

# **Energy Gateway South Transmission Project**

## **Special Status Wildlife Report**

Prepared by:

Environmental Planning Group  
Salt Lake City, Utah

Prepared for:

Ashley National Forest (Duchesne Ranger District)  
Manti-La Sal National Forest (Ferron, Price, and Sanpete Ranger Districts)  
Uinta National Forest (Heber-Kamas and Spanish Fork Ranger Districts)

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# Acronyms

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Applicant	PacifiCorp (doing business as Rocky Mountain Power)
BBS	North American Bird Breeding Surveys
BLM	Bureau of Land Management
C	Candidate
COUT	Colorado to Utah – U.S. Highway 40 to Central Utah to Clover alternative routes
COUT BAX	Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover alternative routes
EIS	Environmental impact statement
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Service
GAP	Gap Analysis Project (National Land Cover)
GIS	Geographic information system
IUCN	International Union for Conservation of Nature
kV	Kilovolt
LRMP	Land and resource management plan
MIS	Management indicator species
NWI	National Wetlands Inventory
PFA	Post-fledgling area
Project	Energy Gateway South Transmission Project
POD	Plan of development
SS	Sensitive species
UDWR	Utah Division of Wildlife Resources
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGS	U.S. Geological Survey

# Introduction

In December 2008, PacifiCorp (doing business as Rocky Mountain Power, the Applicant) submitted an Application for Transportation and Utility Systems and Facilities on Federal Lands (Standard Form 299) to the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) for constructing, operating, and maintaining the Energy Gateway South Transmission Project (Project). In response, the BLM, as the lead agency, in coordination with the USFS and other cooperating agencies, are preparing an environmental impact statement (EIS) and land-use plan amendments to evaluate and disclose the potential Project-related environmental impacts that could result from the action proposed by the Applicant (Proposed Action) and alternative routes of the Proposed Action. The Applicant's interests and objectives, the purpose of the federal action, and a description of the Project are provided in more detail in Chapters 1 and 2 of the Project Final EIS (BLM 2016).

Approximately 1,425 miles of alternative routes, through 16 counties in the states of Wyoming, Colorado, and Utah are being evaluated for the transmission line and associated facilities (e.g., access roads, series compensation stations, and temporary construction workspaces). Portions of the alternative routes cross three national forests—the Ashley, Uinta-Wasatch-Cache<sup>1</sup>, and Manti-La Sal National Forests.

This document evaluates the potential direct, indirect, and cumulative effects of the Project on USFS Region 4 sensitive species, national forest management indicator species (MIS), and selected migratory bird species known or suspected to occur on USFS-administered lands affected by the Project. The purpose of this document is to provide analysis, determination, and rationale for the likely effects of the alternative routes on these species.

## ***Overview of Issues Addressed***

The MIS lists were obtained from the land resource management plans (LRMP) for the Ashley, Manti-La Sal, and Uinta National Forests (USFS 1986a, b; 2003). Sensitive species with potential to occur on national forests crossed by the alternative routes were identified on the USFS Intermountain Region sensitive species lists (USFS 2013).

On August 1, 2007, the national forests in Utah formalized an updated state-wide strategy for addressing migratory birds in USFS planning and project documents (USFS 2008). Species selected for this analysis were chosen based on the process identified in this strategy. Bird species were selected from species included in the Utah Partners in Flight Conservation Strategy (Parrish et al. 2002), the Utah Comprehensive Wildlife Conservation Strategy (Utah Division of Wildlife Resources [UDWR] 2005), and the U.S. Fish and Wildlife Service (FWS) Birds of Conservation Concern bird lists (FWS 2008). Birds included in these publications include those at higher risk due to habitat loss or degradation, with highest-risk species given priority status in the Utah Partners in Flight Conservation Strategy listing (Parrish et al. 2002).

For this analysis, black rosy-finch, black-throated gray warbler, grasshopper sparrow, sage sparrow and Virginia's warbler were selected as representative species to analyze the effects of transmission line impacts on potentially suitable habitats. Effects on all other habitat types were analyzed using migratory birds that were also sensitive and/or MIS.

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<sup>1</sup>In March 2008, the Uinta National Forest and Wasatch-Cache National Forest were combined into one administrative unit. Each of these national forests is still operating under individual forest LRMPs approved in 2003. When the term Uinta is used in context with the USFS, it refers to the Uinta Planning Area of the Uinta-Wasatch-Cache National Forest.

## Affected Environment

Information concerning monitoring results, life histories, suitable habitats, threats, population trends, and ecology for special status species that are known or suspected to occur in the Project area (Table 1) can be found in the *Life Histories and Population Analysis for Management Indicator Species of the Ashley National Forest* (USFS 2006a); *Life History and Analysis of Endangered, Threatened, Candidate, and Sensitive Species of the Ashley National Forest* (USFS 2006b); *Terrestrial Wildlife Monitoring Report on the Roosevelt/Duchesne Ranger District, Ashley National Forest* (2012a); Uinta National Forest monitoring reports (USFS 2010a, 2011f); and *Endangered, Threatened, Sensitive, and Management Indicator Species Accounts, Terrestrial Wildlife Species, Dixie, Fishlake, and Manti-La Sal National Forest* (USFS 2014). Species information for the Manti-La Sal National Forest was updated between the draft and final versions of this report to incorporate information provided in the USFS 2014 document, which was unavailable when the draft report was completed. Estimated effects and potential determinations are based in part upon the information presented in these documents. These documents are hereby incorporated by reference. Information on big game species in Utah were obtained from Statewide Management Plans (UDWR 2008, 2010), and Herd Unit Management Plans (UDWR 2006a, b, c; 2012a, b, c).

In addition to these data, agency personnel were consulted to identify specific species' ranges on USFS-administered land, and relevant scientific literature, agency publications, and online databases (e.g., NatureServe 2013; Birds of North America Online 2013; World Wildlife Fund WildFinder 2006), and International Union for Conservation of Nature Redlist (IUCN 2012) were reviewed.

Using the information collected, the full list of special status species was refined to include only species likely to occur on USFS-administered land. Table 1 identifies federally listed candidate species, USFS-sensitive, MIS, and migratory bird species that may be present in areas affected by the Project that are analyzed in this document.

TABLE 1 SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR IN ALTERNATIVE ROUTE STUDY CORRIDORS					
Common Name	Scientific Name	National Forest			Rationale
		Ashley	Manti-La Sal	Uinta	
<b>U.S. Forest Service Sensitive Species and Management Indicator Species</b>					
American beaver	<i>Castor canadensis</i>			MIS	Potentially suitable habitat exists in the Project area on the Uinta National Forest.
Bald eagle	<i>Haliaeetus leucocephalus</i>	SS	SS	SS	Potentially suitable nesting, wintering and roosting areas, and foraging habitat occur on the three national forests.
Elk	<i>Cervus elaphus</i>	MIS	MIS		The Project alternative routes cross Utah Division of Wildlife Resources (UDWR) designated habitats on the Ashley and Manti-La Sal National Forests (UDWR 2007a).
Flammulated owl	<i>Otus flammeolus</i>	SS	SS	SS	Potentially suitable nesting and foraging habitat occurs in the Project area on the three national forests.
		Migratory bird of conservation concern			

**TABLE 1  
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR  
OR WITH POTENTIAL TO OCCUR IN ALTERNATIVE ROUTE STUDY CORRIDORS**

Common Name	Scientific Name	National Forest			Rationale
		Ashley	Manti-La Sal	Uinta	
Golden eagle	<i>Aquila chrysaetos</i>	MIS	MIS		Indicator species for cliff and rock habitat on forests. Known to nest in Utah; known nest locations on the Ashley and Manti-La Sal National Forests (U.S. Forest Service [USFS] 2006b). Potentially suitable nesting and foraging habitat occurs in the Project area on the three national forests.
		Migratory bird of conservation concern			
Greater sage-grouse	<i>Centrocercus urophasianus</i>	C/SS/MIS	C/SS	C/SS	Occupied, winter, and brood-rearing habitats are crossed by the Project on the Manti-La Sal National Forest (UDWR 2011a,b,c; 2013)
Lincoln's sparrow	<i>Melospiza lincolni</i>	MIS			Potentially suitable nesting and foraging habitat occurs in the Project area on the Ashley National Forest (USFS 2006b).
		Migratory bird of conservation concern			
Mule deer	<i>Odocoileus hemionus</i>	MIS	MIS		The Project alternative routes cross UDWR-designated habitats on the Ashley and Manti-La Sal National Forests (UDWR 2007b).
Northern goshawk	<i>Accipiter gentilis</i>	SS/MIS	SS/MIS	SS/MIS	Potentially suitable nesting and foraging habitat occurs in the Project area on the three national forests.
		Migratory bird of conservation concern			
Peregrine falcon	<i>Falco peregrinus anatum</i>	SS	SS	SS	Potentially suitable nesting and foraging habitat occurs in the Project area on the three national forests.
Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>	MIS			Potentially suitable nesting and foraging habitat occurs in the Project area on the Ashley National Forest (USFS 2006b).
Song sparrow	<i>Melospiza melodia</i>	MIS			Potentially suitable nesting and foraging habitat occurs in the Project area on the Ashley National Forest (USFS 2006b).
Spotted bat	<i>Euderma maculatum</i>	SS	SS	SS	Potentially suitable roosting and foraging habitat occurs in the Project area on the three national forests.

TABLE 1 SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR IN ALTERNATIVE ROUTE STUDY CORRIDORS					
Common Name	Scientific Name	National Forest			Rationale
		Ashley	Manti-La Sal	Uinta	
Three-toed woodpecker	<i>Picoides dorsalis</i>	SS	SS	SS/MIS	Potentially suitable nesting and foraging habitat occurs in the Project area on the three national forests.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SS	SS	SS	Potentially suitable roosting and foraging habitat occurs in the Project area on the three national forests.
Warbling vireo	<i>Vireo gilvus</i>	MIS			Potentially suitable mapped nesting and foraging habitat occurs in the Project area on the Ashley National Forest.
Other Species of Concern: Migratory Birds					
Black rosy-finch	<i>Leucosticte atrata</i>	Migratory bird of conservation concern			Potentially suitable alpine breeding habitat above 8,600 feet is very limited in the Project area on the Manti-La Sal and Uinta National Forests.
Black-throated gray warbler	<i>Setophaga nigrescens</i>	Migratory bird of conservation concern			Potentially suitable breeding habitat occurs in pinyon-juniper and mountain shrub habitats in the Project area on the three national forests.
Grasshopper sparrow	<i>Ammodramus savannarum</i>	Migratory bird of conservation concern			Potentially suitable breeding habitat occurs in grassland habitat in the Project area on the three national forests.
Sage sparrow	<i>Artemisiospiza belli</i>	Migratory bird of conservation concern			Potentially suitable breeding habitat occurs in sagebrush communities in the Project area on the three national forests.
Virginia's warbler	<i>Oreothlypis virginiae</i>	Migratory bird of conservation concern			Potentially suitable habitat occurs in montane and mountain shrub habitat in the Project area on the three national forests.
NOTES: Nomenclature follows U.S. Fish and Wildlife Service (2012a) for federally listed candidate species and NatureServe (2013) for all others. Federally Listed (U.S. Fish and Wildlife Service) C = Candidate USFS Status MIS = Management indicator species SS = Sensitive species					

Table 2 identifies species included on lists described above that do not occur or for which suitable habitat does not occur in areas affected by the Project on USFS-administered lands. Impacts on these species

would not be anticipated due to implementation of the Project; therefore, they have not been carried forward for a detailed analysis.

TABLE 2 SPECIAL STATUS WILDLIFE SPECIES THAT DO NOT OCCUR IN ALTERNATIVE ROUTE STUDY CORRIDORS					
Common Name	Scientific Name	National Forest			Rationale
		Ashley	Manti-La Sal	Uinta	
<b>U.S. Forest Service Sensitive Species and Management Indicator Species</b>					
Abert's squirrel	<i>Sciurus aberti</i>		MIS		Abert's squirrel occurs only on the Monticello Ranger District of the Manti-La Sal National Forest, which would not be affected by the Project.
Boreal owl	<i>Aegolius funereus</i>	SS			Suitable continuous coniferous forest habitat does not occur in the Project area on the Ashley National Forest.
California bighorn sheep	<i>O. canadensis californiana</i>			SS	Species has been translocated to Utah (Antelope Island, Oak Creek, and Newfoundland Mountain Range), but translocation areas are outside the Project area.
Desert bighorn sheep	<i>Ovis c. nelsoni</i>		SS		No mapped habitat exists on areas of the Manti-La Sal National Forest crossed by Project alternative routes.
Fisher	<i>Martes pennanti</i>			SS	Predicted range for the species is outside the Project area. The species is not known to occur in the Project area (Utah Natural Heritage Program 2011).
Great gray owl	<i>Strix nebulosa</i>	SS			Predicted range for the species is outside the Project area. The species is not known to occur in the Project area (Utah Natural Heritage Program 2011).
North American wolverine	<i>Gulo gulo luscus</i>	C/SS			Suitable tundra or boreal forest habitat does not occur in the Project area on the Ashley National Forest.
Rocky mountain bighorn sheep	<i>Ovis canadensis canadensis</i>	SS		SS	Suitable habitat as designated by the Utah Division of Wildlife Resources does not occur in the Project area on any national forest.

TABLE 2 SPECIAL STATUS WILDLIFE SPECIES THAT DO NOT OCCUR IN ALTERNATIVE ROUTE STUDY CORRIDORS					
Common Name	Scientific Name	National Forest			Rationale
		Ashley	Manti-La Sal	Uinta	
White-tailed ptarmigan	<i>Lagopus leucura</i>	MIS			Suitable alpine meadow habitat does not occur in the Project area on the Ashley National Forest.
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C/SS	C/SS	C/SS	Potentially suitable riparian habitat does not occur in the Project area on any of the national forests.
NOTES: Nomenclature follows U.S. Fish and Wildlife Service (2012a) for federally listed threatened and endangered species and NatureServe (2013) for all others. Federally Listed (U.S. Fish and Wildlife Service) C = Candidate U.S. Forest Service Status MIS = Management indicator species SS = Sensitive species					

## Existing Condition

### Ashley National Forest

Alternative COUT-B, and COUT-C Variations 2 and 5 (Camp Timberlane/Argyle Canyon) cross the Ashley National Forest. These alternative routes cross wildlife habitats in the vicinity of Sowers Canyon, Reservation Ridge, or both areas.

Alternative COUT-B crosses the Ashley National Forest through Sowers Canyon. Habitats in the 2-mile-wide study corridor in Sowers Canyon have been largely unmodified and unaffected by anthropogenic events. The alternative route parallels existing linear facilities, including a lower-voltage transmission line and Forest Road 152 (Sowers Canyon Road). Sower Canyon Road is used for recreational access to the Ashley National Forest, though its distance from major population centers and lack of major recreational draws in Sowers Canyon results in only minor use. The existing transmission line results in occasional disturbance associated with vegetation maintenance and line inspections; however, the right-of-way is narrow and has only resulted in minor habitat modification. Habitats north of the Ashley National Forest have been affected by substantial oil and gas development. Oil and gas development is known to negatively affect habitat functionality and may have displaced wildlife into the similar but unaffected areas of the Ashley National Forest. Overall, habitats in the study corridor through Sowers Canyon on the Ashley National Forest maintain high levels of functionality for wildlife and are largely unaffected by past actions that would fragment, modify, and reduce the quality of wildlife habitats.

Alternative COUT-C variations would cross portions of the Ashley National Forest in the vicinity of Reservation Ridge. Habitats in the 2-mile-wide study corridor in the vicinity of Reservation Ridge are on the very southern edge of the Ashley National Forest and also have been largely unmodified and unaffected by anthropogenic events. The alternative routes follow an existing ungraded forest road (the Reservation Ridge Road). The Reservation Ridge Road is rough and only suitable for low-speed vehicle use, is located far from major population centers, and receives only minor public use. Additionally, Reservation Ridge is located approximately 4 miles north of a major highway, railroad, and other human activity in the Emma Park area. The duration and intensity of human activity in the Emma Park area may

displace wildlife resulting in more intensive wildlife use of the Reservation Ridge area than would otherwise be expected. Overall, habitats in the study corridor in the vicinity of Reservation Ridge maintain high levels of functionality for wildlife and are largely unaffected by past actions that would fragment, modify, and reduce the quality of wildlife habitats.

## **Manti-La Sal National Forest**

All alternative routes cross the Manti-La Sal National Forest. Alternatives COUT-A, COUT-B, and COUT-C and route variations cross the edge of the Manti-La Sal National Forest in the vicinity of Spanish Fork and Thistle Creek Canyons. Alternatives COUT BAX-E and COUT-H cross the Manti-La Sal National Forest between Price and Fairview. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I cross the Manti-La Sal National Forest between Huntington and Mount Pleasant.

Alternatives COUT-A, COUT-B, and COUT-C and route variations cross the edge of the Manti-La Sal National Forest in the vicinity of Spanish Fork and Thistle Creek Canyons. Habitats in the 2-mile-wide study corridor in Spanish Fork and Thistle Creek Canyons have been heavily modified by anthropogenic and natural events. The corridor parallels existing linear facilities including a steel-lattice 345 Kilovolt (kV) transmission line, U.S. Highways 6 and 89, and the Rio Grande Western Railroad. In addition to these linear facilities, habitats on the forest in Spanish Fork and Thistle Creek Canyons have been affected by nearby residential and agricultural developments, livestock grazing, and frequent off-highway-vehicle and recreational use. These events have fragmented, modified, and reduced the quality of habitats present in the study corridor in Spanish Fork and Thistle Creek Canyons. Native vegetation has been cleared and non-native invasive plants have become established in many areas of disturbance. The development of high-voltage transmission lines, residential and agricultural developments, major highways, and the railroad has resulted in increased levels of human activity, noise, and construction of significant barriers to terrestrial wildlife movement (e.g., U.S. Highways 6 and 89).

Habitats in the 2-mile-wide study corridor for Alternatives COUT BAX-E and COUT-H have been largely unmodified and unaffected by anthropogenic events. The alternative routes parallel existing linear facilities for portions of the crossing of the Manti-La Sal National Forest including a buried pipeline, paved county roads, and graded and unimproved forest roads. Localized areas in the 2-mile-wide study corridor have been affected by wildfires (e.g., the 2012 Seeley Fire), development of cabins and residential developments on private land adjacent to the national forest, and high levels of recreational use. Wildfires have resulted in substantial, though natural, changes in the composition and structure of vegetation that provides habitat for wildlife. Human presence, vehicle use and noise, and modification of vegetation associated with roadways and residential developments have fragmented, modified, and reduced the quality of habitats adjacent to the roads and developments. However, the mountainous, forested nature of habitats in this area has limited developmental impacts on the majority of wildlife habitat on the national forest. Overall, habitats in the study corridor between Price and Fairview maintain functionality for wildlife and are largely unaffected by past anthropogenic actions that would fragment, modify, and reduce the quality of wildlife habitats.

