2 **Environmental Effects: Proposed Action**

### 3.13.2.1 *Direct and Indirect Impacts*

***Issue: How would the Gen-Tie Line affect wildlife and fish in the Gen-Tie Line boundary vicinity, including pronghorn, mule deer, and elk winter, yearlong habitats, and mule deer and pronghorn crucial range in the Gen-Tie Line boundary vicinity?***

Impacts on bats, raptors, and other migratory birds from project development on BLM lands were addressed and disclosed in the Rawlins RMP FEIS; BLM 2008b), which is hereby incorporated by reference. The Rawlins RMP FEIS (2008b), page 4-453, states,

*ROW-approved actions for power lines, communication sites, and wind turbines would increase the potential of injury and death to bats, raptors, and other migratory birds as a result of collisions. Appropriate mitigation measures, such as adjusting the location, height, spacing, coloration, and density of development, would avoid or reduce disturbance to migration routes, wintering areas, and other sensitive habitats.*

Potential impacts on big game and fisheries from the Gen-Tie Line are further described below.

### ***Big Game***

Direct effects to big-game species would include the removal of vegetation associated with Gen-Tie Line construction (see Table 2-2) that could potentially eliminate forage for big game species. Other direct effects to big game include an increase potential for mortality and injury associated with vehicular collisions. Increased vehicular traffic on Highways 30/287 and 487 during construction or trucks and equipment on existing access roads may injure or kill individuals, and the local populations may

experience higher levels of mortality. Increased human presence and noise at the Gen-Tie Line location during construction also could result in habitat fragmentation and functional habitat loss due to big-game avoidance of the Gen-Tie Line boundary. Access by big game animals to the Gen-Tie Line boundary would not be restricted (e.g., no new fences) and big game would continue to have access to seasonal ranges within the Gen-Tie Line boundary. During construction activities and interim reclamation, big game may expend more energy having to travel around the Gen-Tie Line area and travel farther to meet nutritional and energy needs. Limited increased human activity would occur in the Gen-Tie Line boundary during operations due to ongoing operations and maintenance.

The BLM Rawlins RMP contains a stipulation restricting activities or surface use from November 15 to April 30 to protect big-game winter habitat and from May 1 to June 30 to protect big-game birthing areas (BLM 2008b). The proposed Gen-Tie Line does not cross any big-game parturition areas.

### ***Fish and Amphibians***

No project components are in perennial waterways. No fish habitat is expected to be lost as a result of the Proposed Action. Direct impacts on fish resulting from the Proposed Action may result from an increase in sedimentation entering waterways during construction, which may cause a decrease in water quality downstream of the Proposed Action. Increases in sedimentation may result in mortality or injury to fish resulting from clogged gills or reduction in visibility and subsequent inability to find food resources. Hazardous spills may result in reduction of water quality and direct injury or mortality to fish. Avoidance and minimization measures described previously for water resources and wetlands/riparian zones would reduce impacts on fish species occurring in the Proposed Action area. With the implementation of these measures, direct impacts on fish resulting from the Proposed Action are expected to be negligible.

#### ***3.13.2.2 Cumulative Impacts***

The CIAA for wildlife and fish species is the Gen-Tie Line boundary plus a 10-mile buffer surrounding the Gen-Tie Line, as well as the extent of the big game herd units that overlap the Gen-Tie Line route. Ongoing and reasonably foreseeable future actions that occur within the CIAA and that could contribute to cumulative impacts include the Rock Creek Wind Facility, the Lucky Star Wind Project, the Ekola Flats Wind Project, the Dunlap Wind Project, the Boswell Springs Wind Project, the Medicine Bow Wind Project, the Seven Mile Hill Wind Project, the High Plains McFadden Wind Project, the Gateway South Transmission Line, the Gateway West Transmission Line, the Last Mile Transmission Line, and the Seminole Pumped Storage Project (Figure 3-1 and Table 3-3). The types of cumulative impacts on wildlife and fish due to ongoing and reasonably foreseeable future projects would be similar to the direct and indirect impacts described above but to a greater degree due to the extent of development across the CIAA.

The Proposed Action would incrementally contribute to cumulative effects on wildlife and fish due to the 107.7 acres of temporary surface disturbance and 0.2 acre of permanent disturbance, including 8.3 acres of temporary disturbance on BLM-administered land and 0.02 acre of permanent disturbance on BLM-administered land. In addition, the Proposed Action could contribute to cumulative effects on wildlife and fish from overland travel used to access and maintain the Gen-Tie Line wildlife/vehicle collisions due to project-related traffic. However, given the relatively small scale of the Proposed Action, the location of the Gen-Tie Line within an existing utility-corridor that has already been disturbed, and the proximity to other transmission lines and large wind development projects, the incremental contribution to cumulative effects on wildlife and fish from the Proposed Action are expected to be minor. In addition, Applicant-Committed Environmental Protection Measures would reduce incremental contributions to cumulative effects as indicated above in the analysis of direct and indirect impacts on wildlife and fish.