For Alternatives COUT BAX-B, COUT BAX-C, and COUT-I, habitats in the 2-mile-wide study corridor have been largely unmodified and unaffected by anthropogenic events. The alternative routes parallel existing linear facilities for the crossing of the Manti-La Sal National Forest, including a 345kV wood-framed transmission line, paved county roads, and graded and unimproved forest roads. Localized areas in the 2-mile-wide study corridor have been affected by surface facilities associated with underground coal mining, oil and gas development, and high levels of recreational use. Human presence, vehicle use and noise, and modification of vegetation associated with roadways and industrial developments have fragmented, modified, and reduced the quality of habitats adjacent to the roads and developments.

However, the mountainous, forested nature of habitats in this area has limited developmental impacts on the majority of wildlife habitats on the national forest. Overall, habitats in the study corridor between Huntington and Mount Pleasant maintain functionality for wildlife and are largely unaffected by past anthropogenic actions that would fragment, modify, and reduce the quality of wildlife habitats.

## **Uinta National Forest**

Alternative COUT-A and COUT-A Variation 1 (Chipman Creek) cross the Uinta National Forest through the Sheep Creek, Upper Tie Fork, and Willow Creek drainages. Habitats in the 2-mile-wide study corridor in these areas have been largely unmodified and unaffected by anthropogenic events. The alternative routes parallel existing linear facilities, including the Bonanza-Mona 345kV transmission line as well as graded and unimproved forest roads. The existing Bonanza-Mona transmission line was constructed in the 1980s and wildlife that use habitats adjacent to the transmission line have likely adapted to the modification of vegetation in the right-of-way and occasional disturbance associated with human presence and equipment use during transmission line inspection and maintenance activities. The Sheep Creek and Strawberry Ridge roads are located in the 2-mile-wide study corridor in this area and are graded forest roads that receive moderate-to-heavy use. Several ungraded forest roads also occur in the 2-mile-wide study corridor. Human presence, vehicle use and noise, and modification of vegetation associated with these roadways have fragmented, modified, and reduced the quality of habitats adjacent to the roads. However, the mountainous, forested nature of habitats in this area limits the effects of these features on the effectiveness of the habitats and the wildlife that depend on them.

Alternatives COUT-A, COUT-B, and COUT-C and route variations cross the Uinta National Forest through Spanish Fork Canyon. Habitats in the 2-mile-wide study corridor in Spanish Fork Canyon have been heavily modified by anthropogenic and natural events. The corridor parallels existing linear facilities, including two steel-lattice 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, and the Rio Grande Western Railroad. In addition to these linear facilities, habitats on the Forest in Spanish Fork Canyon have been affected by nearby residential developments, livestock grazing, and frequent off-highway-vehicle and recreational use.

These events have fragmented, modified, and reduced the quality of habitats present in the study corridor in Spanish Fork Canyon. Native vegetation has been cleared and non-native invasive plants have become established in many areas of disturbance. The development of multiple high-voltage transmission lines, major highways, and the railroad has resulted in increased levels of human activity, noise, and construction of significant barriers to terrestrial wildlife movement (i.e., U.S. Highway 6).

## **U.S. Forest Service Sensitive Species and Management Indicator Species**

### **American Beaver (*Castor canadensis*) – MIS: Uinta**

Potentially suitable habitat for beaver is typically found within 328 feet (100 meters) of intermittent and perennial streams with less than 15 percent slopes (Boyle and Owens 2007). This habitat type is very limited in the Project area on the Uinta National Forest.

### **Bald Eagle (*Haliaeetus leucocephalus*) – USFS Sensitive: Ashley, Manti-La Sal, and Uinta**

Potentially suitable bald eagle nesting, wintering and roosting habitats associated with riparian, wetland, montane, agriculture, and cliff types occur throughout the Project area on the Ashley, Manti-La Sal, and Uinta National Forests. Potential foraging habitat could occur in any of the vegetation communities in the

Project area. One known nest is located within 0.5 mile of the Project on the southeastern edge of Strawberry Reservoir on the Uinta National Forest (Bosworth 2003).

**Elk (*Cervus elaphus*) – MIS: Ashley and Manti-La Sal**

UDWR has designated crucial and substantial elk habitat throughout the Project area, and elk occur throughout the Project area. The Project centerline crosses designated elk habitat on the Ashley and Manti-La Sal National Forests (Table 3).

TABLE 3 SUMMARY OF ESTIMATED LINEAR DISTANCE (IN MILES) OF ELK HABITAT CROSSED ON THE ASHLEY AND MANTI-LA SAL NATIONAL FORESTS				
Alternative Route	Crucial Summer Range	Crucial Spring/Fall Range	Crucial Winter Range	Substantial Habitat
<b>Ashley National Forest</b>				
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>				
COUT-B	8	–	2	–
COUT-C Variation 5	–	–	–	1
<b>Manti-La Sal National Forest</b>				
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>				
COUT BAX-B	1	–	–	3
COUT BAX-C	14	–	–	3
COUT BAX-E	7	–	–	1
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>				
COUT-A and COUT-A Variation 1	–	–	1	–
COUT-B	–	–	1	–
COUT-C and all route variations	–	–	1	–
COUT-H	7	–	–	1
COUT-I	14	–	–	3
NOTE: Miles are approximate and have been rounded to the nearest mile.				

**Flammulated Owl (*Otus flammeolus*) – USFS Sensitive: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern**

Potentially suitable mature forested habitat is interspersed throughout the Project area, but is limited on the portions that cross the Ashley National Forest and the Uinta National Forest.

**Golden Eagle (*Aquila chrysaetos*) – MIS: Ashley and Manti-La Sal; Migratory Bird of Conservation Concern**

Potentially suitable golden eagle habitat is interspersed throughout the Project area but is limited on the portions that cross the Manti-La Sal National Forest and the Uinta National Forest.

**Greater Sage-grouse (*Centrocercus urophasianus*) – Endangered Species Act (ESA): Candidate; USFS Sensitive: Ashley, Manti-La Sal, and Uinta; MIS: Ashley**

The Project would not cross within 4 miles of active leks on any of the three national forests and does not cross occupied, crucial brood-rearing, or crucial winter habitat on the Ashley or Uinta National Forests. The Project centerline does cross occupied, crucial brood-rearing, and crucial winter habitat used by the Horn Mountain sage-grouse population on the Manti-La Sal National Forest (Table 4) east of Highway 31

and occupied, crucial brood-rearing, and crucial winter habitat not associated with a specific population. The Horn Mountain sage-grouse population is described further in Section 3.2.8.5 of the Project Final EIS (BLM 2016).

TABLE 4 SUMMARY OF ESTIMATED LINEAR DISTANCE (IN MILES) OF GREATER SAGE-GROUSE HABITAT CROSSED ON THE MANTI-LA SAL NATIONAL FOREST			
Alternative Route	Brood-rearing habitat	Occupied habitat	Winter habitat
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>			
COUT BAX-B	6	6	4
COUT BAX-C	6	6	4
COUT BAX-E	2	2	–
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>			
COUT-H	2	2	–
COUT-I	6	6	4

NOTE: Miles are approximate and have been rounded to the nearest mile.

**Lincoln’s Sparrow (*Melospiza lincolni*) – MIS: Ashley; Migratory Bird of Conservation Concern**

Potentially suitable riparian habitat is limited in the Project area on the Ashley National Forest.

**Mule Deer (*Odocoileus hemionus*) – MIS: Ashley and Manti-La Sal**

UDWR has designated crucial and substantial mule deer habitat throughout the Project area, and mule deer occur throughout the Project area. The Project would cross designated mule deer habitat on the Ashley and Manti-La Sal National Forests (Table 5).

TABLE 5 SUMMARY OF ESTIMATED LINEAR DISTANCE (IN MILES) OF MULE DEER HABITAT CROSSED ON THE ASHLEY AND MANTI-LA SAL NATIONAL FORESTS					
Alternative Route	Crucial Spring/Fall Habitat	Crucial Summer Range	Crucial Winter Range	Crucial Winter/Spring Habitat	Substantial Habitat
<b>Ashley National Forest</b>					
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>					
COUT-B	–	2	1	–	7
COUT-C Variation 2	–	1	–	–	–
COUT-C Variation 5	–	1	–	–	–
<b>Manti-La Sal National Forest</b>					
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>					
COUT BAX-B	2	13	2	–	–
COUT BAX-C	2	13	2	–	–
COUT BAX-E	2	6	–	–	–
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>					
COUT-A and COUT-A Variation 1	–	–	–	1	–
COUT-B	–	–	–	1	–
COUT-C and all route variations	–	–	–	1	–
COUT-H	2	6	–	–	–
COUT-I	2	13	2	–	–

NOTE: Miles are approximate and have been rounded to the nearest mile.

**Northern Goshawk (*Accipter gentilis*) – USFS Sensitive/MIS: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern**

Suitable nesting and foraging habitat occurs throughout the Project area on each of the national forests. The Project alternative routes cross one known post-fledgling area (PFA) on the Ashley National Forest (Sowers Canyon). On the Manti-La Sal National Forest, Alternatives COUT-H and COUT BAX-E cross the Upper Huntington Creek PFA and are within 200 feet of the North Fork of Burnout Canyon PFA. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I cross the north end of the Trail Mountain PFA, and would be within 1 mile of three other PFAs (Browns Canyon, Right Fork of Rilda, and East Mountain). One known PFA on the Uinta National Forest (Streeper Creek) is within 0.25 mile of Alternative COUT-A and COUT-A Variation 1; however, the Project would not affect the nest area or PFA habitat of this territory.

**Peregrine Falcon (*Falco peregrinus anatum*) – USFS Sensitive: Ashley, Manti-La Sal, and Uinta**

Potentially suitable cliff nesting habitat associated with barren and sparsely vegetated areas is limited in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests. Potentially suitable foraging habitat associated with grassland and riparian habitats also is limited on the three national forests in the project area.

**Red-naped Sapsucker (*Sphyrapicus nuchalis*) – MIS: Ashley**

Potentially suitable deciduous woodland habitat is limited in the Project area on the Ashley National Forest.

**Song Sparrow (*Melospiza melodia*) – MIS: Ashley**

Potentially suitable riparian habitat is very limited in the Project area on the Ashley National Forest.

**Spotted Bat (*Euderma maculatum*) and Townsend's Big-eared Bat (*Corynorhinus townsendii*) – USFS Sensitive: Ashley, Manti-La Sal, and Uinta**

Potentially suitable breeding and roosting cliff habitat is very limited in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests. Potentially suitable foraging habitat includes areas within 6 miles of roosting habitat may occur in any of the vegetation communities in the Project area.

**Three-toed Woodpecker (*Picoides dorsalis*) – USFS Sensitive: Ashley, Manti-La Sal, and Uinta; MIS: Uinta**

Potentially suitable montane coniferous forest habitat occurs on Ashley, Manti-La Sal, and Uinta National Forests, but is limited in the Project area.

**Warbling Vireo (*Vireo gilvus*) – MIS: Ashley**

Potentially suitable aspen and riparian habitat is limited in the Project area on the Ashley National Forest.

## **Other Species of Concern – Migratory Birds**

### **Black Rosy-finch (*Leucosticte atrata*)**

Potentially suitable alpine habitat does not occur in the Project area on the Ashley National Forest and is very limited in the Project area on the Manti-La Sal and Uinta National Forests.

### **Black-throated Gray Warbler (*Setophaga nigrescens*)**

Potentially suitable pinyon-juniper habitat occurs in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests.

### **Grasshopper Sparrow (*Ammodramus savannarum*)**

Potentially suitable grassland is limited in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests.

### **Sage Sparrow (*Artemisiospiza belli*)**

Potentially suitable sagebrush/shrub-steppe habitat occurs in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests.

### **Virginia's Warbler (*Oreothlypis virginiae*)**

Potentially suitable mountain shrubland and oak woodland habitat is limited in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests.

## **Environmental Consequences**

### ***Methodology***

Effects on USFS-sensitive, MIS, and other species of concern were evaluated by quantitatively assessing the Project's potential effects on habitat and known occurrences of each species using geographic information systems (GIS). Habitat for each species analyzed was identified using the best available information regarding individual species' life history characteristics and habitat requirements (Table 6). Where possible, existing data maintained by UDWR or USFS (e.g., nest locations, mapped or modeled habitat) were obtained and used to analyze effects on individual species. For species without pre-existing habitat data on USFS-administered land, potentially suitable habitat was identified using GIS methods and available data. GIS data representing land cover (U.S. Geological Survey [USGS] 2012), elevation and slope (USGS 1999), and locations of waterways (USGS 2009) were collected from publicly available sources. Landcover data were reclassified using methods described in the Project Final EIS Section 3.2.5.4 (BLM 2016). These data were manipulated using methods described in Table 6 to identify areas of potentially suitable habitat for each species based on their life history requirements. In general, habitat modeling methods used were conservative and are likely to overestimate the amount of habitat available for each species on the landscape as the models do not take into account species-specific selection of habitat features in a given vegetation community.

**TABLE 6  
METHODS USED TO QUANTIFY SPECIAL STATUS WILDLIFE POTENTIAL HABITATS**

<b>U.S. Forest Service Sensitive Species and MIS</b>	
American beaver	Potential habitat includes areas within 328 feet (100 meters) of intermittent and perennial streams (U.S. Geological Survey [USGS] 2009) with less than 15 percent slope (U.S. Forest Service [USFS] 2010a; USGS 1999; Boyle and Owens 2007).
Bald eagle	Potential nesting, wintering and roosting areas include areas associated with riparian, wetland, montane, agriculture, and cliff Gap Analysis Project (GAP) land-cover types (USGS 2012) within 1 mile of the Project right-of-way.  Potential foraging habitat includes all land-cover types on national forest lands in the Project area.
Elk	Utah Division of Wildlife Resources (UDWR) designated elk seasonal range (UDWR 2012a)
Flammulated owl	Potential habitat was identified using GAP land-cover types associated with montane and aspen habitats (USGS 1999).
Golden eagle	Potential nesting habitat was identified using GAP land-cover types associated with alpine, barren/sparsely vegetated, montane, and pinyon-juniper with a greater than 40 percent slope (USGS 2012).
Greater sage-grouse	Lek locations (UDWR 2013); occupied, winter, and brood-rearing habitats (UDWR 2011a, b, c)
Lincoln's sparrow	Potential habitat was identified using GAP land-cover types and National Wetlands Inventory (NWI) data associated with riparian and wetland habitat (USGS 2012; U.S. Fish and Wildlife Service [FWS] 2012b).
Mule deer	UDWR-designated mule deer seasonal range (UDWR 2007b)
Northern goshawk	Known nest locations, nest areas and post-fledgling areas (USFS 2011a, b, c, d)  Potential nesting habitat was identified using GAP land-cover types associated with aspen, montane, ponderosa pine and riparian habitats and NWI data (USGS 2012; FWS 2012b).  Potential foraging habitat was identified using GAP land-cover types and NWI data associated with aspen, big sagebrush, disturbed, mountain shrub, pinyon-juniper, riparian, and shrub-steppe (USGS 2012; FWS 2012b).
Peregrine falcon	Potential nesting habitat was identified using GAP land-cover types associated with barren/sparsely vegetated cover (cliff) (USGS 2012).  Potential foraging habitat within 2 miles of nesting cliff habitat was identified using GAP land-cover types and NWI data associated with riparian and grassland (USGS 2012; FWS 2012b).
Red-naped sapsucker	Potential habitat was identified using GAP land-cover types and NWI data associated with aspen below 9,514 feet; and riparian habitat (USGS 1999, 2012; FWS 2012b).
Song sparrow	Potential habitat was identified using GAP land-cover types and NWI data associated with riparian and wetland habitat (USGS 2012; FWS 2012b).
Spotted bat and Townsend's big-eared bat	Potential roosting habitat was identified using GAP land-cover types associated with barren/sparsely vegetated cover (cliff) (USGS 2012) within 1.5 miles of the Project area.  Potential foraging habitat was identified using all GAP land-cover types (USGS 2012) within 6 miles of potential roosting habitat in the Project area.
Three-toed woodpecker	Potential habitat was identified using GAP land-cover types associated with montane habitat above elevation 8,000 feet (USGS 1999, 2012; Parrish et al. 2002).

<b>TABLE 6</b>	
<b>METHODS USED TO QUANTIFY SPECIAL STATUS WILDLIFE POTENTIAL HABITATS</b>	
Warbling vireo	Potential habitat was identified using GAP land-cover types and NWI data associated with aspen and riparian habitats below an elevation of 9,514 feet (USGS 1999, 2012; FWS 2012b).
<b>Other Species of Concern: Migratory Birds</b>	
Black rosy-finch	Potential habitat was identified using GAP land-cover types associated with alpine habitat above elevation 8,600 feet (Parrish et al. 2002; USGS 1999, 2012).
Black-throated gray warbler	Potential habitat was identified using GAP land-cover types associated with pinyon juniper habitat (Parrish et al. 2002; USGS 2012).
Grasshopper Sparrow	Potential habitat was identified using GAP land-cover types associated with grassland habitat (Vickery 1996; USGS 2012).
Sage sparrow	Potential habitat was identified using GAP land-cover types associated with sagebrush/shrub-steppe habitat (Martin and Carlson 1998; USGS 2012).
Virginia's Warbler	Potential habitat was identified using GAP land-cover types associated with mountain shrub; oak woodland habitat (Parrish et al. 2002; USGS 2012).

The extent of Project-related disturbance of potentially suitable or known habitat for each species was analyzed quantitatively using GIS. The length of habitat for each species crossed by the Project alternative routes on USFS-administered land was calculated by overlaying the modeled habitat for each species with the alternative route reference centerlines. To estimate the area (in acres) of impacts on this habitat, an average of the acres of disturbance per mile of transmission line was calculated for each alternative route using the total length of each alternative route and the total disturbance estimated for the alternative route presented in Table 2-11 of the Project Final EIS (BLM 2016). The average extent of disturbance per mile for each alternative route and the total length of habitat crossed were used to calculate the area (in acres) of potential effects on each wildlife habitat. Calculation of the area of impacts on habitat using these methods is conservative as much of the disturbance would be temporary and reclaimed following construction of the Project.

The total area of modeled habitat in a cumulative impact analysis area was calculated to provide context for Project-related disturbance. Cumulative impact analysis areas for each species were defined in consideration of the species' life history requirements and sensitivity to disturbance and are described below under Spatial and Temporal Context for Effects Analysis.

## **Types of Potential Effects**

This section includes a description of types of potential effects that were considered in the assessment of potential effects for each species analyzed in this report.

### **Direct and Indirect Effects**

Project-related activities on USFS-administered land could affect wildlife through loss, degradation, and fragmentation of foraging, nesting or breeding habitat, and suitable cover. Direct impacts on wildlife resources could result from removal, alteration, and damage to vegetation during construction of Project access roads, transmission line towers, and associated facilities. Direct impacts on wildlife include increased disturbance and physiological stress from human presence, noise and activity during construction in the short-term, or from increased recreational access to occupied or potentially suitable habitat over the long-term (Knick et al. 2003). Direct impacts also include loss of ground cover through a reduction in height and vigor of vegetation and through loss and damage of trees and shrubs. The magnitude of potential impacts on wildlife could be greater for habitat obligates, or species with limited range or mobility. However, impacts on wide-ranging species could include temporal or spatial shifts in

activity from crucial range habitat and migration corridors. Direct impacts also include increased risk of mortality or injury of wildlife from collision with vehicles, Project structures, or equipment. The probability of mortality or injury of wildlife is a function of species' life history and physiological traits and individual response to disturbance.

Indirect impacts on wildlife include construction of new access roads that facilitate increased public access to previously inaccessible locations could increase potential hunting or poaching pressure (Bromley 1985). Prey species also could experience an increase in predation risk due to an increase in perch availability for raptors along transmission line rights-of-way (Knight and Kawashima 1993). Habitat alteration, fragmentation, and degradation could affect sensitive habitat quality and function indirectly through changes in natural fire regimes or microclimate; animal and plant community composition; and alterations to predator-prey dynamics, parasitism, resource competition, and rates of herbivory (Willyard et al. 2004), which could affect reproductive success, population size, survival and fitness of special status species (Riffell et al. 1996, Leung and Marion 2000).

### **Cumulative Effects**

Project-related loss, fragmentation, and modification of habitat could contribute to existing and ongoing loss, fragmentation, and modification of vegetation and terrain that provide habitat for wildlife on USFS-administered land from past and present actions and reasonably foreseeable future actions. Construction of the Project could follow, and potentially overlap construction and reclamation efforts of the TransWest Express Transmission Project. Overlapping construction and reclamation periods for the two projects could result in prolonged displacement or increase the extent of displacement of wildlife from important habitats and could extend the potential recovery time of wildlife from the direct and indirect effects of the Project.

The quality and quantity of specific habitat types associated with wildlife (such as riparian corridors that support obligate bird species and contiguous sagebrush habitats that support sage-grouse) are necessary for maintaining viable populations of special status wildlife species on the national forests. Impacts from any one past and present action or reasonably foreseeable future action could affect special status wildlife species or their habitat. The incremental cumulative effects of all past and present actions and reasonably foreseeable future actions could increase the intensity or magnitude of impacts on some wildlife populations. Disturbance that occurs during multiple breeding seasons in or in proximity to important nesting, breeding, or foraging habitat could have greater or long-term impacts on sensitive species. Individual or population sensitivity to or recovery from cumulative disturbance is a function of species-specific life history characteristics and behavior.

### **Design Features and Selective Mitigation Measures**

The USFS LRMPs and other land-use plans relevant to the Project were reviewed to identify best-management practices and other measures that mitigate potential impacts and were compiled and condensed into a comprehensive list. The measures comprise (a) design features for environmental protection that the Applicant would implement as standard practice of construction, operation, and/or maintenance (refer to Table 2-8 in the Project Final EIS [BLM 2016]) and (b) selective mitigation measures the Applicant agrees to apply through the impact assessment and mitigation planning process (refer to Table 2-13 in Project Final EIS) to avoid, reduce, or minimize moderate and high impacts of the Project.

If an action alternative is selected, the Project mitigation measures will be carried forward for the alternative route selected into the plan of development (POD) (refer to Project Final EIS Section 2.4). In the case of some resources (e.g., biological resources, water resources), post-EIS, pedestrian, agency-

approved surveys would be required to refine the environmental protection requirements and further develop the detail of the POD and POD mapping. Implementation plans that would be included in the POD include a Plant and Wildlife Species Conservation Plan.

Design features of the Proposed Action and selective mitigation measures would be used under all alternative routes to reduce effects of the Project on wildlife and to meet standards and guidelines in applicable LRMPs. A description of the design features and selective mitigation measures that would be used to reduce effects on wildlife resources analyzed in this report and a description of how these measures would be effective at reducing Project effects is included in the Project Final EIS, Sections 3.2.7.4 and 3.2.8.4 (BLM 2016). The design features of the Proposed Action and selective mitigation measures were considered in all effects analyses conducted for this report. Additional mitigation measures would be developed and applied to reduce effects in the event that the analysis indicates the measures described in this section do not provide adequate environmental protection for USFS to grant a special-use authorization for an alternative route in compliance with relevant laws, regulations, and agency policies.

### Incomplete and Unavailable Information

Determinations of potential impacts on national forest-wide population trends and population viability were evaluated using the best available information. However, information or data on many sensitive species distribution, abundance, and population trends, both in the state of Utah and on USFS-administered land, are not comprehensive or complete.

### Spatial and Temporal Context for Effects Analysis

The analysis for each species was conducted in a relevant cumulative impact analysis area. Cumulative impact analysis areas for wildlife resources were based on the best available information for species-specific territory or home range, known locations, and biologically relevant buffers for each species (Table 7).

The temporal scope for the Project is the direct, indirect, and cumulative effects that include both short-term and long-term impacts. Short-term impacts are defined as impacts that are anticipated to begin during construction and dissipate in 5 years because of Project reclamation activities. The Applicant’s proposal does not include plans for decommissioning the Project; therefore, long-term impacts associated with the presence of the transmission line (e.g., tower foundations) may be permanent and would persist through the life of the Project.

<b>TABLE 7 METHODS USED TO QUANTIFY SPECIAL STATUS WILDLIFE CUMULATIVE IMPACTS ANALYSIS AREA</b>		
<b>Common Name</b>	<b>Cumulative Impacts Analysis Area Distance on Either Side of the Proposed Right-of-way</b>	<b>Rationale<sup>1</sup></b>
<b>U.S. Forest Service Sensitive Species and Management Indicator Species</b>		
American beaver	5,249 feet	Two-times the species year-round range (up to 2,625 feet) from den (NatureServe 2013)
Bald eagle	1 mile	Two-times the recommended 0.5 mile buffer for the species (U.S. Fish and Wildlife Service 2007)

**TABLE 7  
METHODS USED TO QUANTIFY SPECIAL STATUS WILDLIFE  
CUMULATIVE IMPACTS ANALYSIS AREA**

<b>Common Name</b>	<b>Cumulative Impacts Analysis Area Distance on Either Side of the Proposed Right-of-way</b>	<b>Rationale<sup>1</sup></b>
Elk	Contiguous designated elk seasonal range in wildlife management units crossed by national forest boundaries and crossed by Project alternative routes	Designated seasonal range is essential for the survival of local elk populations.  Wildlife management units provide quantifiable measures of current population size and trends and range area and condition.
Flammulated owl	0.5 mile	Two times the recommended 0.25 mile buffer for the species (Romin and Muck 2002)
Golden eagle	1 mile	Two times the recommended 0.5 mile buffer for the species (Romin and Muck 2002)
Greater sage-grouse	11 miles	Sage-grouse that attend leks up to 11 miles from the Project may be indirectly affected by the loss of habitat functionality during other seasons of the year (Connelly et al. 2000).
Lincoln's sparrow	328 feet	Diameter of occupied territory in low-density populations (Ammon 1995)
Mule deer	Contiguous designated mule deer seasonal range in wildlife management units crossed by national forest boundaries and crossed by the proposed right-of-way	Designated seasonal range is essential for the survival of local mule deer populations.  Wildlife management units provide quantifiable measures of current population size and trends; range area and condition.
Northern goshawk	1 mile for known nest locations	Average hunting range from nest (Squires and Kennedy 2006)
	6 miles for potentially suitable nesting and foraging habitat	Farthest recorded breeding range from nest (Squires and Kennedy 2006)
Peregrine falcon	2 miles for foraging and nesting habitat	Nest buffer: average hunting range of up to 2 miles from nesting cliff sites (U.S. Fish and Wildlife Service 1984).
Red-naped sapsucker	686 feet	Diameter of defended territory (NatureServe 2013)
Song sparrow	299 feet	Diameter of occupied territory (Arcese et al. 2002)
Spotted bat and Townsend's big-eared bat	3 miles for roosting habitat	Two times known 1.5-mile roosting habitat distance from roost (Gruver and Keinath 2006, Luce and Keinath 2007)
	6 miles from potentially suitable foraging habitat	Known foraging distance from day roost (Wackenhut and McGraw 1998)
Three-toed woodpecker	2,026 feet	Diameter of occupied territory (NatureServe 2013).  Active nests identified through surveys require a 30-acre buffer (U.S. Forest Service 2003).
Warbling vireo	1,048 feet	Diameter of species territory (NatureServe 2013)

**TABLE 7  
METHODS USED TO QUANTIFY SPECIAL STATUS WILDLIFE  
CUMULATIVE IMPACTS ANALYSIS AREA**

<b>Common Name</b>	<b>Cumulative Impacts Analysis Area Distance on Either Side of the Proposed Right-of-way</b>	<b>Rationale<sup>1</sup></b>
<b>Other Species of Concern: Migratory Birds</b>		
Black rosy-finch	4.98 miles	Two times the foraging distance of 2.49 miles from the nest reported for breeding pairs (Johnson 2002)
Black-throated gray warbler	3,200 feet	Territory size data for black-throated gray warbler are not available (Guzy and Lowther 2012; Parrish et al. 2002). The yellow warbler ( <i>Setophaga petechia</i> ) and black-throated gray warbler are congeners (i.e., of the same genus) and have similar natural history traits. A 3,200-foot buffer was used based on the territory size of the yellow warbler (NatureServe 2013).
Grasshopper sparrow	524 feet	Diameter of species territory (Vickery 1996)
Sage sparrow	453 feet	Diameter of species largest recorded territory (Wiens et al. 1985)
Virginia's warbler	557 feet	Diameter of species largest recorded territory (Parrish et al. 2002)
NOTE: <sup>1</sup> Home ranges/territories were assumed to be circular; cumulative impact analysis areas include the 250-foot right-of-way for each alternative route and the adjacent potentially suitable habitat within a distance equal to one home range/territory diameter on either side of the right-of-way.		

## Cumulative Effects Analysis

Cumulative disturbance from all past, present, and reasonably foreseeable future actions on species' habitat in the cumulative impact analysis areas was calculated using shapefiles of specific projects received from agencies and local governments. The extent of all impacts from past and present actions and reasonably foreseeable future actions including Project-related disturbance was then determined for all lands, regardless of jurisdiction, in the cumulative impact analysis areas for each wildlife resource. Variations in actual degrees of disturbance from past and present actions and reasonably foreseeable future actions are disregarded to provide a consistent and conservative estimate of cumulative effects; all areas of reasonably foreseeable future actions identified in shapefiles provided for activities are considered to be equally disturbed for the purposes of this analysis.

The approach for analysis of cumulative effects is presented in Table 4-3 of the Project EIS (BLM 2016). The cumulative effects analysis considers past and present actions and reasonably foreseeable future actions (Tables 4-1 and 4-2 of the Project EIS [BLM 2016]) in cumulative impacts analysis areas for relevant alternative routes. Areas affected by wildfires were excluded from the quantitative analysis as habitat can recover from these events. Recovery from wildfires depends on the time since the occurrence, precipitation amounts, plant species, and degree of associated degradation (weed invasion, soil loss, and fire intensity). Vegetation management activities were also excluded because, although they may result in initial temporary losses in habitat, they are assumed to improve habitat in the long-term.

## Local Route Variations

The EIS for the Project considered the potential impacts of several route variations that were developed to address local-scale issues. Appendix F of the Project EIS (BLM 2016) provides a description of all route variations considered in the Final EIS. The EIS for the Project considered variations to Alternatives COUT-A and COUT-C that would cross USFS-administered land. The local route variation to COUT-A is located near Chipman Creek on the Uinta National Forest. This route variation is referred to as COUT-A Variation 1 in this report. There are three local route variations to Alternative COUT-C on USFS-administered lands. One local route variation occurs along U.S. Highway 6 and is referred to in this report as COUT-C Variation 1. The other two variations occur in the Camp Timberlane/Argyle Canyon area. These route variations are referred to as COUT-C Variations 2 and 5 in this report to match nomenclature for these routes in the EIS for the Project. This report addresses the potential impacts that were assessed along the entire length of each alternative route on USFS-administered lands.

## Results

### U.S. Forest Service Sensitive Species and Management Indicator Species

#### American Beaver (MIS: Uinta)

#### *Environmental Consequences*

Impacts on potentially suitable American beaver habitat on the Uinta National Forest are presented in Tables 8.

TABLE 8 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR AMERICAN BEAVER HABITAT ON THE UINTA NATIONAL FOREST								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	7	1,444	0.5	179	56	40	275	1,169
COUT-A Variation 1	7	1,320	0.5	179	56	28	263	1,058

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. The beaver is a management indicator species for riparian habitat on the Uinta National Forest only.  
 Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

The Project would affect 0.5 percent or less of potentially suitable beaver habitat in the cumulative impact analysis area on the Uinta National Forest (Table 8). Alternative COUT-A and COUT-A Variation 1 follow an existing 345kV transmission line through the Uinta National Forest, although areas in the 2-mile-wide study corridor have been largely unaffected by anthropogenic events. Due to the linear nature of beaver habitat along streams on the Uinta National Forest, and anticipated span distances between

transmission line structures (refer to Section 2.3 of the Project Final EIS), construction of permanent transmission line structures and work areas in riparian areas and beaver habitat would likely be avoided and is not anticipated to diminish habitat effectiveness for beaver on the Uinta National Forest. Disturbance to individual beaver could occur as a result of the proposed activities but is unlikely as beavers tend to be crepuscular or nocturnal (NatureServe 2013) and thus active outside of likely construction and maintenance activities schedules.

Project-related impacts on riparian areas and beaver habitat would include minor tree clearing in the right-of-way to allow for safe operation of the transmission line. These effects would be minor and localized and would not prevent the habitat from supporting current or future beaver populations. Preconstruction surveys would be conducted to identify riparian areas and beaver habitat crossed by the Project (Design Feature 3), and in areas where riparian areas or beaver habitats are identified. Selective Mitigation Measures 2 and 7 (avoidance of sensitive resources and spanning or avoiding sensitive features) would be implemented to avoid or reduce impacts on beaver habitat. Access roads have been previously developed to the existing transmission line, and development of new access roads across beaver habitat for construction likely would not be necessary. If necessary, construction of new Project-related access roads would use existing crossings of riparian areas and beaver habitat (Selective Mitigation Measure 2); therefore, habitat effectiveness for beaver would not be diminished on USFS-administered lands.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendment on the American beaver would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Though unlikely, Project-related loss, fragmentation and modification of potentially suitable American beaver habitat could occur under Alternative COUT-A and COUT-A Variation 1. If beaver habitat is affected by the Project, the effects of the Project could contribute to the cumulative loss, fragmentation, and modification of beaver habitat in the cumulative impact analysis area (Table 8). Past and present actions that have affected beaver on the Uinta National Forest include the construction of an existing 345kV steel-lattice transmission line and construction of forest roads. Reasonably foreseeable future actions include (a) TransWest Express Transmission Project, which would follow the same route through the Uinta National Forest as Alternative COUT-A and COUT-A Variation 1 and (b) recreational development (Sheep Creek Trail), which could result in localized increases in human disturbance and noise in potentially suitable beaver habitat on the Uinta National Forest.

### ***Findings***

Alternative COUT-A and COUT-A Variation 1 could result in local losses or modifications of potentially suitable habitat for beaver on the Uinta National Forest. Any effects on riparian areas or beaver habitat on the Uinta National Forest are anticipated to be minor and localized and would not prevent the habitat from supporting current or future beaver populations. Furthermore, the majority of potentially suitable American beaver habitat on the Uinta National Forest would remain unaffected by the Project and other cumulative actions in the cumulative impact analysis area. Overall, the Project would not contribute to the current decreasing trend of beaver populations on the Uinta National Forest.

**Bald Eagle (USFS Sensitive: Ashley, Manti-La Sal, and Uinta)**

**Environmental Consequences**

Impacts on potentially suitable bald eagle foraging habitat and impacts on nesting, wintering, and roosting habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Tables 9 and 10.

TABLE 9 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR BALD EAGLE FORAGING HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	171	17,808	1.0	794	407	92	1,293	16,515
COUT-C Variation 2	8	4,802	0.2	27	139	26	192	4,610
COUT-C Variation 5	18	9,574	0.2	97	276	57	430	9,143
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	284	28,306	1.0	9,971	465	229	10,665	17,641
COUT BAX-C	282	28,306	1.0	9,971	465	228	10,664	17,642
COUT BAX-E	127	16,660	0.8	5,963	311	63	6,337	10,323
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	16	5,388	0.3	352	151	88	591	4,797
COUT-A Variation 1	16	5,388	0.3	352	151	89	591	4,797
COUT-B	16	5,388	0.3	352	151	86	589	4,799
COUT-C	16	5,388	0.3	352	151	91	594	4,794
COUT-C Variation 1	16	5,388	0.3	352	151	91	594	4,794
COUT-C Variation 2	17	5,388	0.3	352	151	91	594	4,794
COUT-C Variation 5	18	5,388	0.3	352	151	101	604	4,784
COUT-H	140	16,660	0.8	5,963	311	69	6,343	10,317
COUT-I	301	28,306	1.1	9,971	465	244	10,679	17,627
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	329	34,572	1.0	1,350	2,119	454	3,923	30,649
COUT-A Variation 1	321	34,010	0.9	1,340	2,119	457	3,915	30,095
COUT-B	127	24,278	0.5	1,534	712	281	2,527	21,751
COUT-C	134	24,278	0.6	1,534	712	296	2,542	21,736
COUT-C Variation 1	118	23,421	0.5	1,507	700	342	2,549	20,872
COUT-C Variation 2	151	27,857	0.5	2,153	835	339	3,326	24,530
COUT-C Variation 5	168	27,857	0.6	2,153	835	376	3,363	24,494
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 10  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR BALD EAGLE NESTING, WINTERING, AND ROOSTING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	23	4,755	0.5	207	84	5	296	4,459
COUT-C Variation 2	5	1,507	0.3	3	42	6	51	1,456
COUT-C Variation 5	9	3,632	0.2	30	79	14	124	3,508
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	81	8,750	0.9	3,126	71	69	3,266	5,484
COUT BAX-C	81	8,750	0.9	3,126	71	68	3,265	5,485
COUT BAX-E	21	3,617	0.6	1,669	53	4	1,726	1,892
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	23	3,617	0.6	1,669	53	4	1,726	1,891
COUT-I	86	8,750	1.0	3,126	71	73	3,270	5,480
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	57	5,347	1.1	181	328	66	575	4,773
COUT-A Variation 1	72	5,456	1.3	180	328	81	589	4,867
COUT-B	1	1,592	0.1	171	34	13	218	1,375
COUT-C	1	1,592	0.1	171	34	13	218	1,374
COUT-C Variation 1	1	1,536	0.1	169	33	18	220	1,316
COUT-C Variation 2	6	2,211	0.3	302	44	16	362	1,849
COUT-C Variation 5	7	2,211	0.3	302	44	18	364	1,847
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction.								
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

The analysis of bald eagle foraging habitat incorporated all possible vegetation types that occur in the cumulative impact analysis area. Bald eagles are most likely to be found foraging near water bodies or sources of carrion (e.g., roads); therefore, this analysis is a conservative estimation of foraging habitat used by bald eagles. The analysis of bald eagle nesting, wintering, and roosting habitat included riparian, wetland, montane, cliff, and agricultural lands. The analysis of nesting, wintering, and roosting habitat also is conservative because breeding habitat and winter roost areas are generally concentrated close to water bodies and primary food sources (fish, waterfowl and seabirds) or in upland areas where carrion (mammals and birds) is readily available (NatureServe 2013). Preferential roost areas typically include large and accessible conifers close to food sources.