### **3.13.3 Environmental Effects: Western Route Alternative**

Impacts on wildlife resulting from temporary or permanent habitat alteration would be similar for the Western Route Alternative, resulting in 0.5 acre more temporary disturbance and the same amount of permanent disturbance. The Western Route Alternative would result in more temporary habitat alteration or loss on BLM-managed lands than for the proposed action: approximately 8.8 acres of temporary disturbance. Impacts to wildlife resulting from increased human noise and disturbance during construction would be the same under each alternative.

### **3.13.4 Environmental Effects: No Action Alternative**

Under the No Action Alternative, the project would not be constructed on BLM-administered land. Wildlife and fish on Federal land would continue to be subject to existing conditions. The BLM lands in the area would remain open for other uses.



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## 4 CONSULTATION, COORDINATION, AND LIST OF PREPARERS

### 4.1 Agencies Consulted

#### 4.1.1 U.S. Fish and Wildlife Service

The BLM submitted a Biological Assessment to the USFWS Ecological Services Office pursuant to its consultation requirements under Section 7 of the Endangered Species Act. Consultation addressed Ute ladies’-tresses in the Gen-Tie Line project area and listed species in the Platte River system. The BA resulted in a no effect determination for Ute ladies' tresses. Water depletions associated with construction of the power line may affect and is likely to adversely affect Platte River Species. The USFWS Ecological Services Office issued a Biological Opinion on February 17, 2023 and the BLM incorporated requested conservation measures into the permit stipulations.

#### 4.1.2 Wyoming State Historic Preservation Office

The BLM led consultation with the Wyoming State Historic Preservation Office regarding historic properties pursuant to the National Historic Preservation Act and implementing regulations at 36 CFR 800. The BLM performed a Class I and Class III survey, which resulted in a Finding of No Adverse Effect. The BLM received concurrence from the Wyoming State Historic Preservation Office in February 2023, concluding the consultation process.

#### 4.1.3 Wyoming Game and Fish Department

Rock Creek has consulted with WGFD to determine agency concerns, discuss wildlife survey protocols, and to develop the WGFD Monitoring Plans.

### 4.2 List of Preparers

This EA was prepared by a contractor and its content was reviewed and approved by the BLM prior to public distribution. Preparers, reviewers, and contributors are listed in Table 4-1.

**Table 4-1. List of Preparers**

Name	Role
<b>Bureau of Land Management</b>	
Carla Fiedor	BLM Project Manager/Lands and Realty
Todd Smith	Lands and Realty
Bonnie Bruce	Cultural and Tribal Resources
Craig Thomas	Paleontology
Mary Read	Fish, Wildlife, and Special Status Species
Anna Rothleutner	Noxious Weeds and Invasive Species
Cheryl Newberry	Range Resources and Livestock Grazing
<b>NEPA Contractor</b>	
ICF	