Disturbance to foraging, nesting, wintering, and roosting bald eagles could occur on USFS-administered lands as a result of the proposed activities but is unlikely as bald eagles generally avoid areas of

anthropogenic disturbance (NatureServe 2013). Right-of-way clearing would have little impact on bald eagle foraging habitat, while an increase in roads could result in beneficial impacts through increased road kill for foraging eagles. Preconstruction nest and winter roost surveys would be conducted in suitable bald eagle habitat (Design Feature 3), and seasonal and spatial restrictions would be implemented during construction and maintenance to reduce disturbance to roosting or wintering bald eagles (Selective Mitigation Measure 12 and Design Feature 8). In the event that bald eagle winter roosts or nests are located during preconstruction surveys, access roads constructed for the Project would be closed following construction (Selective Mitigation Measure 15) to reduce disturbance to roosting or nesting bald eagles. Potential for mortality to bald eagles from collision with transmission structures would be reduced by implementing avian-safe transmission line design standards (Design Feature 4). Furthermore, due to the phase-to-phase, and phase-to-ground separation of components of 500kV transmission lines, electrocution of bald eagles would not be possible on the transmission line. After application of design features and selective mitigation measures, impacts on bald eagle habitat effectiveness on all three national forests from all alternative routes would be limited to localized loss and modification of potentially suitable bald eagle foraging, nesting, wintering, and roosting habitat. The majority of potentially suitable habitat would remain undisturbed in the cumulative impact analysis area on all three national forests (Tables 9 and 10), and habitat effectiveness for bald eagles on USFS-administered lands would remain largely unaffected by the Project.

The Project would affect 1.0 percent or less of the total available bald eagle foraging habitat and 0.5 percent or less of potentially suitable nesting, wintering, and roosting habitat in the cumulative impact analysis area on the Ashley National Forest (Tables 9 and 10). Alternative COUT-B would affect comparatively more bald eagle habitat than COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows linear developments (lower-voltage transmission lines and forest roads) that have resulted in only minor habitat modification, and potentially suitable foraging, nesting, wintering, and roosting habitat in the study corridor maintains high levels of functionality for bald eagles. COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the national forest. This area has largely remained unmodified by anthropogenic developments; therefore, habitat effectiveness for bald eagles would likely be high.

The Project would affect between 0.3 and 1.1 percent of total available bald eagle foraging habitat and 1.0 percent or less of potentially suitable nesting, wintering, and roosting habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Tables 9 and 10). Alternatives COUT-A, COUT-B, and COUT-C and route variations would affect the least potential bald eagle habitats and follow linear developments (i.e., existing transmission lines, U.S. Highways 6 and 89, and the Rio Grande Western Railroad, and forest roads) on the Manti-La Sal National Forest. These developments have decreased the quality and effectiveness of bald eagle habitats that would be crossed by these alternative routes. Additionally, bald eagles that use these habitats are likely habituated to frequent noise and human presence associated with operation of the transportation infrastructure. Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I would affect comparatively more bald eagle habitat than Alternatives COUT-A, COUT-B, and COUT-C and route variations on the Manti-La Sal National Forest. While the habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation although potentially suitable foraging, nesting, wintering, and roosting habitat in the study corridor for these alternative routes maintain high levels of functionality for bald eagles.

The Project would affect between 0.5 and 1.0 percent of the total available bald eagle foraging habitat and between 0.3 and 1.3 percent of potentially suitable nesting, wintering, and roosting habitat in the cumulative impact analysis area on the Uinta National Forest (Tables 9 and 10). Alternative COUT-A and COUT-A Variation 1 would affect comparatively more bald eagle habitat than Alternatives COUT-B and

COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat in the 1980s and is subject to occasional human disturbance during transmission line maintenance or inspection. Bald eagles in the area have likely adapted to the modification of habitat in the right-of way and occasional disturbance, and potentially suitable bald eagle foraging, nesting, wintering, and roosting habitats in the study corridor for these alternative routes maintain high levels of functionality. Habitat under Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development from two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. Bald eagle habitat quality is likely to be diminished in these areas, and bald eagles have likely habituated to frequent noise and human presence from previous development.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La National Forest; an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest; and an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest. The effects of the plan amendments on bald eagles would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss and modification of potentially suitable bald eagle foraging, nesting, wintering, and roosting habitat under all alternative routes could contribute to the cumulative loss, fragmentation, and modification of potentially suitable bald eagle foraging, nesting, wintering, and roosting habitats in relevant cumulative impact analysis areas and reduce habitat effectiveness for bald eagles. The majority of disturbance from past and present actions reported in Tables 9 and 10 results from past oil and gas leasing for which minimal development is anticipated and underground coal mining and leasing with minimal ground disturbance. Past and present actions also includes a reservoir development on the Manti-La Sal National Forest, which provide long-term benefits on bald eagle populations by improving fishing opportunities and availability of primary food resources but also increase disturbance of bald eagles from increased recreational use (i.e., boating, fishing and camping). Reasonably foreseeable future actions that include the TransWest Express Transmission Project, a pipeline, sand and gravel mining, a tunnel, and recreational development could further reduce habitat effectiveness for bald eagles on USFS-administered lands and potentially increase disturbance on bald eagle populations.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, bald eagle habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007) and two smaller fires, the Dry Canyon Fuels Project, and several other vegetation management activities affect bald eagle habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, three smaller fires, and the Sheep Creek Vegetation Management Project affect bald eagle habitat in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012), one smaller fire, and USFS habitat projects affect bald eagle habitat in the cumulative impact analysis area. Wildfires can be detrimental to bald eagles through habitat loss (FWS 2009); however, only minor portions of bald eagle habitat in the cumulative impact analysis area are affected by wildfire. Vegetation management activities may result in initial temporary losses to bald eagle habitat but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project, for example, is intended to reduce the intensity of wildfires.

## Findings

All alternative routes that cross USFS-administered lands could result in local losses or modifications of potential bald eagle foraging, nesting, wintering, and roosting habitat and may locally reduce habitat effectiveness for bald eagles. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on USFS-administered lands, as these alternative routes affect a greater amount of potentially suitable bald eagle habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of potential bald eagle foraging, nesting, wintering, and roosting habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for bald eagles on the national forests would remain largely unaffected by the Project. Construction, operation, and maintenance of the Project are not likely to contribute to federal listing or loss of bald eagle viability on the Ashley, Manti-La Sal, or Uinta National Forests.

## Elk (MIS: Ashley and Manti-La Sal)

### Environmental Consequences

Potential impacts on crucial and substantial elk habitats are summarized in Tables 11 through 13.

TABLE 11 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR ELK CRUCIAL SUMMER RANGE HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	142	59,905	0.24	8,399	217	0	8,616	51,289
COUT-C Variation 2	3	127,768	<0.01	8,397	734	0	9,132	118,636
COUT-C Variation 5	3	127,768	<0.01	8,397	734	0	9,132	118,636
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	229	538,234	0.04	104,232	9,028	125	113,385	424,850
COUT BAX-C	227	538,234	0.04	104,232	9,028	124	113,384	424,850
COUT BAX-E	114	538,234	0.02	104,232	9,028	50	113,309	424,925
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	124	538,234	0.02	104,232	9,028	54	113,314	424,920
COUT-I	243	538,234	0.04	104,232	9,028	133	113,392	424,842
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction.								
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 12  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR CRUCIAL ELK WINTER RANGE HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COU)</b>								
COU-B	29	90,942	0.03	6,808	285	0	7,093	83,849
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COU)</b>								
COU-A	16	322,822	<0.01	55,698	5,470	247	61,415	261,406
COU-A Variation 1	16	322,822	<0.01	55,698	5,470	248	61,416	261,406
COU-B	16	322,822	<0.01	55,698	5,470	259	61,428	261,394
COU-C	16	322,822	<0.01	55,698	5,470	273	61,442	261,380
COU-C Variation 1	16	322,822	<0.01	55,698	5,470	292	61,460	261,362
COU-C Variation 2	17	322,822	<0.01	55,698	5,470	274	61,442	261,380
COU-C Variation 5	18	322,822	<0.01	55,698	5,470	304	61,472	261,350

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

**TABLE 13  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR ELK SUBSTANTIAL HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COU)</b>								
COU-C Variation 2	6	46,583	0.01	8,698	618	78	9,394	37,190
COU-C Variation 5	15	46,583	0.03	8,698	618	62	9,377	37,206
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COU BAX)</b>								
COU BAX-B	53	470,284	0.01	34,299	927	78	35,304	434,980
COU BAX-C	52	470,284	0.01	34,299	927	78	35,304	434,980
COU BAX-E	14	470,284	<0.01	34,299	927	13	35,239	435,045

**TABLE 13  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR ELK SUBSTANTIAL HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	15	470,284	<0.01	34,299	927	14	35,240	435,044
COUT-I	56	470,284	0.01	34,299	927	77	35,303	434,981
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Project-related impacts on elk could include temporary displacement from seasonal habitats that provide forage, cover, water, and space into less suitable habitats and minor loss of forage as a result of removal of native vegetation during Project construction. These effects are unlikely to adversely affect elk populations over the long-term as local elk populations have adapted to previous anthropogenic disturbance in designated ranges on the Ashley and Manti-La Sal National Forests. Project-related impacts could have beneficial effects on elk by altering optimum percentages of shrub classes and vegetation on the right-of-way and increasing forage availability (Willyard et al. 2004). Project-related impacts on designated elk habitat would be reduced through implementation of Design Features 26, 27, and 28 (vehicle and construction activity access restrictions and construction personnel instruction). Disturbance to local elk populations would be reduced by avoiding construction and maintenance operations during periods when elk are especially sensitive to disturbance from human activities (e.g., wintering) through application of Selective Mitigation Measure 12. Access roads constructed for the Project would be closed following construction in the event that they are likely to facilitate increased human use and disturbance of crucial elk habitats that could result in measurable adverse effects on elk (Selective Mitigation Measure 15). After application of design features and selective mitigation measures, impacts would be localized and are not anticipated to affect overall habitat effectiveness for elk on the national forests.

The Project would affect 0.25 percent or less of designated elk crucial summer and winter range and substantial habitat in the cumulative impact analysis area on the Ashley National Forest (Tables 11 through 13). Alternative COUT-B would affect comparatively more elk habitat than Alternative COUT-C and route variations on the Ashley National Forest. Alternative COUT-B crosses designated elk habitat in Sowers Canyon on the Ashley National Forest and follows an existing lower voltage transmission line. Elk populations continue to use seasonal habitat in the area and have likely adapted to some level of anthropogenic disturbance from development in the area. COUT-C route variations follow the natural boundary between elk crucial summer range and substantial habitat in the Reservation Ridge area, and impacts are likely to be minor as the Project is not likely to impede movement between the designated ranges.

The Project would affect 0.08 percent or less of designated elk crucial summer and winter range and substantial habitat in the cumulative impact analysis area on the Manti-La Sal National Forest.

Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I, would affect comparatively more elk habitat than Alternatives COUT-A, COUT-B, and COUT-C and route variations on the Manti-La Sal National Forest. The habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation. Designated elk habitat in the area maintains high levels of functionality. Alternatives COUT-A, COUT-B, and COUT-C and route variations parallel existing transmission lines, U.S. Highways 6 and 89, and the Rio Grande Western Railroad along the northern boundary of the Manti-La Sal National Forest. In addition, habitats have been affected by nearby residential and agricultural developments, livestock grazing, and frequent off-highway-vehicle and recreational use. These developments have decreased the quality and effectiveness of elk crucial winter range that would be crossed by the Project, although elk that use these habitats are likely habituated to frequent noise and human presence associated with operation of the transportation infrastructure.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, and an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest. The effects of the plan amendments on elk would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of elk crucial summer, crucial winter, and substantial habitat would contribute to the cumulative loss, fragmentation, and modification of elk crucial summer, crucial winter, and substantial habitat in relevant cumulative impact analysis areas and reduce habitat effectiveness for elk. A substantial portion of the cumulative impacts on the Manti-La Sal National Forest reported in Tables 11 through 13 results from coal mining. The majority of coal mining operations on the Manti-La Sal National Forest involve underground mining techniques that do not disturb or prevent elk from using habitat on the surface. Reasonably foreseeable future actions include the TransWest Express Transmission Project, oil and gas development, a coal mine, a reservoir, and residential development that are likely to be located in areas of previous disturbance; therefore, disturbance on local elk populations would be minimized.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, elk habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012) and USFS habitat projects affect elk habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 47,587-acre Seeley fire (2012) and several smaller fires, the Dry Canyon Fuels Project, and multiple other vegetation management activities affect elk habitat in the cumulative impact analysis area. Wildfire is a natural ecological process in elk habitats that may reduce the availability of forage and hiding cover in the short-term, but could be beneficial to elk through promoting long-term forest health and forage regeneration. Vegetation-management activities may result in initial temporary losses to elk habitat but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project, for example, is intended to reduce the intensity of wildfires.

### ***Findings***

No elk calving grounds or crucial spring/fall or crucial year-long habitats would be affected by any of the alternative routes on the Ashley or Manti-La Sal National Forests. All alternative routes that cross the Ashley and Manti-La Sal National Forests could result in localized modification of forage and cover in

designated elk crucial summer, crucial winter, and substantial habitat, but only slightly when considering the existing disturbance. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-B, and COUT-I, as these alternative routes affect a greater amount of elk crucial and substantial habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of designated elk habitat would remain undisturbed in the cumulative impact analysis area, and habitat effectiveness for elk would remain largely unaffected by the Project. None of the alternative routes that cross the Ashley and Manti-La Sal National Forests would adversely affect the current stable trend for elk populations on the Ashley and Manti-La Sal National Forests.

**Flammulated Owl (USFS Sensitive: Ashley, Manti-La Sal; Migratory Bird of Conservation Concern) Environmental Consequences**

Impacts on potentially suitable flammulated owl habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 14.

TABLE 14 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR FLAMMULATED OWL HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	20	1,106	1.8	40	40	0	80	1,026
COUT-C Variation 2	5	616	0.8	3	39	3	45	571
COUT-C Variation 5	13	1,649	0.8	28	88	12	127	1,522
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	175	8,359	2.1	2,842	235	126	3,203	5,156
COUT BAX-C	174	8,359	2.1	2,842	235	125	3,202	5,157
COUT BAX-E	76	5,157	1.5	1,914	134	35	2,083	3,074
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	83	5,157	1.6	1,914	134	38	2,086	3,070
COUT-I	186	8,359	2.2	2,842	235	134	3,211	5,148

**TABLE 14  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR FLAMMULATED OWL HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	115	5,170	2.2	149	429	119	698	4,473
COUT-A Variation 1	133	5,373	2.5	147	429	141	718	4,655
COUT-B	1	340	0.3	28	10	10	48	292
COUT-C	1	340	0.3	28	10	11	48	292
COUT-C Variation 1	1	338	0.3	28	10	11	48	290
COUT-C Variation 2	9	1,053	0.9	270	28	13	312	742
COUT-C Variation 5	10	1,053	0.9	270	28	15	313	740
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Disturbance to potentially suitable flammulated owl habitat could occur on USFS-administered lands as a result of the proposed activities but is unlikely as potentially suitable old growth montane forest is limited in the Project area on the national forests, particularly on the Ashley and Uinta National Forests.

Direct effects on flammulated owl habitat could include the removal, alteration, and damage to vegetation and or trees during construction of Project access roads, transmission line towers, and all associated facilities. Displacement of individuals as a result of habitat loss or degradation also may occur. The magnitude of Project-related impacts would be minimized through the use of avian-safe transmission line design standards (Design Feature 4) that would reduce the potential for avian collisions with the transmission line. Due to the separation of components of 500kV transmission lines, and the small body size and wing span of the flammulated owl, electrocution would not be possible on the transmission line. In addition, preconstruction nest surveys would be conducted in potentially suitable flammulated owl habitat (Design Feature 3), and seasonal and spatial restrictions would be implemented during construction and maintenance to avoid disturbing flammulated owls during sensitive breeding periods (Selective Mitigation Measure 12 and Design Feature 8). Project access roads would be closed in the event that flammulated owl nests are located during preconstruction surveys and if new access roads are likely to facilitate increased human use and disturbance of these areas (Selective Mitigation Measure 15). After application of design features and selective mitigation measures, impacts on potentially suitable flammulated owl habitat on all three national forests from all alternative routes would be limited to localized loss and modification of potentially suitable flammulated owl habitat.

The Project would affect 1.8 percent or less of the total available potentially suitable flammulated owl habitat in the cumulative impact analysis area on the Ashley National Forest (Table 14). COUT-B would affect comparatively more flammulated owl habitat than COUT-C route variations on the Ashley National Forest. While COUT-B would affect 20 acres of flammulated owl habitat on the Ashley National Forest,

all disturbance would occur on habitat effected by past, present, or reasonably foreseeable future actions. All route variations are located in the vicinity of Reservation Ridge at the southern edge of the Ashley National Forest. Habitat in this area has largely been unaffected by development, and habitat effectiveness for flammulated owl is likely to be high due to the mountainous and forested terrain.

The Project would affect 2.2 percent or less of potentially suitable habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 14). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect comparatively more flammulated owl habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. While the habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation, potentially suitable flammulated owl habitat in the study corridor for these alternative routes maintain high levels of functionality due to the mountainous, forested nature of habitats in this area.

The Project would affect 2.5 percent or less of potentially suitable habitat in the cumulative impact analysis area on the Uinta National Forest (Table 14). Alternative COUT-A and COUT-A Variation 1 would affect comparatively more flammulated owl habitat than Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat in the 1980s and is subject to occasional human disturbance during transmission line maintenance or inspection. Flammulated owls in the area have likely adapted to the modification of habitat in the right-of way and occasional disturbance, and habitat effectiveness for flammulated owls is likely to be high due to the mountainous and forested terrain in the area that limits the effects of noise and development. Habitat under Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development from two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. Flammulated owl habitat quality is likely to be diminished in these areas, and flammulated owls have likely habituated to frequent noise and human presence from previous development.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on flammulated owls would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss and modification of potentially suitable flammulated owl habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable flammulated owl habitat in relevant cumulative impact analysis area and could reduce habitat effectiveness for flammulated owl. Reasonably foreseeable future actions include the TransWest Express Transmission Project, sand and gravel mining, a reservoir, a tunnel, transportation, and recreational developments that could further reduce habitat effectiveness and potentially increase disturbance on flammulated owl populations.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, flammulated owl habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. No flammulated owl habitat in the cumulative analysis impact area on the Ashley National Forest appears to be affected by wildfires or vegetation management. On the Manti-La Sal National Forest, two relatively small wildfires, the Dry Canyon Fuels Project, and several other

vegetation management projects affect flammulated owl habitat in the cumulative analysis impact area. On the Uinta National Forest, the 25,913-acre Salt Creek fire (2007), three smaller fires, and the Sheep Creek Vegetation Management Project affect flammulated owl habitat in the cumulative analysis impact area. Wildfires could reduce habitat effectiveness for flammulated owl through removal of old-growth wood, snags, and dense old-growth vegetation that flammulated owl use for nesting and roosting (Linkhart and Mccallum 2013). However, only minor portions of flammulated owl habitat are affected by wildfire in the cumulative impact analysis area. Vegetation management activities, such as the Sheep Creek Vegetation Management Project, may result in initial temporary losses to flammulated owl habitat, but are designed to benefit wildlife habitat conditions in the long-term.