## 5 REFERENCES

- Albany County. 2008. *Albany County Comprehensive Plan*. Available: <https://www.co.albany.wy.us/256/Plans-Reports>. Accessed: October 29, 2021.
- Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.
- Bureau of Land Management (BLM). 2007. *Record of Decision. Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States*. Programmatic Environmental Impact Statement. Washington D.C.: U.S. Department of Interior.
- . 2008a. *BLM National Environmental Policy Act Handbook H-1790-1*. Available: [https://www.blm.gov/sites/blm.gov/files/uploads/Media\\_Library\\_BLM\\_Policy\\_Handbook\\_h1790-1.pdf](https://www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_Handbook_h1790-1.pdf). Accessed: August 2022.
- . 2008b. *Record of Decision and Approved Rawlins Resource Management Plan*. Available: <https://eplanning.blm.gov/eplanning-ui/project/63197/570>. Accessed: September 2022.
- . 2009. *Approved Resource Management Plan Amendments/Record of Decision (ROD) for Designation of Energy Corridors on Bureau of Land Management Administered Lands in the 11 Western States*. Available: [https://corridoreis.anl.gov/documents/docs/Energy\\_Corridors\\_final\\_signed\\_ROD\\_1\\_14\\_2009.pdf](https://corridoreis.anl.gov/documents/docs/Energy_Corridors_final_signed_ROD_1_14_2009.pdf). Accessed: September 2022.
- . 2010. BLM Wyoming Sensitive Species Policy and List. Available: <https://www.blm.gov/sites/blm.gov/files/docs/2021-01/wy2010-027atch2.pdf>.
- . 2011b. Wyoming-BLM Reclamation Policy Suggested Reclamation Plan Template for Oil and Gas Operations. Available at: <https://www.blm.gov/sites/default/files/policies/IM2012-032%20Attachment%20%200%26GReclTemplate.pdf>. Accessed: August 2022.
- . 2012. Wyoming Reclamation Policy. Available: <https://www.blm.gov/sites/blm.gov/files/policies/IM2012-032%20Attachment%201%20WYReclPolicy.pdf>. Accessed: August 2022.
- . 2015. *Bureau of Land Management Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs Field Offices Approved Resource Management Plan Amendment for Greater Sage-Grouse*. Available: [https://eplanning.blm.gov/public\\_projects/lup/9153/63189/68431/002\\_Wyoming\\_ARMPA\\_Main-Body.pdf](https://eplanning.blm.gov/public_projects/lup/9153/63189/68431/002_Wyoming_ARMPA_Main-Body.pdf). Accessed: September 2022.
- . 2016. *TransWest Express Transmission Project and Resource Management Plan Amendments and Record of Decision*. Available: [https://eplanning.blm.gov/public\\_projects/nepa/65198/92849/113809/BLM\\_ROD\\_FINAL\\_20161212.pdf](https://eplanning.blm.gov/public_projects/nepa/65198/92849/113809/BLM_ROD_FINAL_20161212.pdf). Accessed: September 30, 2022.
- . 2019. *Wyoming Greater Sage-Grouse Approved Management Plan Amendment and Record of Decision*. Available: [https://eplanning.blm.gov/public\\_projects/lup/103347/168776/205593/WY\\_ROD\\_03142019\\_signed.pdf](https://eplanning.blm.gov/public_projects/lup/103347/168776/205593/WY_ROD_03142019_signed.pdf). Accessed: October 29, 2021.

- . 2021. Mountain Plover (*Charadrius montanus*) Exception Request Survey Protocol. USDI-Bureau of Land Management, Rawlins Field Office. December.
- . 2022. GIS Data: BLM National PFYC Potential Fossil Yield Classification Geologic Formation 2022 Polygons. Available: [https://navigator.blm.gov/data?id=SQLUQJUW\\_9621](https://navigator.blm.gov/data?id=SQLUQJUW_9621). Accessed: August 18, 2022.
- Carbon County. 2012. *Carbon County Comprehensive Land Use Plan*. Available: <https://www.carbonwy.com/DocumentCenter/View/515/Comprehensive-Land-Use-Plan-Amended-04-03-2012?bidId=>. Accessed: September 2022.
- . 2021. *Carbon County Natural Resource Management Plan*. Available: <https://www.carbonwy.com/DocumentCenter/View/5937/Carbon-County-Natural-Resource-Management-Plan-Adoption-Date-07-06-2021>. Accessed: September 2022.
- Chapman, S. S., S. A. Bryce, J. M. Omernik, D. G. Despain, J. ZumBerge, and M. Conrad. 2004. Ecoregions of Wyoming (color poster with map, descriptive text, summary tables, and photographs): Reston, VA: U.S. Geological Survey (map scale 1:1,400,000).
- Fertig, Walter and Laura Welp. 1998. Status Report on Persistent sepal yellowcress (*Rorippa calycina*) in Wyoming. Wyoming Natural Diversity Database. Available: <https://www.uwyo.edu/wyndd/files/docs/reports/wynddreports/u98fer05wyus.pdf>. Accessed November 2022.
- Innergex. 2022. *The Last Mile Transmission Project*. Available: <https://www.innergex.com/last-mile-transmission-project/>. Accessed: September 2022.
- Invenergy. 2021. *Rock Creek Wind Generation-Tie Line Project WYW-186605*. January.
- Loss, S. Will, T. and Marra P. 2014. Refining Estimates of Bird Collision and Electrocution Mortality at Power Lines in the United States. PLoS ONE 9(7): e101565. doi:10.1371/journal.pone.0101565
- Ogle, M., and L. St. John. 2009. Plant Guide: Ute Ladies' Tresses (*Spiranthes diluvialis*). U.S. Department of Agriculture, Natural Resources Conservation Service. Available: [https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg\\_spdi6.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_spdi6.pdf). Accessed: August 2022.
- U.S. Army Corps of Engineers (USACE). 1987. 1987 Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1 (on-line edition). Wetlands Research Program. Prepared by Environmental Laboratory, USACE, Vicksburg, Mississippi. January 1987. Available online: <https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4532/>
- . 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. (Version 2.0). ERDC/EL TR-10-1. Wetlands Regulatory Assistance Program, USACE, Vicksburg, Mississippi. March 2010. Available online: <https://usace.contentdm.oclc.org/utls/getfile/collection/p266001coll1/id/7613>
- U.S. Department of Agriculture (USDA). 2022. Natural Resources Conservation Service: Soils. Available: <https://www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home/>. Accessed: September 2022.