### ***Findings***

All alternative routes that cross potentially suitable flammulated owl habitat on USFS-administered lands could result in local losses or modifications of potentially suitable habitat and could reduce habitat effectiveness for flammulated owls. The magnitude of impacts would be greater under Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest; COUT-B on the Ashley National Forest; and COUT-A and COUT-A Variation 1 on the Uinta National Forest, as these alternative routes affect a greater amount of potentially suitable flammulated owl habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. For all alternative routes that affect potentially suitable habitat for flammulated owls, the majority of potentially suitable habitat on USFS-administered lands would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for flammulated owl would remain largely unaffected by the Project. Alternative routes that cross potentially suitable flammulated owl habitat may affect individuals but are not likely to cause a trend to federal listing or loss of viability on the Ashley, Uinta, or Manti-La Sal National Forests. When analyzed as a migratory bird species representing montane forest habitat, impacts resulting from any of the alternative routes are unlikely to affect regional flammulated owl population trends.

### **Golden Eagle (MIS: Ashley and Manti-La Sal; Migratory Bird of Conservation Concern)**

#### ***Environmental Consequences***

All alternative routes would affect potentially suitable golden eagle nesting habitat on the Ashley, Manti-La Sal, and Uinta National Forests (Table 15).

Disturbance to golden eagles could occur on USFS-administered lands as a result of the proposed activities but is unlikely as potentially suitable golden eagle nesting habitat is very limited in the Project area. Project-related impacts on golden eagle nesting habitat could include the removal, alteration, and damage to vegetation and or trees during construction of Project access roads, transmission line towers, and all associated facilities and the displacement of individuals as a result of habitat loss or degradation. Habitat effectiveness could be decreased but only slightly when considering the existing disturbance and habitat modification. Golden eagles will use coniferous habitat that has open space, including clear-cuts and firebreaks; and they will nest on transmission towers (Pagel 2010). Project-related structures also may provide indirect benefits for golden eagles by increasing perching and hunting potential. Risk of mortality and injury from collision or electrocution is unlikely due to the use of avian-safe transmission line design standards (Design Feature 4) to reduce the potential for avian collisions with the transmission line. Due to the separation of components of 500kV transmission lines, electrocution of golden eagles or any other bird would not be possible on the transmission line.

**TABLE 15  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR GOLDEN EAGLE NESTING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	7	6,838	0.1	265	27	5	296	6,542
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	63	5,435	1.2	1,982	40	56	2,078	3,357
COUT BAX-C	63	5,435	1.2	1,982	40	56	2,078	3,358
COUT BAX-E	4	1,124	0.4	197	22	4	224	900
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	4	1,124	0.4	197	22	4	224	900
COUT-I	67	5,435	1.2	1,982	40	60	2,082	3,354
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	16	2,539	0.6	38	107	25	170	2,369
COUT-A Variation 1	17	2,474	0.7	38	107	26	171	2,303
COUT-B	5	1,982	0.3	32	54	14	100	1,882
COUT-C	5	1,982	0.3	32	54	15	101	1,881
COUT-C Variation 2	5	2,096	0.2	33	54	19	105	1,990
COUT-C Variation 5	5	2,096	0.2	33	54	21	107	1,988

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction. The golden eagle is a management indicator species for cliff and rock habitat on the Ashley and Manti-La Sal National Forests only but is analyzed as a migratory bird species on all three national forests.  
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

Disturbance to nesting golden eagles would be reduced by conducting preconstruction nest surveys in potentially suitable golden eagle habitat (Design Feature 3). Seasonal and spatial restrictions would be implemented during construction and maintenance to avoid disturbing golden eagles during sensitive breeding periods (Selective Mitigation Measure 12 and Design Features 6 and 8). Project access roads would be closed in the event that golden eagle nests are located during preconstruction surveys, and new access roads are likely to facilitate increased human use and disturbance of these areas (Selective Mitigation Measure 15). After application of design features and selective mitigation measures, impacts on potentially suitable golden eagle habitat on all three national forests from all alternative routes would be limited to loss and modification of potentially suitable golden eagle habitat but is not anticipated to reduce habitat effectiveness for golden eagles on USFS-administered lands.

The Project would affect 0.1 percent or less of the total available golden eagle nesting habitat in the cumulative impact analysis area on the Ashley National Forest (Table 15). Alternative COUT-B follows

an existing transmission line and forest roads through Sowers Canyon that has resulted in minor modification to existing habitats.

The Project would affect 1.2 percent or less of the total available golden eagle nesting habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 15). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect comparatively more golden eagle habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation. Potentially suitable nesting habitat in the study corridor is anticipated to maintain high levels of functionality for golden eagles. Five known golden eagle nests occur within 0.5 mile of the right-of-way under Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest (Utah Natural Heritage Program 2011); three nests are located on the south facing slope in the vicinity of Deer Creek Mine, one nest occurs in Meeting House Canyon adjacent to an existing transmission line, and one nest on the east of Upper Joes Canyon adjacent to a forest road. Due to the proximity of these nests to existing disturbances, the eagles that use them have likely habituated to some level of noise and human presence. The current status of the nests are unknown but would be identified during preconstruction nest surveys that would inform appropriate mitigation measures to reduce impacts on nesting golden eagles.

The Project would affect 0.7 percent or less of the total available golden eagle nesting habitat in the cumulative impact analysis area on the Uinta National Forest (Table 15). Alternative COUT-A and COUT-A Variation 1 would affect more golden eagle habitat than Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 follow the Bonanza-Mona Transmission Project that was constructed in the 1980s and is subject to occasional human disturbance during transmission line maintenance or inspection. Golden eagles in the area have likely adapted to the modification of habitat in the right-of way and occasional disturbance and potentially suitable golden eagle nesting habitat in the study corridor for these alternative routes maintain high levels of functionality. Habitat crossed by Alternatives COUT-B and COUT-C and route variations has been heavily modified by previous development from two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. Golden eagle habitat quality is likely to be diminished in these areas, and individual golden eagles that use these habitats have likely habituated to frequent noise and human presence from previous development.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on golden eagles would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation and modification of potentially suitable golden eagle habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable golden eagle habitat in the relevant cumulative impact analysis area and could contribute to reductions in habitat effectiveness for golden eagles. The majority of disturbance from past and present actions reported in Table 15 results from past oil and gas leasing for which minimal development is anticipated, and underground coal mining and leasing with minimal ground disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a reservoir, a pipeline, and a coal mine,

which could further reduce habitat effectiveness for the golden eagle on USFS-administered land, and potentially increase disturbance on golden eagle populations..

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, golden eagle habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012) affects golden eagle habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007) and two smaller fires, the Dry Canyon Fuels Project, and several other vegetation management activities affect golden eagle habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, three smaller fires, and the Sheep Creek Vegetation Management Project affect golden eagle habitat in the cumulative impact analysis area. Wildfires can be detrimental to golden eagles through habitat loss (FWS 2015); however, only minor portions of golden eagle habitat area are affected by wildfire in the cumulative impact assessment area. Vegetation management activities may result in initial temporary losses to golden eagle habitat, but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project, for example, is intended to reduce the intensity of wildfires.

### ***Findings***

All alternative routes that cross USFS-administered lands could result in local losses or modifications of potential golden eagle nesting habitat and may locally reduce habitat effectiveness for golden eagles. Potential impacts would be the same among all alternative routes on the Ashley National Forest and similar among alternative routes on the Uinta National Forest. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on the three national forests, as these alternative routes affect a greater amount of potentially suitable golden eagle habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of potentially suitable golden eagle nesting habitat on USFS-administered lands would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for golden eagles would remain largely unaffected by the Project. None of the alternative routes would affect the stable forest-wide golden eagle population trend for the Ashley and Manti-La Sal National Forests. When analyzed as a migratory bird species representing barren/sparsely vegetated habitat, impacts resulting along any of the alternative routes are unlikely to affect regional golden eagle population trends.

### **Greater Sage-grouse (ESA: candidate; USFS Sensitive: Ashley, Uinta, and Manti-La Sal; MIS: Ashley)**

#### ***Environmental Consequences***

None of the alternative routes are located in sage-grouse habitats within 4 miles of active sage-grouse leks on the Ashley, Manti-La Sal, or Uinta National Forests. None of the alternative routes would affect sage-grouse brood-rearing, occupied, or winter habitat on the Ashley or Uinta National Forests. Impacts on sage-grouse brood-rearing, occupied, or winter habitat on the Manti-La Sal National Forest are presented in Table 16.

**TABLE 16  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR GREATER SAGE-GROUSE HABITATS ON THE MANTI-LA SAL NATIONAL FOREST**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Brood-rearing Habitat</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	97	54,894	0.20	10,749	190	62	11,000	43,894
COUT BAX-C	97	54,894	0.20	10,749	190	61	10,999	43,895
COUT BAX-E	32	50,736	0.06	11,538	96	5	11,639	39,097
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	35	50,736	0.07	11,538	96	6	11,640	39,096
COUT-I	103	54,894	0.20	10,749	190	65	11,004	43,891
<b>Occupied Habitat</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	97	61,752	0.20	11,845	194	62	12,101	49,651
COUT BAX-C	97	61,752	0.20	11,845	194	61	12,100	49,652
COUT BAX-E	32	90,180	0.04	15,833	411	139	16,383	73,797
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	35	90,180	0.04	15,833	411	56	16,300	73,880
COUT-I	103	61,752	0.20	11,845	194	65	12,105	49,647
<b>Winter Habitat</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	69	41,741	0.20	1,269	120	60	1,449	40,291
COUT BAX-C	68	41,741	0.20	1,269	120	59	1,449	40,292
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	73	41,741	0.20	1,269	120	64	1,453	40,288
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction.								
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

None of the alternative routes would affect sage-grouse habitat on the Ashley National Forest, which supports the Anthro Mountain sage-grouse population. Similarly, none of the alternative routes cross sage-grouse habitats on the Uinta National Forest, which provides habitat for the Strawberry/Fruitland sage-grouse population. Disturbance to sage-grouse occupied, brood-rearing, and winter habitat could occur on the Manti-La Sal National Forest as a result of the proposed activities. Sage-grouse on the Manti-La Sal National Forest are a part of the Horn Mountain sage-grouse population, which is described further in Section 3.2.8.5 of the Project Final EIS (BLM 2016). The Horn Mountain sage-grouse population is small, and population trends on the Manti-La Sal National Forest are undetermined. However, a recent BLM analysis of population-specific lek counts for this area suggests a declining population (BLM 2013). However, no alternative routes would be located in sage-grouse habitats within 4 miles of active sage-grouse leks on the Ashley, Manti-La Sal, or Uinta National Forests. Habitats within 4

miles of sage-grouse leks are especially important sage-grouse nesting and brood-rearing habitat because the majority of sage-grouse hens nest within 4 miles of the lek at which they were bred.

A detailed description of potential effects on sage-grouse that could occur as a result of the Project is included in Section 3.2.8.4 of the Project Final EIS (BLM 2016). The magnitude of effects would be minimized through implementation of preconstruction sage-grouse lek surveys in all occupied sage-grouse habitat (Design Feature 3) and seasonal restrictions within 4 miles of active leks to reduce the effects of construction noise and human presence on nesting and brooding sage-grouse (Selective Mitigation Measure 12). Additionally, seasonal restrictions would be implemented in designated winter habitat to reduce the effects of construction noise and human presence on wintering sage-grouse (Selective Mitigation Measure 12). Tower design modification using tubular steel H-frame structures (Selective Mitigation Measure 6) and installation of raptor and corvid perch deterrents (Selective Mitigation Measure 14) would be implemented in sage-grouse habitats within 4 miles of leks to reduce raptor and corvid predation on breeding, nesting, and brooding sage-grouse. The Project has been designed to be colocated with existing and planned transmission lines where possible (refer to Section 2.1.1 of the Project Final EIS [BLM 2016]), in part to reduce the proliferation of new perching sites for avian predators in additional areas across the landscape. The Applicant has committed to develop a sage-grouse mitigation plan to compensate for remaining unavoidable adverse effects of sage-grouse and sage-grouse habitat that could occur as a result of implementation of the Project (refer to Project Final EIS, Appendix K [BLM 2016]).

The Project would affect 0.2 percent or less of brood-rearing habitat, occupied habitat, and winter habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 16). Habitats within 4 miles of known leks are not crossed by the alternative routes. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect more brood-rearing and occupied habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, and COUT-H, would affect the same amount of winter habitat on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I are located directly adjacent to an existing 345kV wood-pole H-frame transmission line and cross sage-grouse occupied, brood-rearing, and wintering habitats on the Manti-La Sal National Forest that provides habitat for the Horn Mountain sage-grouse population. These habitats presumably have already incurred the negative effects of transmission line presence in sage-grouse habitats. Additionally, sage-grouse habitat crossed on the Manti-La Sal National Forest consists of a mosaic of wet meadows, sagebrush flats, and deciduous aspen forest. Where crossing wet meadows or sagebrush flats would be unavoidable, the transmission line would be micro-sited to locate the line along the edges of meadows and openings to avoid placing tall structures in contiguous open habitats that may be used by sage-grouse. Site-specific mitigation would be developed for the POD if one of these alternative routes were selected.

Alternatives COUT BAX-E and COUT-H cross habitats designated by UDWR as sage-grouse occupied and brood-rearing habitats on the Manti-La Sal National Forest. These habitats historically were considered part of the Emma Park sage-grouse population, though sage-grouse have not been documented using this area and are believed to be extirpated (BLM 2013). The sage-grouse habitat crossed is not included in a sage-grouse management area identified in the *Conservation Plan for Greater Sage-grouse in Utah* (State of Utah 2013), and sage-grouse are not anticipated to occupy these habitats in the future. Therefore, Alternatives COUT BAX-E and COUT-H would have no impact on individual sage-grouse on the Manti-La Sal National Forest.

### ***Cumulative Effects***

Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I on the Manti-La Sal National Forest would contribute to the cumulative loss, fragmentation, and modification of sage-grouse

brood-rearing, occupied, and winter habitat in the cumulative impact analysis area. However, designated sage-grouse habitats crossed by Alternatives COUT BAX-E and COUT-H are not occupied by sage-grouse; therefore, impacts on these habitats would not result in any cumulative effects on sage-grouse. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, and COUT-I have been affected previously by transmission-line development, which would reduce the incremental effects of the Project on sage-grouse using affected habitats. Past and present actions on sage-grouse brood-rearing, occupied, and winter habitat on the Manti-La Sal National Forest include oil and gas development and a coal mine. Coal mining in sage-grouse habitat is occurring using underground methods and disturbance of sage-grouse habitats is not anticipated. Portions of the sage-grouse habitats also have been leased for oil and gas development, though surface activity in sage-grouse habitats is not anticipated. Therefore, Table 16 likely provides a conservative overestimate of cumulative impacts on sage-grouse habitats on the Manti-La Sal National Forest. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a reservoir, a tunnel, and transportation development.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, greater sage-grouse habitat affected by vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, USFS habitat projects affect greater sage-grouse habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the Dry Canyon Fuels Project and several other vegetation management activities affect greater sage-grouse habitat in the cumulative impact analysis area. On the Uinta National Forest, the Sheep Creek Vegetation Management Project affects greater sage-grouse habitat in the cumulative impact analysis area. Vegetation management activities, such as the Sheep Creek Vegetation Management Project, may result in initial temporary losses to greater sage-grouse habitat, but are designed to benefit wildlife habitat conditions in the long-term.

### ***Findings***

All alternative routes that cross brood-rearing, occupied, and winter habitat on USFS-administered lands could result in local losses or modifications to the habitat, and could reduce habitat effectiveness for sage-grouse. None of the alternative routes would be located in sage-grouse habitats within 4 miles of active sage-grouse leks on the Ashley, Manti-La Sal, or Uinta National Forests. None of the alternative routes would affect sage-grouse brood-rearing, occupied, or winter habitat on the Ashley or Uinta National Forests. The magnitude of impacts would be greater under Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest as these alternative routes affect a greater amount of brood-rearing and occupied habitat but habitat effectiveness in these areas has been reduced by previous transmission-line development. Overall, the majority of brood-rearing, occupied, and winter habitat on USFS-administered lands would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area. Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I may affect individual sage-grouse but are not likely to cause a trend towards federal listing or a loss of viability on the Manti-La Sal National Forest. No other alternative routes would affect sage-grouse on USFS-administered lands.

### **Lincoln's Sparrow (MIS: Ashley; Migratory Bird of Conservation Concern)**

#### ***Environmental Consequences***

Impacts on potentially suitable Lincoln's sparrow habitat on the Ashley and Uinta National Forests are presented in Table 17. No potentially suitable riparian habitat occurs in the Project area on the Manti-La Sal National Forest.

**TABLE 17  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR LINCOLN'S SPARROW HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	3	77	3.9	8	34	4	46	31
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	24	145	16.6	1	5	25	31	113
COUT-A Variation 1	30	180	16.7	1	4	32	37	143
NOTES: <sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. The Lincoln's sparrow is a management indicator species for riparian habitat on the Ashley National Forest only but is analyzed as a migratory bird species on all three national forests. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Disturbance to Lincoln's sparrow habitat could occur on USFS-administered lands as a result of the proposed activities but is unlikely as potentially suitable riparian habitat is extremely limited in the study corridor on the Ashley National Forest and patchy on the Uinta National Forest.

The only anticipated impacts on riparian areas and potentially suitable Lincoln's sparrow habitat associated with the Project would be minor tree clearing in the right-of-way to allow for safe operation of the transmission line and construction of new access roads to access the transmission line in the event that existing crossings of riparian areas are not sufficient. Temporary displacement of individuals as a result of habitat loss or degradation also may occur, but effects are anticipated to be minor and localized and would not prevent the habitat from supporting local Lincoln's sparrow populations. The magnitude of Project-related impacts would be minimized through the implementation of preconstruction surveys to identify riparian areas that may be used by Lincoln's sparrow (Design Feature 3). In areas where riparian areas are identified, avoidance of sensitive resources and spanning or avoiding sensitive features (Selective Mitigation Measures 2 and 7) and selective removal of trees more than 5-feet tall in riparian and tree nesting habitats (Selective Mitigation Measure 4) would be implemented to avoid or reduce impacts on riparian areas. Due to the anticipated span distances between transmission line structures (refer to Section 2.3 of the Project Final EIS [BLM 2016]), construction of permanent transmission line structures and work areas in riparian areas and potentially suitable Lincoln's sparrow habitat likely would be avoided completely. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory birds nesting season, appropriate species-specific nest buffers would be implemented on identified active Lincoln's sparrow nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 3.9 percent or less of the total available Lincoln's sparrow potentially suitable habitat in the cumulative impact analysis area on the Ashley National Forest (Table 17). Alternative COUT-B follows linear development (lower-voltage transmission lines and forest roads) that has resulted in minor habitat modification; therefore, habitat effectiveness for Lincoln's sparrow along Alternative COUT-B is expected to be high.