- U.S. Department of Energy (DOE) and U.S. Bureau of Land Management (BLM). 2008. Programmatic Environmental Impact Statement, Designation of Energy Corridors on Federal Land in the 11 Western States (DOE/EIS-0386). Available: <https://corridoreis.anl.gov/eis/guide/index.cfm#vol1>. Accessed: September 2022.
- U.S. Fish and Wildlife Service (USFWS). 1992. *Interim Survey Requirements for Ute Ladies'-Tresses Orchid* (*Spiranthes diluvialis*). Updated 2017. Available: [https://www.fws.gov/sites/default/files/documents/SPDI\\_interimSurveyRequirements\\_1992\\_revised%202017.pdf](https://www.fws.gov/sites/default/files/documents/SPDI_interimSurveyRequirements_1992_revised%202017.pdf). Accessed October 3, 2022.
- . 1996. *Western Prairie Fringe Orchid Recovery Plan* (*Platanthera praeclara*). Available: <https://puc.sd.gov/commission/dockets/HydrocarbonPipeline/2014/HP14-002/rstexhibit/24.pdf>. Accessed: August 2022.
- . 2014. *Revised Recovery Plan for the Pallid Sturgeon* (*Scaphirhynchus albus*). Available: [http://www.pallidsturgeon.org/wp-content/uploads/2012/11/Pallid-Sturgeon-Recovery-Plan-First-Revision-signed-version-012914\\_3.pdf](http://www.pallidsturgeon.org/wp-content/uploads/2012/11/Pallid-Sturgeon-Recovery-Plan-First-Revision-signed-version-012914_3.pdf). Accessed: August 2022.
- . 2022a. *Dunlap Wind Energy Project*. Available: <https://fws.gov/project/dunlap-wind-energy-project>. Accessed September 2022.
- . 2022b. *Information for Planning and Consultation*. Available: <https://ipac.ecosphere.fws.gov/>. Accessed: August 2022.
- . 2022c. National Wetlands Inventory. Available: <https://www.fws.gov/program/national-wetlands-inventory/wetlands-data>. Accessed: October 2022.
- U.S. Geological Survey (USGS). 2016. LANDFIRE database. Available: <https://landfire.gov/>. Accessed: August 2022.
- . 2022. National Hydrography Dataset. Available: <https://www.usgs.gov/national-hydrography/national-hydrography-dataset>. Accessed: August 2022.
- University of Wyoming (UWYO). 2022. Wyoming Natural Diversity Database. Available: <http://www.uwyo.edu/wyndd/>. Accessed: August 2022.
- Western EcoSystems Technology, Inc (WEST). 2022a. *Ute Ladies' Tresses Surveys Rock Creek II Transmission Line Project*. September 30, 2022.
- . 2022b. *Biological Environmental Assessment Support Report for the Rock Creek II Transmission Line Project*. September 30, 2022.
- . 2022c. *Wetlands and Weed Report for the Rock Creek II Transmission Line Project*.
- . 2022e. *Weed Inventory and Management Plan Rock Creek II Transmission Line Carbon and Albany Counties, Wyoming*. October 21, 2022.
- Wyoming Game & Fish Department (WGFD). 2010. *Pygmy Rabbit Species Range*. GIS File. Downloaded 2018.

- . 2017a. Wyoming Species Account: Greater sage-grouse (*Centrocercus urophasianus*). Available: <https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/SWAP/Birds/Greater-Sage-Grouse.pdf>. Accessed: February 27, 2021
- . 2017b. Big Game Hunt Units. GIS Data. Downloaded 2017.
- . 2021. Wildlife in Wyoming: Big Game. Available: <https://wgfd.wyo.gov/Wildlife-in-Wyoming/Geospatial-Data/Big-Game-GIS-Data>. Accessed: August 2022.
- . 2022. Greater sage-grouse lek locations. GIS Data. Downloaded 2022.
- Wyoming Weed and Pest Council (WWPC). 2019a. Wyoming Weed and Pest Control Act State Designated Weed and Pests. Wyoming Department of Agriculture. W.S. 11-5-102 (a)(xi). Available: [https://wyoweed.org/wp-content/uploads/2018/07/StateDesignatedList\\_2018.pdf](https://wyoweed.org/wp-content/uploads/2018/07/StateDesignatedList_2018.pdf).
- . 2019b. Wyoming Weed and Pest Declared List By County. Wyoming Department of Agriculture. W.S. 11-5-105 (b)(vi). Available: <https://wyoweed.org/wp-content/uploads/2019/09/2019-Declared-List.pdf>
- Wyoming Department of Environmental Quality (WYDEQ). 2020. *Wyoming's 2020 Integrated 305(b) and 3030(d) Report*. Available: [https://deq.wyoming.gov/water-quality/watershed-protection/water-quality-assessment/?wpcp\\_link=JTdCJTlyc291cmNIJTlyJTNBJTlyZTEzYzQwNzIxMzZDM4MzFjYWJINGUxMmJIOTc0MTAwMjAlMjllMkMIMjJhY2NvdW50X2lkJTlyJTNBJTlyMTEzMTQyMjM3OTUwMTUyNjI3MzcyJTlyJTJDJTlybGFzdEZvbGRlciUyMiUzQSUyMjFsRXA5WkdsOFJ3OG84VTM0LWhObTE2bmc1N3A4SXFBUyUyMiUyQyUyMmZybGRlclBhdGglMjllM0EIMjJXeU14YkVWd09WcEhiRGhTZHpodk9GVXpOQzFvVG0weE5tNW50VGR3T0VseFFWTTW1YUSUzRCUzRCUyMiUyQyUyMmZvY3VzX2lkJTlyJTNBJTlyMXJiOW1pblldhaGo0cHVdZmg3a19henNjZVd4eEdudzFLJTlyJTdE](https://deq.wyoming.gov/water-quality/watershed-protection/water-quality-assessment/?wpcp_link=JTdCJTlyc291cmNIJTlyJTNBJTlyZTEzYzQwNzIxMzZDM4MzFjYWJINGUxMmJIOTc0MTAwMjAlMjllMkMIMjJhY2NvdW50X2lkJTlyJTNBJTlyMTEzMTQyMjM3OTUwMTUyNjI3MzcyJTlyJTJDJTlybGFzdEZvbGRlciUyMiUzQSUyMjFsRXA5WkdsOFJ3OG84VTM0LWhObTE2bmc1N3A4SXFBUyUyMiUyQyUyMmZybGRlclBhdGglMjllM0EIMjJXeU14YkVWd09WcEhiRGhTZHpodk9GVXpOQzFvVG0weE5tNW50VGR3T0VseFFWTTW1YUSUzRCUzRCUyMiUyQyUyMmZvY3VzX2lkJTlyJTNBJTlyMXJiOW1pblldhaGo0cHVdZmg3a19henNjZVd4eEdudzFLJTlyJTdE). Accessed: August 2022.

## **APPENDIX A**

### ***Interdisciplinary (ID) Team Checklist***

## INTERDISCIPLINARY TEAM NEPA CHECKLIST

**Project Title:** Rock Creek Transmission Line Environmental Assessment

**NEPA Log Number:** DOI-BLM-WY-D030-2023-0011-EA

**File/Serial Number:** ROW No. WYW-186605

**Project Leader:** Carla Fiedor, Realty Specialist

**DETERMINATION OF STAFF:** *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA. **The NEPA Handbook states that issues need to be analyzed in detail if: 1) Analysis of the issue is necessary to make a reasoned choice between alternatives; 2) The issue is significant...or where analysis is necessary to determine the significance of impacts.**

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.

**RESOURCES AND ISSUES CONSIDERED:**

Determination	Resource	Rationale for Determination	BLM Staff	Date
NI	Air Quality	The Gen-Tie Line would be in an area that is in attainment or unclassified with respect to all criteria pollutants; therefore, general conformity does not apply, and no emission inventory would be needed to determine conformance. Construction activities would be temporary and transitory, and operational emissions would be minimal. Therefore, the Gen-Tie Line construction and operation would be unlikely cause or contribute to an exceedance of ambient air quality standards.		
NP	Areas of Critical Environmental Concern (ACECs)	No ACECs are in the Gen-Tie Line area or Gen-Tie Line area vicinity. The nearest ACEC is approximately 16 miles away from the Gen-Tie Line area at the nearest point.		
NP	Cave and Karst	No cave or karst resources are in the Gen-Tie Line area or Gen-Tie Line area vicinity. The nearest caves are the Shirley Mountain Caves and the Cave Creek Cave ACEC, which are approximately 16 miles northwest of the Gen-Tie Line area at the nearest point.		
PI	Cultural Resources	Cultural resources are present in the Gen-Tie Line area, and the Gen-Tie Line area on BLM-administered land has been subject to intensive pedestrian inventory. Surface disturbance could physically affect historic properties, and the Gen-Tie Line could result in visual, atmospheric, or auditory effects to historic properties for which setting and feeling are character-defining aspects of the property.		
NP	Environmental Justice	The only community in the Gen-Tie Line area vicinity is Medicine Bow, Wyoming, which is approximately 0.5 mile from the route of the Proposed Action. There are no identified environmental justice communities in Medicine Bow, and the Proposed Action is not anticipated to result in any disproportionate impacts on environmental justice communities.		
NI	Farmlands (Prime or Unique)	Total Gen-Tie Line area (150-ROW): approximately 90 acres on BLM-administered surface. Farmland of statewide importance if irrigated = 5.5 acres Non-prime farmland = 84.5 acres Surface disturbance associated with the construction of the Gen-Tie Line may result in impacts on the up to 5.5 acres of farmlands. However, the farmlands are not irrigated, nor are they actively farmed. In addition, soil handling (i.e.,		