The Project would affect 16.7 percent or less of potentially suitable habitat in the cumulative impact analysis area on the Uinta National Forest (Table 17). Project-related effects are an overestimation as most if not all habitat would be spanned or avoided. There is abundant potentially suitable habitat for Lincoln's sparrow outside of the cumulative impact analysis area on the national forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat in the 1980s and is subject to occasional human disturbance during transmission line maintenance or inspection. However, potentially suitable Lincoln's sparrow habitat, while patchy in the study corridor, likely maintains high levels of functionality due to the mountainous, forested nature of habitats in this area that have precluded excessive anthropogenic disturbance.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendment on Lincoln's sparrows would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss and modification of potentially suitable Lincoln's sparrow habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable Lincoln's sparrow habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for Lincoln's sparrow. Past and present actions on potentially suitable Lincoln's sparrow habitat include oil and gas leasing. Reasonably foreseeable future actions include the TransWest Express Transmission Project. Incremental Project disturbance on potentially suitable Lincoln's sparrow habitat would occur in areas of pre-existing disturbance or areas of future disturbance (i.e., collocating the Project transmission line with the TransWest Express Transmission Project). Reasonably foreseeable future actions also would include riparian restoration management actions that could offset disturbance from proposed actions and improve riparian habitat quality and increase habitat effectiveness for Lincoln's sparrow over the long-term.

### ***Findings***

Alternative COUT-A, COUT-A Variation 1, and Alternative COUT-B could result in local losses or modifications of potentially suitable riparian and wetland habitat and may reduce habitat effectiveness for Lincoln's sparrow on USFS-administered lands. The magnitude of effects would be greater under Alternative COUT-A and COUT-A Variation 1 on the Uinta National Forest as they would affect a greater amount of potentially suitable Lincoln's sparrow habitat and would be located in areas of high habitat effectiveness. Overall, the majority of potentially suitable Lincoln's sparrow habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for Lincoln's sparrow on the Ashley and Uinta National Forests would remain largely unaffected by the Project. Any effects on riparian areas or Lincoln's sparrow habitat on the Ashley National Forest would be minor and localized and would not prevent the habitat from supporting current Lincoln's sparrow populations. The Project is unlikely to adversely affect the stable national forest-wide trend of Lincoln's sparrow in the Ashley National Forest. When analyzed as a migratory bird species representing riparian and wetland habitats, impacts resulting from any of the alternative routes are unlikely to affect regional Lincoln's sparrow population trends.

**Mule deer (MIS: Ashley and Manti-La Sal)**

***Environmental Consequences***

Impacts on crucial and substantial mule deer habitats are summarized in Tables 18 through 22.

TABLE 18 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR MULE DEER CRUCIAL SPRING/FALL HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	30	214,607	0.01	10,229	189	57	10,475	204,132
COUT BAX-C	29	214,607	0.01	10,229	189	56	10,475	204,132
COUT BAX-E	28	214,607	0.01	10,229	189	32	10,451	204,156
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	31	214,607	0.01	10,229	189	36	10,454	204,153
COUT-I	32	214,607	0.01	10,229	189	60	10,479	204,128
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction.								
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

TABLE 19 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR MULE DEER CRUCIAL SUMMER RANGE HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	35	32,608	0.10	5,646	74	0	5,720	26,888
COUT-C Variation 2	8	416,410	<0.01	16,933	2,266	224	19,423	396,987
COUT-C Variation 5	18	416,410	<0.01	16,933	2,266	142	19,341	397,069

**TABLE 19**  
**SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)**  
**FOR MULE DEER CRUCIAL SUMMER RANGE HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	222	518,477	0.04	121,428	12,248	84	133,761	384,716
COUT BAX-C	220	518,477	0.04	121,428	12,248	84	133,760	384,717
COUT BAX-E	94	518,477	0.02	121,428	12,248	15	133,691	384,786
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	103	518,477	0.02	121,428	12,248	16	133,692	384,785
COUT-I	235	518,477	0.05	121,428	12,248	90	133,766	384,711
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 20**  
**SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)**  
**FOR MULE DEER CRUCIAL WINTER RANGE HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	17	41,483	0.04	2,992	139	0	3,131	38,352
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	33	635,260	0.01	63,868	2,315	115	66,298	568,962
COUT BAX-C	32	635,260	0.01	63,868	2,315	114	66,297	568,963
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	35	635,260	0.01	63,868	2,315	102	66,285	568,975
NOTES:								
<sup>1</sup> Cumulative disturbance was calculated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 21  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR MULE DEER CRUCIAL WINTER/SPRING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-E	5	101,060	<0.01	6,400	996	49	7,445	93,614
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	16	101,060	0.02	6,400	996	162	7,558	93,501
COUT-A Variation 1	16	101,060	0.02	6,400	996	162	7,559	93,501
COUT-B	16	101,060	0.02	6,400	996	167	7,563	93,497
COUT-C	16	101,060	0.02	6,400	996	175	7,572	93,488
COUT-C Variation 1	16	101,060	0.02	6,400	996	200	7,596	93,463
COUT-C Variation 2	17	101,060	0.02	6,400	996	176	7,572	93,487
COUT-C Variation 5	18	101,060	0.02	6,400	996	195	7,591	93,468
COUT-H	5	101,060	<0.01	6,400	996	54	7,450	93,610
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 22  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR MULE DEER SUBSTANTIAL HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	119	259,406	0.05	48,502	1,291	0	49,793	209,613
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

The majority of mule deer habitat that would be affected by alternative routes that cross the Ashley and Manti-La Sal National Forests is crucial summer range and substantial habitat. Crucial winter/spring,

winter, and winter/spring ranges would also be affected but are primarily located on or outside the boundaries of the Ashley and Manti-La Sal National Forests.

Project-related impacts on mule deer could include temporary displacement from seasonal habitats that provide forage, cover, water, and space into less suitable habitats and minor loss of forage as a result of removal of native vegetation during Project construction. These effects are unlikely to adversely affect mule deer populations over the long-term as local mule deer populations have adapted to and accommodated previous anthropogenic disturbance in designated range on the Ashley and Manti-La Sal National Forests. The magnitude of potential effects on mule deer habitats would be reduced through the implementation of Design Features 26, 27, and 28 (vehicle and construction activity access restrictions and construction personnel instruction). Impacts on mule deer would also be reduced by avoiding construction and maintenance operations during periods when mule deer are especially sensitive to disturbance from human activities (e.g., wintering and fawning) through application of Selective Mitigation Measure 12. Access roads constructed for the Project would be closed following construction in the event they are likely to facilitate increased human use and disturbance of crucial mule deer habitats that would result in measurable adverse effects on mule deer (Selective Mitigation Measure 15). After application of design features and selective mitigation measures, impacts on mule deer habitats on the Ashley and Manti-La Sal National Forests would be localized and are not anticipated to affect overall habitat effectiveness for mule deer on the Ashley and Manti-La Sal National Forests.

The Project would affect 0.1 percent or less of the designated mule deer crucial summer and winter range, and substantial habitat in the cumulative impact analysis area on the Ashley National Forest (Tables 18 through 22). Alternative COUT-B would affect comparatively more mule deer habitat than Alternatives COUT-C and route variations on the Ashley National Forest. Alternative COUT-B crosses mule deer crucial winter range on the northern boundary of the Ashley National Forest and crosses substantial habitat in Sowers Canyon on the Ashley National Forest. The alternative follows an existing lower voltage transmission line and forest roads on the national forest, and local mule deer populations have likely adapted to some level of anthropogenic disturbance from previous development in the area. COUT-C route variations follow the southern boundary of mule deer crucial summer range in the Reservation Ridge area and impacts are likely to be minor as the majority of designated mule deer crucial summer range would remain undisturbed by the Project.

The Project would affect 0.05 percent or less of designated mule deer crucial spring/fall, summer, winter, and winter/spring habitat in the cumulative impact analysis area on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect comparatively more mule deer crucial habitat than all other alternative routes on the Manti-La Sal National Forest. The magnitude of Project-related impacts under Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I are likely to be minimal due to existing disturbance from existing linear facilities, as well as coal mining, oil and gas development, recreational use, and residential development. Designated mule deer habitat in the area maintains high levels of functionality due to the mountainous, forested nature of habitats that has effectively limited the effects of development in this area. Alternatives COUT-A, COUT-B, COUT-C and route variations parallel existing transmission lines, U.S. Highways 6 and 89, and the Rio Grande Western Railroad along the northern boundary of the Manti-La Sal National Forest. Habitat effectiveness on the northern boundary has been further diminished by residential and agricultural development, livestock grazing, and recreational use although local mule deer populations have likely habituated to ongoing disturbance. Project-related impacts on mule deer are likely to be minimal in the area.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, and an amendment to the Ashley National

Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest. The effects of the plan amendments on mule deer would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of mule deer designated habitat would contribute to the cumulative loss, fragmentation, and modification of mule deer designated habitat in relevant cumulative impact analysis areas and reduce habitat effectiveness for mule deer. On the Manti-La Sal National Forest, a large percentage of the past and present impacts reported in Tables 18 through 22 are a result of oil and gas leases and coal mining. Minimal development is anticipated with past oil and gas leasing, and minimal ground disturbance is associated with underground coal mining. Reasonably foreseeable future actions include the TransWest Express Transmission Project, oil and gas development, a pipeline, and a coal mine that could further impact habitat quality for mule deer.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, mule deer habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012) and USFS habitat projects affect mule deer habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007), the 47,587-acre Seeley fire (2012), the Dry Canyon Fuels Project, and multiple other vegetation management activities affect mule deer habitat in the cumulative impact analysis area. Wildfire is a natural ecological process that can promote long-term forest health and forage regeneration in mule deer habitat over the long-term (UDWR 2006b), potentially increasing mule deer use of habitat. Vegetation management activities may result in initial temporary losses to mule deer habitat, but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project, for example, is intended to reduce the intensity of wildfires.

### ***Findings***

No mule deer crucial spring/fall, winter/spring, or year-long habitats would be affected on the Ashley National Forest. No mule deer crucial year-long or substantial habitat would be affected on the Manti-La Sal National Forest. All alternative routes that cross the Ashley and Manti-La Sal National Forests could result in localized modification or loss of forage and cover in designated mule deer crucial and substantial habitats but only slightly when considering the existing disturbance. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-B, and COUT-I as these alternative routes affect a greater amount of mule deer crucial and substantial habitat on the Ashley and Manti-La Sal National Forests and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of mule deer crucial and substantial habitats would remain undisturbed in the cumulative impact analysis area, and habitat effectiveness for mule deer would remain largely unaffected by the Project. None of the alternative routes that cross the Ashley National Forest would adversely affect the current stable to decreasing trend for mule deer populations on the Ashley National Forest. None of the alternative routes that cross the Manti-La Sal National Forest would adversely affect the stable mule deer population trend on the Manti-La Sal National Forest.

**Northern Goshawk (USFS Sensitive/MIS: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern)**

**Environmental Consequences**

There would be no impacts on northern goshawk PFAs on the Uinta National Forest. Impacts on delineated PFAs on the Ashley and Manti-La Sal National Forests and potentially suitable nesting and foraging habitat for northern goshawk on all three national forests are presented in Tables 23 through 25.

TABLE 23 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR NORTHERN GOSHAWK POST-FLEDGLING AREAS								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	20	600	3.3	16	33	0	49	551
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	5	760	0.7	37	4	5	41	719
COUT BAX-C	5	760	0.7	37	4	5	41	719
COUT BAX-E	11	613	1.8	613	0	0	613	0
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	13	613	2.1	613	0	0	613	0
COUT-I	5	760	0.7	37	4	5	41	719
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

**TABLE 24  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR NORTHERN GOSHAWK POTENTIAL NESTING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	23	34,189	0.07	2,520	393	23	2,936	31,253
COUT-C Variation 2	5	30,076	0.02	697	384	75	1,156	28,920
COUT-C Variation 5	13	48,090	0.03	2,115	663	101	2,879	45,211
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	175	95,428	0.2	25,496	274	146	25,916	69,512
COUT BAX-C	174	95,428	0.2	25,496	274	145	25,915	69,513
COUT BAX-E	76	85,046	0.1	15,993	272	53	16,318	68,727
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	83	85,046	0.1	15,993	272	58	16,323	68,722
COUT-I	186	95,428	0.2	25,496	274	156	25,925	69,502
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	139	100,900	0.1	1,546	3,962	196	5,704	95,196
COUT-A Variation 1	163	100,307	0.2	1,545	3,962	225	5,731	94,575
COUT-B	1	70,178	<0.01	1,410	192	54	1,657	68,521
COUT-C	1	70,178	<0.01	1,410	192	57	1,660	68,518
COUT-C Variation 1	1	70,126	<0.01	1,414	185	61	1,659	68,467
COUT-C Variation 2	9	92,417	0.01	2,034	432	77	2,543	89,873
COUT-C Variation 5	10	92,417	0.01	2,034	432	86	2,552	89,865

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction.  
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

**TABLE 25  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR NORTHERN GOSHAWK POTENTIAL FORAGING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	99	117,012	0.10	6,664	663	75	7,402	109,610
COUT-C Variation 2	3	76,531	<0.01	2,683	1,237	196	4,115	72,416
COUT-C Variation 5	8	114,619	<0.01	5,123	1,835	193	7,152	107,468
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	171	147,258	0.10	37,316	900	289	38,505	108,753
COUT BAX-C	170	147,258	0.10	37,316	900	287	38,504	108,755
COUT BAX-E	105	111,872	0.10	18,856	565	133	19,554	92,317
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	16	81,290	0.02	1,948	480	282	2,711	78,579
COUT-A Variation 1	16	81,290	0.02	1,948	480	283	2,712	78,578
COUT-B	16	81,290	0.02	1,948	480	276	2,705	78,585
COUT-C	16	81,290	0.02	1,948	480	291	2,719	78,570
COUT-C Variation 1	16	81,290	0.02	1,948	480	291	2,719	78,571
COUT-C Variation 2	17	81,290	0.02	1,948	480	291	2,720	78,570
COUT-C Variation 5	18	81,290	0.02	1,948	480	323	2,752	78,538
COUT-H	115	111,872	0.10	18,856	565	146	19,567	92,305
COUT-I	182	147,258	0.10	37,316	900	246	38,462	108,796
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	286	295,175	0.10	8,111	7,171	848	16,129	279,046
COUT-A Variation 1	271	293,644	0.10	8,099	7,164	843	16,107	277,538
COUT-B	126	256,793	0.10	7,613	2,178	686	10,477	246,316
COUT-C	133	256,793	0.10	7,613	2,178	753	10,544	246,249
COUT-C Variation 1	116	256,759	0.10	7,617	2,169	800	10,586	246,173
COUT-C Variation 2	145	309,651	0.05	9,674	2,923	849	13,446	296,205
COUT-C Variation 5	161	309,651	0.10	9,674	2,923	941	13,538	296,113

NOTES:

<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

Disturbance to known northern goshawk delineated PFAs, known nest locations, and potentially suitable nesting and foraging habitat could occur on USFS-administered lands as a result of the proposed activities. Project-related effects on northern goshawk habitat could include the removal, alteration, and damage to vegetation and/or trees during construction of Project access roads, transmission line towers, and all associated facilities. However, suitable goshawk nesting habitat generally occurs in patches greater than or equal to approximately 25 acres (10 hectares) in size (Woodbridge and Dietrich 1994),

though the USFS uses 10 acres as a conservative minimum area for nest stands. Displacement of individuals as a result of habitat loss or degradation also may occur, but with abundant alternative habitat for goshawk in the cumulative impact analysis area, Project-related impacts on goshawk would be localized and would not preclude goshawk from using habitat on the national forest. Localized displacement from nest sites also may occur but would not prevent the habitat from supporting goshawk populations. Preconstruction nest surveys would be conducted in suitable goshawk nesting habitat (Design Feature 3), and seasonal and spatial restrictions would be implemented during construction and maintenance to avoid disturbing nesting and brood-rearing goshawks (Selective Mitigation Measure 12 and Design Feature 8). Potential mortality risk to goshawks would be reduced by implementing avian-safe transmission line design standards (Design Feature 4) that reduce the potential for avian collisions with the transmission line. Due to the phase-to-phase and phase-to-ground separation of components of 500kV transmission lines, electrocution of goshawks would not be possible on the transmission line. Access roads constructed for the Project would be closed following construction in the event that they cross goshawk PFAs and the new access roads are likely to facilitate increased human use and disturbance of goshawks using these areas (Selective Mitigation Measure 15).

### **Post-fledgling Areas**

Alternative COUT-B would affect 3.3 percent of an identified PFA on the Ashley National Forest (Table 23). Alternative COUT-B follows an existing transmission line and forest roads through Sowers Canyon that has resulted in minor modification to existing habitats, and habitat effectiveness for goshawk is likely to be high in the area. The nest area in the PFA would not be affected by any alternative routes. Alternative COUT-B follows the existing low voltage transmission line through the PFA, which would reduce the need for construction of new access roads in the PFA. Some removal of forested vegetation would be required in the PFA to allow for safe operation of the transmission line. Trees in the PFA would be removed selectively (Selective Mitigation Measure 4) to reduce the effects of tree removal on habitats in the PFA. Additionally, there are several north-facing slopes with coniferous forest in the immediate vicinity of the PFA crossed that provide similar habitat to what would be disturbed by the transmission line and could function as replacement habitat for affected individual birds.

The estimated Project disturbance would affect between 0.7 and 2.1 percent of crossed PFAs on the Manti-La Sal National Forest (Table 23). Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I could affect known PFAs. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I are located within 1 mile of three known nests, and Alternatives COUT BAX-E and COUT-H are located within 1 mile of four known nests. Alternatives COUT BAX-E and COUT-H cross the Upper Huntington Creek PFA on the Manti-La Sal National Forest. These alternative routes also would be located within 1 mile of known goshawk nests in the Upper Huntington Creek and North Fork of Burnout Canyon PFAs. Delineated nest areas around the known nests would not be crossed. The areas around the Upper Huntington Creek and North Fork of Burnout Canyon PFAs contain existing high-traffic unpaved roads and receive human traffic associated with recreational use of these roads. As a result, goshawks occupying these territories are likely somewhat habituated to human presence and noise associated with vehicle use. Some removal of forested vegetation would be required in the PFA to allow for safe operation of the transmission line. Trees would be removed selectively in the PFA (Selective Mitigation Measure 4) to reduce the effects of tree removal on habitats in the PFA. The area around the Upper Huntington Creek PFA contains a natural mosaic of forested, shrub, and meadow habitats and removal of some trees from the PFA would not substantially alter the structure of goshawk nesting habitat in the PFA and the abundant surrounding forested habitats. Additionally, access roads constructed for the Project through the PFA would be closed following construction to prevent increased human use and disturbance of these areas (Selective Mitigation Measure 15).

Alternatives COUT BAX-B, COUT BAX-C, and COUT-I cross the North End of Trail Mountain PFA on the Manti-La-Sal National Forest. These alternative routes also are located within 0.5 mile of two known goshawk nests in the North End of Trail Mountain PFA. Delineated nest areas around the known nests would not be crossed. The alternative routes cross only the far northwestern corner of the PFA for approximately one span length between tower structures (approximately 1,500 feet) and would be adjacent to an existing high-voltage transmission line. Additionally, unpaved roads that receive frequent recreational traffic cross the PFA and are located between the transmission line alternative routes and the known nest sites in the PFA. Goshawks occupying these territories are likely somewhat habituated to human presence and noise associated with vehicle use. Some removal of forested vegetation would be required in the PFA to allow for safe operation of the transmission line. Trees would be removed selectively in the PFA (Selective Mitigation Measure 4) to reduce the effects of tree removal on habitats in the PFA. Minimal access road construction would likely be required due to the presence and proximity of existing roads to the alternative routes and a short distance for which the PFA would be crossed. The area around the North End of Trail Mountain PFA contains a natural mosaic of forested, shrub, and meadow habitats and removal of some trees from in the PFA would not substantially alter the structure of goshawk nesting habitat in the PFA and the abundant surrounding forested habitats. Additionally, access roads constructed for the Project through the PFA would be closed following construction to prevent increased human use and disturbance of these areas (Selective Mitigation Measure 15).