Determination	Resource	Rationale for Determination	BLM Staff	Date
		topsoil stripping and stockpiling), reclamation practices, and other design features and best management practices would eliminate potential impacts on farmlands.		
NP	Floodplains	The proposed Gen-Tie Line structures would not be constructed in floodplains. The proposed Gen-Tie Line would not span any floodplains in the Gen-Tie Line area.		
NI	Fuels/Fire Management	The proposed Gen-Tie Line is in a designated utility corridor, with three-quarters of the route paralleling existing transmission lines. The BLM's stated fuels and fire management is to suppress wildland fires in identified areas including industrial interface areas which would include the Gen-Tie Line area and vicinity. Therefore, no impacts would be anticipated to BLM's fuels and fire management practices for the resource management planning area.		
NI	Geology/Mineral Resources/Energy Production	The proposed Gen-Tie Line is in a designated utility corridor and parallels existing transmission lines for 2.2 miles of the route. These utility corridors were designated by the BLM as preferred routes for energy infrastructure based in part on the limited potential for impacts on resources within the corridors. In addition, the Gen-Tie Line is not expected to create any new impacts on geology, minerals, or energy production due to the existing developed nature of the corridor. As a result, the Gen-Tie Line is not expected to result in new impacts on geology, minerals, or energy production.		
NI	Greenhouse Gas Emissions	Construction activities would be temporary and transitory and operational emissions would be minimal. The construction and minimal operational greenhouse gas emissions would not notably contribute to climate change effects. As a result, the Gen-Tie Line is not expected to notably contribute to greenhouse gas emissions or climate change.		
NI	Health and Safety	Construction, operations, and maintenance activities would be subject to approved Emergency Response and Health and Safety Plans. These plans will dictate hazard signage and other measures to protect the public, safety training for project personnel and other industry-standard measure to limit health and safety hazards. Application of approved Emergency Response and Health and Safety Plans to project activities is expected to protect health and safety.		
NI	Invasive Species/Noxious Weeds	Weeds may be present within the Gen-Tie Line area or Gen-Tie Line area vicinity. Surface disturbance from structure construction, laydown areas, and site access could increase the spread of weeds. Gen-Tie Line design elements and best management practices to reduce the spread of weeds will be implemented including conducting a weed inventory and creating a weed management plan in accordance with BLM standards. Equipment will be washed to remove weed seeds. Post-construction monitoring will ensure control of weeds and re-establishment of native species.		
NP/NI	Lands/Access	The proposed Gen-Tie Line is in a designated utility corridor and is parallel to existing transmission lines for three-quarters of the route. As a result, there would be no change to land use within the Gen-Tie Line area. These utility corridors were designated by the BLM as preferred routes for energy infrastructure based in part on the limited potential for impacts on resources within the corridors. The Gen-Tie Line would use existing access routes where possible. Where structure sites are not immediately accessible from existing roads, short routes of non-graded overland access may be necessary in order to access the site. However, because the proposed Gen-Tie Line is in a		

Determination	Resource	Rationale for Determination	BLM Staff	Date
		designated utility corridor, no change to access within the Gen-Tie Line or vicinity is anticipated, and the Gen-Tie Line would not affect access to BLM-administered lands by proximate landowners or public land users.		
NP	Lands with Wilderness Characteristics	There are no inventoried Lands with Wilderness Characteristics in the Gen-Tie Line or the vicinity.		
NI	Livestock Grazing	The Gen-Tie Line crosses the North Area grazing allotment, which consists of 12,605 public land acres. All lands within the allotment are currently permitted for grazing. Surface disturbance associated with the Gen-Tie Line would be minimal and in areas of previous disturbance. Following construction, reclamation activities would be conducted to reestablish vegetation along the ROW to allow for continued livestock grazing, resulting in 0.2 acre of public land long-term surface disturbance that would be unavailable for grazing. In addition, best management practices and mitigation would be applied to minimize potential impacts on grazing such as immediately repairing any damaged range improvements to their pre-disturbed condition. As a result, the Gen-Tie Line is not expected to result in impacts on livestock grazing.		
NP	National Conservation Areas	There are no National Conservation Areas in the State of Wyoming.		
NP	National Historic Trails (NHTs)	There are no NHTs within 0.25 mile of the Gen-Tie Line, and the closest NHT is approximately four miles away from the Gen-Tie Line at the nearest point.		
NP	National Recreational Trails	There are no National Recreational Trails in the Gen-Tie Line or the vicinity.		
PI	Tribal Resources and Native American Religious Concerns	There may be Traditional Cultural Properties and resources of potential concern to Native American tribes in the Gen-Tie Line and its immediate vicinity. Surface disturbance could physically affect those resources, if present, and the Gen-Tie Line could result in visual, atmospheric, or auditory effects on those resources.		
PI	Paleontology	Under the Proposed Action, the Gen-Tie Line would cross geologic units on BLM land with low to high potential for paleontological resources, including 9.42 acres in Potential Fossil Yield Class (PFYC) 2, 75.7 acres in PFYC 3, and 0.1 acre in PFYC 4. Previously recorded paleontological occurrences are within one mile of the Gen-Tie Line.		
NI	Rangeland Health Standards	The Gen-Tie Line would result in short-term effects to soils and vegetation during construction. Due to the short-term nature of the construction impacts and the existing developed nature of the route, the Gen-Tie Line is not anticipated to affect soils, vegetation, riparian or wetland areas, or other ecological characteristics to a degree that would affect the BLM's ability to meet rangeland health standards.		
NI	Recreation	The Gen-Tie Line is in the Eastern Extensive Recreation Management Area. There are no developed or undeveloped recreation sites in the Gen-Tie Line or the vicinity. The Gen-Tie Line and the vicinity are used for dispersed recreation activities such as hunting, fishing, hiking, and off-highway vehicle use. As noted in the Rawlins RMP, development areas in the Eastern Extensive Recreation Management Area likely do not retain quality dispersed recreation opportunities and settings (BLM 2008b). Although construction activities would primarily occur during spring through fall, when recreationists could be present in the Eastern Extensive Recreation Management Area, the proposed Gen-Tie Line would be in a designated utility corridor, parallel to an existing transmission line, and would be not expected to result in		

Determination	Resource	Rationale for Determination	BLM Staff	Date
		material impacts on recreational settings and opportunities in the area.		
NI	Socio-Economics	Construction, operation, and maintenance of the proposed Gen-Tie Line would create a temporary increase in employment and a potential need for temporary housing for employees during construction. However, these impacts would be minimal and short-term in nature and are not anticipated to materially affect social and economic conditions in the region.		
PI	Soils	The Gen-Tie Line includes approximately 5 miles of gen-tie line on BLM-administered surface with a 150-foot-wide construction ROW (around 90 acres on BLM surface). Surface disturbance associated with construction of the proposed Gen-Tie Line would result in impacts on soil resources, including loss of soils, compaction of soils, and an increase in the potential for erosion. The proponent would apply best management practices and implement a reclamation plan to stabilize and rehabilitate disturbed soils to the maximum extent practicable. The Gen-Tie Line would also utilize the WWEC-designated utility corridor and would parallel two existing 115-kV transmission lines for 2.2 miles of the route, which would minimize new impacts on soil resources in the Gen-Tie Line due to the existing developed nature of the corridor.		
PI	Special Status Plants	BLM sensitive plant species (e.g., persistent sepal yellowcress) have potential to occur in the Gen-Tie Line or vicinity. Special status plant surveys will provide additional information on existing conditions and occurrences of these species and the potential for impacts.		
PI	Vegetation	Temporary and permanent impacts on sagebrush, grasslands, and shrub-steppe communities would occur during construction and operation of the Gen-Tie Line. Permanent loss of vegetation would be limited to the footprint of structures (up to 279 structures with three to six-foot diameter foundation). The proponent would implement a reclamation plan that would apply all practical efforts to increase the chances of vegetation reestablishment in disturbed areas and would also apply applicant-committed measures to limit impacts on vegetation, such as leaving vegetation in place where recontouring is not required.  In addition, the Gen-Tie Line is within a designated utility corridor and parallels two existing transmission lines for part of the route, which would minimize new impacts on vegetation in the Gen-Tie Line due to the existing developed nature of the corridor.		
NI	Visual Resources	The Gen-Tie Line is in a designated utility corridor with a Visual Resource Management (VRM) of Class IV. Class IV generally allows activities that result in major modifications to the existing character of the landscape. The level of change to the landscape can be high. The management activities may dominate the view and may be the major focus of viewer attention. Every attempt would be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic visual elements of form, line, color, and texture. Because the proposed Gen-Tie Line would parallel an existing transmission line, there would be no change in the visual character of the existing landscape, nor change to BLM's VRM classification for this area.		
NI	Wastes (Hazardous or Solid)	No chemicals subject to Superfund Amendments and Reauthorization Act (SARA) Title III in amounts greater than 10,000 pounds would be used. No hazardous substances defined in 40 CFR 355 and threshold planning		