While the habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation; habitat effectiveness for goshawk in the study corridor for these alternative routes is likely to be high due to the mountainous, forested nature of habitats in this area that reduces the effects of noise and other human activities.

The Project would not affect delineated PFAs on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 follow the Bonanza-Mona Transmission Project that was constructed in the 1980s and is subject to occasional human disturbance during transmission line maintenance or inspection. Northern goshawk in the area have likely adapted to the modification of habitat in the right-of-way and occasional disturbance and habitat effectiveness in the study corridor for these alternative routes is likely to be high for goshawk due to the mountainous, forested nature of habitats in this area. Alternative COUT-A and COUT-A Variation 1 are located within 1 mile of two known nests. Seasonal construction restrictions (Selective Mitigation Measure 12) would prevent construction noise and human presence from negatively affecting goshawks occupying these areas.

## **Nesting and Foraging Habitat**

The analysis of potentially suitable goshawk nesting habitat included all forested cover habitat types in which goshawks are known to nest. The analysis of potentially suitable goshawk foraging habitat incorporated the majority of vegetation types that occur in forested landscapes where goshawk are known to occur. The estimated disturbance to nesting habitat is likely a conservative estimation of habitat used by goshawk on the three national forests, as actual nesting habitat likely comprises a small part of the total potentially suitable nesting habitat. The estimated disturbance to foraging habitat is likely more accurate as goshawk are opportunistic and forage in a wide range of vegetation types.

The Project would affect 0.07 percent or less of potentially suitable nesting habitat and 0.1 percent or less of potentially suitable foraging habitat in the cumulative impact analysis area on the Ashley National Forest (Tables 24 and 25). Alternative COUT-B would affect comparatively more nesting and foraging habitat than Alternative COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows linear development (lower-voltage transmission lines and forest roads) through Sowers Canyon that has resulted in minor habitat modification, and potentially suitable nesting and foraging habitat in the

study corridor maintains high levels of functionality for northern goshawk. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest. Habitats in this area are largely unmodified by anthropogenic developments; therefore habitat effectiveness for goshawk would likely be high.

The Project would affect 0.2 percent or less of potentially suitable nesting habitat and 0.1 percent or less of potentially suitable foraging habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Tables 24 and 25). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect comparatively more goshawk nesting habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H and COUT-I would affect comparatively more goshawk foraging habitat than Alternatives COUT-A, COUT-B, and COUT-C and route variations on the Manti-La Sal National Forest. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation although potentially suitable nesting and foraging habitat in the study corridor for these alternative routes maintain high levels of functionality for goshawk due to the mountainous, forested nature of the area. Alternatives COUT-A, COUT-B, and COUT-C and route variations parallel existing transmission lines, U.S. Highways 6 and 89, and the Rio Grande Western Railroad along the northern boundary of the Manti-La Sal National Forest. Habitats along these alternative routes are generally lower in elevation and do not have the minimum patch size necessary to provide suitable goshawk nesting and foraging habitat. In addition, habitats have been affected by nearby residential and agricultural developments, livestock grazing, and frequent off-highway-vehicle and recreational use. These developments have decreased the quality and effectiveness of potentially suitable foraging habitat.

The Project would affect 0.2 percent or less of potentially suitable nesting habitat, and 0.1 percent or less of potentially suitable foraging habitat in the cumulative impact analysis area on the Uinta National Forest (Tables 24 and 25). Alternative COUT-A and COUT-A Variation 1 would affect comparatively more goshawk nesting habitat but similar amounts of foraging habitat compared to Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat and is subject to occasional human disturbance during transmission line maintenance or inspection. Northern goshawk in the area have likely adapted to the modification of habitat in the right-of-way and occasional disturbance. Potentially suitable nesting and foraging habitat in the study corridor for these alternative routes maintain high levels of functionality due to the mountainous, forested nature of habitats in this area. Habitat under Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development from two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. These developments have decreased the quality and effectiveness of potentially suitable nesting and foraging habitat. Habitats along these alternative routes are generally lower in elevation and do not have the minimum patch size necessary to provide suitable goshawk nesting and foraging habitat.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Uinta National Forest, and an amendment to the Uinta National Forest LRMP would be required for northern goshawks would be the same as the impacts of constructing, operating, and maintaining the Project.

## *Cumulative Effects*

Alternative COUT-B could result in fragmentation and modification of a goshawk PFA on the Ashley National Forest and could contribute to the cumulative loss, fragmentation, and modification of the PFA. Past actions in this PFA include construction of a low-voltage transmission line and construction of unpaved roads. Reasonably foreseeable future actions in this PFA include the TransWest Express Transmission Project. The majority of the PFA would remain unaffected by past and present actions and reasonably foreseeable future actions. Abundant alternative habitat for goshawk would remain even if two additional transmission lines were built. Habitat effectiveness would not be reduced considering habituation to the existing transmission line and road, and the amount of undisturbed suitable habitat remaining.

Alternatives COUT BAX-E and COUT-H could result in fragmentation and modification of the Upper Huntington Creek known goshawk PFA on the Manti-La-Sal National Forest and could contribute to the cumulative loss, fragmentation, and modification of the PFA. The PFA is in the lease boundary of the Skyline Coal Mine, though mining is occurring using underground methods and disturbance to the PFA is not anticipated. Reasonably foreseeable future actions in this PFA include the TransWest Express Transmission Project. The majority of goshawk habitat in the PFA would remain unaffected by past and present actions and reasonably foreseeable future actions.

Alternatives COUT BAX-B, COUT BAX-C, and COUT-I could result in fragmentation and modification of the North End of Trail Mountain known goshawk PFA on the Manti-La-Sal National Forest and could contribute to the cumulative loss, fragmentation, and modification of the PFA. Past actions in this PFA include construction of unpaved roads. The PFA is in the lease boundary of the Deer Creek Coal Mine, though mining is occurring using underground methods and disturbance to the PFA is not anticipated. Portions of the PFA also have been leased for oil and gas development, though surface activity in the PFA is not anticipated. Reasonably foreseeable future actions in this PFA include the TransWest Express Transmission Project. The majority of goshawk habitat in the PFA would remain unaffected by past and present actions and reasonably foreseeable future actions.

All alternative routes could result in fragmentation and modification of potentially suitable northern goshawk nesting and foraging habitat that could contribute to the cumulative loss, fragmentation, and modification of potentially suitable northern goshawk nesting and foraging habitat in relevant cumulative impact analysis areas and could reduce habitat effectiveness for northern goshawk. Past and present actions in potential nesting and foraging goshawk habitat include oil and gas development, limestone leasing, a communication facility, coal mines, sand and gravel extraction, a pipeline, fences, and residential development. The majority of coal mining operations on the Manti-La Sal National Forest involve underground mining techniques that do not disturb or prevent goshawks from using habitat on the surface. Additionally, oil and gas leasing on the Manti-La Sal National Forest has resulted only in minor surface development. Therefore, the estimation of the effects of past and present actions on potential northern goshawk habitats in Tables 24 through 25 is very conservative. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a tunnel, sand and gravel extraction, a pipeline, a coal mine, a reservoir, transportation development, and recreational and residential development that could decrease habitat effectiveness. Localized displacement from nest sites may occur if the Project is colocated with the TransWest Express Transmission Project but would not prevent the habitat from supporting goshawk populations. The majority of goshawk nesting and foraging habitat would remain unaffected by past and present actions and reasonably foreseeable future actions.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, northern goshawk habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012),

several smaller fires, and USFS habitat projects affect northern goshawk habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007), the 47,387-acre Seeley fire (2012), several smaller fires, and multiple fuel treatments and timber sales affect northern goshawk habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, several smaller fires, and the Sheep Creek Vegetation Management Project affect northern goshawk habitat in the cumulative impact analysis area. Wildfires could reduce habitat effectiveness for goshawks in the short-term through the removal of mature trees, canopy coverage, and structural complexity that goshawk prefer for nesting, but could increase availability of open foraging habitat and increase prey abundance (Hanson 2010). Vegetation management activities may result in initial temporary losses to northern goshawk habitat but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project in Manti-La Sal National Forest, for example, is intended to reduce the intensity of wildfires.

### ***Findings***

All alternative routes crossing USFS-administered lands could result in local losses or modifications of potentially suitable goshawk nesting and foraging habitat and may reduce habitat effectiveness for goshawks. The magnitude of effects on PFAs would be greater under Alternative COUT-B, as this alternative route crosses a known goshawk PFA, although delineated nest areas in this PFA would not be affected. . The magnitude of effects on potentially suitable nesting and foraging habitat would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-B, COUT-H, and COUT-I as these alternative routes affect a greater amount of potentially suitable habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of potential goshawk nesting and foraging habitats would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area. All alternative routes may affect individual goshawks but are not likely to cause a trend towards federal listing or a loss of viability on the Ashley, Uinta, or Manti-La Sal National Forests. Additionally, no alternative routes would affect the stable national forest-wide trend of northern goshawk on the Ashley and Manti-La Sal National Forests or on the increasing population trends on the Uinta National Forest. When analyzed as a migratory bird species representing deciduous woodland habitat, impacts resulting from any of the alternative routes are unlikely to affect regional goshawk population trends.

### **Peregrine Falcon (USFS Sensitive: Ashley, Manti-La Sal, and Uinta)**

#### ***Environmental Consequences***

Impacts on potentially suitable peregrine falcon nesting and foraging habitat are presented in Tables 26 and 27.

**TABLE 26  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR PEREGRINE FALCON NESTING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	4	4,577	0.09	234	11	1	245	4,331
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	1	446	0.20	111	1	2	114	332
COUT BAX-C	1	446	0.20	111	1	2	114	332
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	1	446	0.20	111	1	2	114	332
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	1	960	0.10	14	48	1	64	896
COUT-A Variation 1	2	894	0.20	14	48	2	65	830

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

**TABLE 27  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR PEREGRINE FALCON FORAGING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	47	2,661	1.8	215	93	29	337	2,324
COUT-C Variation 2	1	190	0.5	4	10	5	18	171
COUT Variation 5	1	357	0.3	9	12	6	27	330

**TABLE 27  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR PEREGRINE FALCON FORAGING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	25	2,523	1.0	475	18	17	510	2,013
COUT BAX-C	25	2,523	1.0	475	18	17	510	2,013
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	27	2,523	1.1	475	18	19	511	2,012
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	30	4,261	0.7	177	270	38	485	3,776
COUT-A Variation 1	37	4,251	0.9	179	270	44	494	3,757
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Peregrines will use a broad array of habitat types and alternative nest sites in response to human activity, although response often varies by individual, period in the breeding cycle, and environmental conditions (White et al. 2002). Disturbance to peregrine falcons could occur on USFS-administered lands as a result of the proposed activities but is unlikely as the extent of nesting habitat is extremely limited and patchy on the Ashley, Manti-La Sal, and Uinta National Forests. Foraging habitat associated with grassland and riparian areas are also limited on the Ashley, Manti-La Sal, and Uinta National Forests. Construction of permanent transmission line structures and work areas in riparian areas would likely be avoided and is not anticipated to diminish foraging habitat effectiveness for peregrine falcon on the Ashley, Manti-La Sal, and Uinta National Forests. Project-related impacts on peregrine falcon could include the removal, alteration, and damage to vegetation during Project construction and displacement of individuals as a result of habitat loss or degradation. The magnitude of Project-related impacts would be minimized through the application of preconstruction raptor nest surveys in suitable peregrine falcon nesting habitat (Design Feature 3), and seasonal and spatial restrictions during construction and maintenance (Selective Mitigation Measure 12 and Design Feature 8). Access roads constructed for the Project would be closed following construction in the event that peregrine falcon nests are located during preconstruction surveys, and new access roads are likely to facilitate increased human use and disturbance of these areas (Selective Mitigation Measure 15). The Applicant would use avian-safe transmission line design standards (Design Feature 4) to reduce the potential for avian collisions with the transmission line. Due to the phase-to-phase, and phase-to-ground separation of components of 500kV transmission lines, electrocution of peregrine falcons would not be possible on the transmission line. After application of design features and selective mitigation measures, impacts on peregrine falcon habitat on all three national forests from all alternative routes would be limited, and habitat effectiveness for peregrine falcons on USFS-administered lands would remain largely unaffected by the Project.

The Project would affect 0.09 percent or less of peregrine falcon nesting habitat and 1.8 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Ashley National Forest. Alternative COUT-B would affect more peregrine falcon habitat than Alternative COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows linear development (lower-voltage transmission lines and forest roads) that has resulted in minor habitat modification. Potentially suitable nesting and foraging habitat in the study corridor for this alternative maintains high levels of functionality for peregrine falcons. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest. Habitats in this area are largely unmodified by anthropogenic developments; therefore, habitat effectiveness for peregrine falcons would likely be high.

The Project would affect 0.2 percent or less of the total available nesting habitat and 1.1 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would have similar impacts on potentially suitable peregrine falcon foraging habitat. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I follow existing linear facilities (transmission lines, forest roads) on the Manti-La Sal National Forest and would be located in an area of additional disturbance that includes coal mining, oil and gas development, and recreational use, which has resulted in diminished habitat effectiveness in localized areas.

Alternative COUT-A and COUT-A Variation 1 would affect 0.2 percent or less of peregrine falcon nesting habitat and 0.9 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project. This transmission line previously fragmented and altered potentially suitable habitat, and peregrine falcons that use these habitats are subject to occasional human disturbance during transmission line maintenance or inspection. Peregrine falcons have likely adapted to the modification of habitat in the right-of-way and occasional disturbance, and potentially suitable foraging and nesting habitat in the study corridor for these alternative routes maintain high levels of functionality.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on peregrine falcons would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable peregrine falcon nesting and foraging habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable peregrine falcon nesting and foraging habitat in relevant cumulative impact analysis area and could reduce habitat effectiveness for peregrine falcon on the Ashley, Manti-La Sal, and Uinta National Forests. The majority of disturbance from past and present actions reported in Tables 26 and 27 results from past oil and gas leasing for which minimal development is anticipated and underground coal mining and leasing with minimal ground disturbance. However, minimal development is anticipated with oil and gas leasing, and minimal ground disturbance is associated with underground coal mining. Reasonably foreseeable future actions include the TransWest Express Transmission Project, vegetation management, a coal mine, and recreational and residential development that could further decrease habitat effectiveness for peregrine falcon populations. A reservoir also is planned in this area, though this action is not likely to decrease habitat effectiveness and actually may increase habitat effectiveness for peregrine falcon populations.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, peregrine falcon habitat affected by vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, USFS habitat projects affect peregrine falcon habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the Dry Canyon Fuels Project and several other vegetation management activities affect peregrine falcon habitat in the cumulative impact analysis area. On the Uinta National Forest, the Sheep Creek Vegetation Management Project affects peregrine falcon habitat in the cumulative impact analysis area. Vegetation management activities, such as the Sheep Creek Vegetation Management and USFS habitat projects, may result in initial temporary losses to peregrine falcon habitat, but are designed to improve wildlife habitat conditions in the long-term.

***Findings***

All alternative routes that cross suitable peregrine falcon nesting and foraging habitat may reduce habitat effectiveness for peregrine falcons. The magnitude of effects would be greater under Alternative COUT-B compared to other alternative routes due to the high habitat effectiveness along this alternative route and the amount of disturbance in relation to total available habitat. Overall, the majority of potentially suitable peregrine falcon nesting and foraging habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for peregrine would remain largely unaffected by the Project. Construction, operation, and maintenance of the Project are not likely to cause a trend toward federal listing or a loss of viability of peregrine falcon on the Ashley, Manti-La Sal, or Uinta National Forests.

**Red-naped Sapsucker (MIS: Ashley)**

***Environmental Consequences***

Impacts on potentially suitable red-naped sapsucker habitat on the Ashley National Forest are presented in Table 28.

TABLE 28 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR RED-NAPED SAPSUCKER HABITAT ON THE ASHLEY NATIONAL FOREST								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	8	146	5.5	12	42	4	59	87
COUT-C Variation 5	4	62	6.5	2	12	1	15	47
NOTES: <sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. The red-naped sapsucker is a management indicator species for deciduous woodland habitat on the Ashley National Forest only. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Red-naped sapsucker is generally associated with mixed deciduous woodland and riparian habitat, but may use juniper habitat during migration (Walters et al. 2002). Disturbance to potentially suitable red-naped sapsucker habitat could occur on the Ashley National Forest as a result of the proposed activities but is unlikely as potentially suitable habitat is limited in the Project area on the national forest. Direct effects on red-naped sapsucker habitat could include the removal, alteration, and damage to vegetation and or trees during construction of Project access roads, transmission line towers, and all associated facilities and temporary displacement of individuals as a result of habitat loss or degradation. Any effects on red-naped sapsucker habitat on the Ashley National Forest would be minor and localized and would not prevent adjacent habitat from supporting red-naped sapsucker populations.

Under all alternative routes that cross the Ashley National Forest, preconstruction surveys would be conducted to identify riparian areas crossed by the Project (Design Feature 3) that could be used by red-naped sapsucker. In areas where riparian areas are identified, avoidance of sensitive resources and spanning or avoiding sensitive features (Selective Mitigation Measures 2 and 7) and selective removal of trees more than 5-feet tall in riparian habitats (Selective Mitigation Measure 4) would be implemented to avoid or reduce impacts on riparian areas. Due to the anticipated span distances between transmission line structures up to 1,500 feet (refer to Section 2.3 of the Project Final EIS [BLM 2016]), construction of permanent transmission line structures and work areas in riparian areas and potentially suitable red-naped sapsucker habitat likely would be avoided completely. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory birds nesting season, appropriate species-specific nest buffers would be implemented on identified active red-naped sapsucker nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7). Alternative COUT-B follows an existing transmission line through the Ashley National Forest and would use existing access roads where feasible.

The Project would affect 6.5 percent or less of the total available potentially suitable red-naped sapsucker habitat in the cumulative impact analysis area on the Ashley National Forest (Table 28). Alternative COUT-C Variation 5 would affect comparatively more red-naped sapsucker habitat than Alternative COUT-B on the Ashley National Forest. Alternative COUT-B follows an existing lower voltage transmission line through Sowers Canyon and is also located in the vicinity of Reservation Ridge where it joins COUT-C Variation 5. Habitats along these alternative routes have largely remained unmodified by anthropogenic developments; therefore, habitat effectiveness for red-naped sapsucker would likely be high.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable red-naped sapsucker habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable red-naped sapsucker habitat in the cumulative impact analysis area and reduce habitat effectiveness for the species. Past and present actions on potentially suitable red-naped sapsucker habitat include oil and gas leasing. Reasonably foreseeable future actions include the TransWest Express Transmission Project but also include forest and rangeland restoration management actions that could offset disturbance from proposed development and increase habitat effectiveness for red-naped sapsucker over the long-term.