Determination	Resource	Rationale for Determination	BLM Staff	Date
		quantities would be used. Trash generated during construction of the proposed Gen-Tie Line would be disposed of at appropriate waste collection facilities. The proponent will also apply a variety of applicant-committed measures to reduce potential impacts on resources from wastes, such as using fully enclosed containment for all trash generated at the Gen-Tie Line site.		
PI	Water Resources/Quality (Drinking/Surface/Ground)	The Gen-Tie Line would cross an estimated seven intermittent streams on BLM-administered land and two perennial rivers not on BLM-administered land. One aqueduct is between the towns of Arlington and Rock River. Impacts in high-risk flood zones could be avoided through Gen-Tie Line design, or if unavoidable, floodplain development permits may be required. Groundwater permitted for domestic and stock use in the general vicinity is found at depths ranging from approximately 10 to 200 feet below ground surface. The placement of transmission pole structures would be avoided in floodplains.		
PI	Wetlands/Riparian Zones	The Gen-Tie Line area crosses freshwater emergent wetlands on BLM-administered land and lands under other ownership, which were identified through a wetland delineation. The Gen-Tie Line would be designed to avoid delineated wetlands where practicable. Rivers and streams would be spanned, minimizing impacts within riparian zones.		
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the Gen-Tie Line or vicinity.		
NP	Wilderness/Wilderness Study Areas (WSA)	There are no Wilderness areas or WSAs in the Gen-Tie Line or the vicinity.		
NP	Wild Horses	There are no wild horse management units in the Gen-Tie Line or the vicinity.		
PI	Wildlife and Fish	Pronghorn, deer, and elk winter and yearlong habitats are present in the Gen-Tie Line, including mule deer and pronghorn crucial winter range. The Gen-Tie Line would cross an estimated seven intermittent streams on BLM-administered land, two perennial rivers not on BLM-administered land, and emergent wetlands that could result in impacts on fish and amphibians.		
PI	Wildlife – Greater Sage-Grouse	The Gen-Tie Line does not overlap greater sage-grouse Core Habitat Area. The closest occupied lek is approximately 1.9 miles from the Gen-Tie Line at the closest point. During helicopter flights along the proposed Gen-Tie Line corridor, no leks were observed. There could, however, be impacts on greater sage-grouse if the presence of new transmission structures in the existing utility corridor were to cause birds to avoid the area.		
PI	Wildlife – Migratory Birds	Habitat for migratory birds may occur in the Gen-Tie Line and vicinity. Active nests would be identified during preconstruction surveys and avoided according to seasonal timing and spatial requirements. Impacts on nesting and foraging habitats would be minimized by constructing the Gen-Tie Line along existing ROWs and reclaiming disturbed areas with native vegetation. Noise and human activity would be temporary during construction. Collision impacts during operation are anticipated to be minimal due to the small scale of the Gen-Tie Line, limited height and width of structures, static nature of structures, and existing features in the area. Furthermore, the Gen-Tie Line design incorporates Avian Power Line Interaction Committee recommendations to minimize avian electrocution risk.		
PI	Wildlife – Special Status (not Threatened)	BLM sensitive species, such as mountain plover, and burrowing owl, may occur in the Gen-Tie Line and vicinity.		

Determination	Resource	Rationale for Determination	BLM Staff	Date
	Ecological Communities [TEC])	Active nests and pygmy rabbit habitat occupation areas would be identified during preconstruction surveys and avoided according to seasonal timing and spatial requirements. Impacts on nesting and foraging habitats would be minimized by constructing the Gen-Tie Line along existing ROWs and reclaiming disturbed areas with native vegetation. Noise and human activity would be temporary during construction.		
PI	Wildlife Threatened and Endangered (T&E) and Candidate Plant Species	Ute ladies' tresses and western prairie fringed orchid are unlikely to occur. There are no Wyoming Natural Diversity Database occurrences.		
PI	Wildlife T&E and Candidate Animal Species	Piping plover, whooping crane, and pallid sturgeon are unlikely to occur due to location outside of range or lack of habitat. Suitable habitat occurs in the in the Gen-Tie Line for black-footed ferret.		
NP	Woodland/Forestry	There are no forested lands in the Gen-Tie Line or the vicinity.		

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