### ***Findings***

All alternative routes that cross the Ashley National Forest could result in local losses or modifications of potentially suitable red-naped sapsucker habitat and may reduce habitat effectiveness for red-naped sapsuckers. The magnitude of effects would be greater under COUT-C Variation 5 as it would affect a greater amount of potentially suitable habitat and would be located in areas of high habitat effectiveness

for red-naped sapsucker. Overall, the majority of potentially suitable red-naped sapsucker habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area and habitat effectiveness for red-naped sapsucker on the national forest would remain largely unaffected by the Project. None of the alternative routes would affect the stable red-naped sapsucker population trend on the Ashley National Forest.

**Song Sparrow (MIS: Ashley)**

***Environmental Consequences***

Impacts on potentially suitable song sparrow habitat on the Ashley National Forest are presented in Table 29.

TABLE 29 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR SONG SPARROW HABITAT ON THE ASHLEY NATIONAL FOREST								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	3	74	4.1	8	34	4	46	29
NOTES: <sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. The song sparrow is a management indicator species for riparian habitat on the Ashley National Forest only. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Disturbance to potentially suitable song sparrow habitat could occur on the Ashley National Forest as a result of the proposed activities but is unlikely as potentially suitable riparian and wetland habitat is limited in the Project area on the national forest. Due to the anticipated span distances between transmission line structures (refer to Section 2.3 of the Project Final EIS Project Description [BLM 2016]), construction of permanent transmission line structures and work areas in riparian areas and potentially suitable song sparrow habitat likely would be avoided completely. Any effects on riparian areas or song sparrow habitat on the Ashley National Forest would be minor and localized, and would not be expected to prevent the habitat from supporting current song sparrow populations.

Project-related impacts on song sparrow habitat could include the removal, alteration, and damage to vegetation and or trees during construction of Project access roads, transmission line towers, and associated facilities as well as the displacement of individuals as a result of habitat loss or degradation. These effects would be minor and localized and would not prevent the habitat from supporting local song sparrow populations. Preconstruction surveys would be conducted to identify riparian areas crossed by the Project (Design Feature 3) that may be used by song sparrows. In areas where riparian areas are identified, the transmission line would be designed to span or avoid these areas (Selective Mitigation Measures 2 and 7), and selective removal of trees taller than 5-feet in riparian and tree nesting habitats (Selective Mitigation Measure 4) would be implemented to avoid or reduce impacts on riparian areas. Seasonal restrictions on construction and maintenance activities would be implemented during the

migratory bird nesting season for all alternative routes between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory birds nesting season, appropriate species-specific nest buffers would be implemented on identified active song sparrow nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 4.1 percent or less of the total available potentially suitable song sparrow habitat in the cumulative impact analysis area on the Ashley National Forest (Table 29). Alternative COUT-B follows an existing lower voltage transmission line and forest roads through Sowers Canyon where the majority of potentially suitable song sparrow habitat is located. Song sparrows that use these habitats are likely habituated to occasional disturbance from vehicle travel on the road and occasional inspections and maintenance of the transmission line. Habitats along this alternative route on the Ashley National Forest have largely remained unmodified by anthropogenic developments; therefore, potential habitat effectiveness for the song sparrow would likely be high.

### *Cumulative Effects*

Project-related loss, fragmentation, and modification of potentially suitable song sparrow habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable song sparrow habitat in the cumulative impact analysis area and could reduce habitat effectiveness for the species. Past and present actions on potentially suitable song sparrow habitat include oil and gas leasing for which minimal development is anticipated. Reasonably foreseeable future actions include the TransWest Express Transmission Project. Incremental Project-related disturbance on potentially suitable song sparrow habitat would occur in areas of pre-existing disturbance or areas of future disturbance, such as by collocating the Project transmission line with the TransWest Express Transmission Project. However, reasonably foreseeable future actions also would include riparian restoration management actions that could increase habitat effectiveness and availability for the song sparrow over the long-term.

### *Findings*

Alternative COUT-B crosses USFS-administered lands and could result in local losses or modifications of potentially suitable riparian and wetland habitat and may reduce habitat effectiveness for song sparrows. Overall, the majority of potentially suitable song sparrow habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for song sparrow on the Ashley National Forest would remain largely unaffected by the Project. Alternative COUT-B is not likely to adversely affect the stable national forest-wide song sparrow population trend on the Ashley National Forest.

### **Spotted Bat and Townsend's Big-eared Bat (USFS Sensitive: Ashley, Manti-La Sal, and Uinta)**

### *Environmental Consequences*

Impacts on potentially suitable spotted bat and Townsend's big-eared roosting and foraging habitat are presented in Tables 30 and 31.

**TABLE 30  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR SPOTTED BAT AND TOWNSEND'S BIG-EARED BAT ROOSTING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	4	14,729	0.03	639	13	2	654	14,075
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	1	4,051	0.02	872	1	2	875	3,176
COUT BAX-C	1	4,051	0.02	872	1	2	875	3,176
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	1	4,051	0.02	872	1	2	875	3,175
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	1	6,165	0.02	125	287	4	416	5,749
COUT-A Variation 1	2	6,086	0.03	125	287	5	417	5,670

NOTES:

<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

**TABLE 31  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR SPOTTED BAT AND TOWNSEND'S BIG-EARED BAT FORAGING HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	171	164,989	0.10	9,372	1,001	124	10,497	154,491
COUT-C Variation 2	8	97,643	0.01	3,248	1,405	217	4,870	92,773
COUT-C Variation 5	18	151,557	0.01	6,492	2,177	270	8,939	142,618
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	284	223,778	0.10	58,903	1,011	398	60,312	163,466
COUT BAX-C	282	223,778	0.10	58,903	1,011	395	60,309	163,469
COUT BAX-E	127	155,928	0.08	31,692	665	154	32,510	123,417
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	16	95,816	0.02	3,298	484	285	4,067	91,749
COUT-A Variation 1	16	95,816	0.02	3,298	484	286	4,068	91,749
COUT-B	16	95,816	0.02	3,298	484	279	4,060	91,756
COUT-C	16	95,816	0.02	3,298	484	294	4,075	91,741
COUT-C Variation 1	16	95,816	0.02	3,298	484	293	4,075	91,741
COUT-C Variation 2	17	95,816	0.02	3,298	484	294	4,076	91,740
COUT-C Variation 5	18	95,816	0.02	3,298	484	398	60,312	163,466
COUT-H	140	155,928	0.09	31,692	665	169	32,525	123,402
COUT-I	301	223,778	0.10	58,903	1,011	354	60,268	163,510
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	328	381,879	0.09	28,456	9,106	981	38,543	343,336
COUT-A Variation 1	321	379,877	0.08	28,442	9,099	984	38,525	341,351
COUT-B	127	323,563	0.04	27,444	2,364	766	30,575	292,988
COUT-C	134	323,563	0.04	27,444	2,364	838	30,647	292,917
COUT-C Variation 1	118	323,505	0.04	27,448	2,355	890	30,693	292,812
COUT-C Variation 2	151	390,481	0.04	29,970	3,207	945	34,122	356,358
COUT-C Variation 5	167	390,481	0.04	29,970	3,207	1,048	34,225	356,256

NOTES:

<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

Disturbance to potentially suitable spotted bat and Townsend's big-eared bat roosting and foraging habitat could occur on USFS-administered lands as a result of the proposed activities. Analysis of potentially suitable roosting habitat is conservative as it included all potential cliff areas. Project-related impacts on roosting habitat are unlikely as potentially suitable habitat is very limited in the Project area on the Ashley, Manti-La Sal, and Uinta National Forests. The analysis of potentially suitable foraging habitat included all vegetation types on the Ashley, Manti-La Sal, and Uinta National Forests and is conservative

due to the large area of available habitat. Project-related impacts on individual foraging bats are also anticipated to be minimal due to the likely distribution or behavior of the two species. Townsend's big-eared bat have a wide range and may travel anywhere up to 15 miles per night on foraging trips, and spotted bats are usually solitary foragers (NatureServe 2013).

Project-related impacts on spotted and Townsend's big-eared bat roosting and foraging habitat could include the removal, alteration, and damage to vegetation and or trees during construction of Project access roads, transmission line towers, and associated facilities. Project-related impacts on spotted bat and Townsend's big-eared bat would be minimized through instructing Project personnel on the protection of natural resources (Design Feature 28). Instruction also will be given for reporting and stop-work procedures in the event of a resource conflict such as identification of a roosting site near the Project. Any spotted or Townsend's big-eared bat hibernacula or roost site identified during preconstruction surveys would be subject to additional selective mitigation measures to reduce impacts on individuals and populations.

The Project would affect 0.3 percent or less of the total available roosting habitat and 0.1 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Ashley National Forest (Tables 30 and 31). Alternative COUT-B would affect comparatively more spotted and Townsend's big-eared bat foraging habitat than Alternative COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows linear development (lower-voltage transmission lines and forest roads) that has resulted in minor habitat modification, and potentially suitable roosting and foraging habitat in the study corridor maintains high levels of functionality for spotted or Townsend's big-eared bat. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest and have largely remained unmodified by anthropogenic developments; therefore, habitat effectiveness also would likely be high.

The Project would affect 0.02 percent or less of the total available roosting habitat and 0.1 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Tables 30 and 31). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect more spotted and Townsend's big-eared bat roosting and foraging habitat than Alternatives COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-B, COUT-C and route variations, and COUT-H. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreation although potentially suitable roosting and foraging habitat in the study corridor for these alternative routes maintain high levels of functionality for spotted and Townsend's big-eared bat due to the mountainous, forested nature of habitats in this area that has limited development. Alternatives COUT-A, COUT-B, and COUT-C and route variations are located along the northern boundary of the Manti-La Sal National Forest in an area heavily modified by previous disturbance, including residential and agricultural development, livestock grazing, and recreational use. These disturbances have likely reduced habitat effectiveness for spotted and Townsend's big-eared bat in the area due to frequent noise and human presence associated with operation of the transportation infrastructure.

The estimated Project disturbance would affect 0.03 percent or less of the total available roosting habitat and 0.09 percent or less of the total available foraging habitat in the cumulative impact analysis area on the Uinta National Forest (Tables 30 and 31). Alternative COUT-A and COUT-A Variation 1 would affect more spotted and Townsend's big-eared bat roosting and foraging habitat on the Uinta National Forest than all other alternative routes. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat. Habitats adjacent to the Bonanza-Mona Transmission Project are subject to occasional human disturbance during transmission line maintenance or inspection. However, potentially suitable roosting and foraging

habitat maintain high levels of functionality due to the mountainous, forested nature of habitats in this area. Habitats crossed by Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest have been heavily modified by previous construction of two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. The existing quality of potentially suitable roosting and foraging habitat is likely to be diminished in these areas as a result of these developments.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest, and an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest. The effects of the plan amendments on spotted bats and Townsend's big-eared bats would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable spotted bat and Townsend's big-eared bat roosting and foraging habitat under all alternative routes would contribute to the cumulative loss, fragmentation, and modification of potentially suitable spotted bat and Townsend's big-eared bat roosting and foraging habitat in the cumulative impact analysis area and could reduce habitat effectiveness for the two species. Past and present actions on spotted bat and Townsend's big-eared bat roosting and foraging habitat include oil and gas leasing, limestone leases, mining, and residential development. Minimal development and ground disturbance is anticipated with oil and gas leasing. Abandoned mines potentially could increase subterranean roosting habitat for Townsend's big-eared bat. Reasonably foreseeable future actions include the TransWest Express Transmission Project and recreational development.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, spotted bat and Townsend's big-eared bat habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012), several smaller fires, and USFS habitat projects affect spotted bat and Townsend's big-eared bat habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007), the 47,387-acre Seeley fire (2012), several smaller fires, the West Scofield Burn Project, and multiple other vegetation management activities affect spotted bat and Townsend's big-eared bat habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, several smaller fires, and the Sheep Creek Vegetation Management Project affect spotted bat and Townsend's big-eared bat habitat in the cumulative impact analysis area. Impacts of wildfire on roosting habitat are expected to be low as spotted bats and Townsend's big-eared bats roost on cliffs and in caves. Wildfire may diminish foraging habitat in the short-term, but could improve foraging habitat and increase arthropod prey abundance over the long-term (Carter et al. 2002). Vegetation management activities, such as the West Scofield Burn and Sheep Creek Vegetation Management projects, may result in initial temporary losses to spotted bat and Townsend's big-eared bat habitat, but are designed to benefit wildlife habitat conditions in the long-term.

### ***Findings***

All alternative routes that cross USFS-administered lands could result in local losses or modifications of spotted bat and Townsend's big-eared bat roosting and foraging habitat, and may locally reduce habitat effectiveness for the two species. The magnitude of effects would be greater under Alternatives

COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I than other alternative routes on the Ashley, Manti-La Sal, and Uinta National Forests as these alternative routes affect a greater amount of potentially suitable roosting and foraging habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of potentially suitable roosting and foraging habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for spotted bat and Townsend’s big-eared bat on the Ashley, Manti-La Sal, and Uinta National Forests would remain largely unaffected by the Project. Project-related impacts are not likely to cause a trend to federal listing or loss of viability of spotted bat and Townsend’s big-eared bat on the Ashley, Manti-La Sal, or Uinta National Forests.

**Three-toed Woodpecker (USFS Sensitive: Ashley, Manti-La Sal, and Uinta; MIS: Uinta)**

***Environmental Consequences***

Impacts on potentially suitable three-toed woodpecker habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 32.

<b>TABLE 32 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR THREE-TOED WOODPECKER HABITAT</b>								
<b>Alternative Route</b>	<b>Project Disturbance on the Forest Only</b>	<b>Cumulative Impact Analysis Area<sup>1</sup></b>						
		<b>Total Available Resource</b>	<b>Percent of Total Available Resource Disturbed by the Project</b>	<b>No Action Alternative</b>		<b>Incremental Project Disturbance</b>	<b>Estimated Cumulative Development</b>	<b>Remaining Available Resource</b>
				<b>Past and Present Development</b>	<b>Reasonably Foreseeable Future Actions</b>			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	11	256	4.3	7	19	0	26	229
COUT-C Variation 2	5	284	1.8	2	30	1	33	251
COUT-C Variation 5	9	734	1.2	12	53	3	68	666
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	73	2,837	2.6	1,039	5	59	1,151	1,686
COUT BAX-C	72	2,837	2.5	1,039	54	58	1,151	1,686
COUT BAX-E	21	1,183	1.8	610	40	2	652	531
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	23	1,183	1.9	610	40	3	652	530
COUT-I	77	2,837	2.7	1,039	54	62	1,155	1,682
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	28	827	3.4	22	54	28	103	724
COUT-A Variation 1	36	972	3.7	22	52	36	110	862
<b>NOTES:</b>								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Disturbance to potentially suitable three-toed woodpecker habitat could occur on USFS-administered lands as a result of the proposed activities. On the Ashley National Forest habitat is limited for the species in the Project area. On the Manti-La Sal and Uinta National Forests habitat is widespread on the national forest outside of the alternative route study corridors. Any effects on three-toed woodpecker habitat on the national forest would be minor and localized, and would not prevent adjacent habitat from supporting three-toed woodpecker populations.

Project-related effects on three-toed woodpecker habitat could include the removal, alteration, and damage to vegetation and/or trees during construction of Project access roads, transmission line towers, and all associated facilities and temporary displacement of individuals as a result of habitat loss or degradation. Preconstruction nest surveys would be conducted in potentially suitable three-toed woodpecker habitat (Design Feature 3), and seasonal and spatial restrictions would be implemented during construction and maintenance to avoid disturbing three-toed woodpecker during sensitive breeding periods (Selective Mitigation Measure 12 and Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory birds nesting season, appropriate species-specific nest buffers would be implemented on identified active three-toed woodpecker nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 4.3 percent or less of total available three-toed woodpecker habitat in the cumulative impact analysis area on the Ashley National Forest (Table 32). Alternative COUT-B would affect more potentially suitable habitat than Alternative COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows linear development (lower-voltage transmission lines and forest roads) that has resulted in only minor habitat modification. Potentially suitable habitat for three-toed woodpecker in this study corridor is likely to maintain high levels of functionality. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest, which also largely remains unmodified by anthropogenic developments.

The Project would affect 2.7 percent or less of total available three-toed woodpecker habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 32). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect more potentially suitable three-toed woodpecker habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreational development that has likely fragmented three-toed woodpecker habitat locally and potentially reduced food availability. Potentially suitable habitat in the study corridor for these alternative routes maintains high levels of functionality for three-toed woodpecker due to the mountainous, forested nature of the area.

The Project would affect 3.7 percent or less of total available three-toed woodpecker habitat in the cumulative impact analysis area on the Uinta National Forest (Table 32). Alternative COUT-A and COUT-A Variation 1 follow the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat. Habitats adjacent to the transmission line are subject to occasional human disturbance during transmission line maintenance or inspection. Three-toed woodpeckers are very tolerant of human disturbance (Leonard 2001) and have likely adapted to the modification of habitat in the right-of way. Potentially suitable three-toed woodpecker habitat maintains high levels of functionality in the area due to the mountainous, forested nature of habitats in the cumulative impact analysis area on the Uinta National Forest.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Uinta National Forest, and an amendment to the Uinta National Forest LRMP would be required for

authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on three-toed woodpeckers would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable three-toed woodpecker habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable three-toed woodpecker habitat in the cumulative impact analysis area and could reduce habitat effectiveness for three-toed woodpecker. Past and present actions on three-toed woodpecker habitat include oil and gas leasing and a coal mine. Minimal development is anticipated with the oil and gas leases and coal mining is currently being conducted using underground methods that have minimal surface disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a coal mine, a reservoir, and transportation and residential development.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, three-toed woodpecker habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. No wildfires or vegetation management activities appear to impact three-toed woodpecker habitat in the cumulative impact analysis area on the Ashley National Forest. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007), the Dry Canyon Fuels Project, and several other vegetation management activities affect three-toed woodpecker habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, one smaller fire, and the Sheep Creek Vegetation Management Project affect three-toed woodpecker habitat in the cumulative impact analysis area. Wildfires may diminish three-toed woodpecker habitat in the short-term, but increased insect prey availability during forest recovery could benefit the woodpeckers in the long-term (Wiggins 2004). Vegetation management activities may result in initial temporary losses to three-toed woodpecker habitat, but are designed to benefit wildlife habitat conditions in the long-term. The Dry Canyon Fuels Project, for example, is intended to reduce the intensity of wildfires.

### ***Findings***

All alternative routes that cross USFS-administered lands could result in local losses or modifications of potentially suitable three-toed woodpecker habitat and may locally reduce habitat effectiveness for the species. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on the Ashley, Manti-La Sal, and Uinta National Forests as these alternative routes affect a greater amount of potentially suitable three-toed woodpecker habitat and would be located in areas of high habitat effectiveness compared to other alternative routes. Overall, the majority of potentially suitable three-toed woodpecker habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for three-toed woodpecker would remain largely unaffected by the Project on the Ashley, Manti-La Sal, and Uinta National Forests. None of the alternative routes that cross potentially suitable three-toed woodpecker habitat on the Uinta National Forest would contribute to the minor decreasing national forest-wide population trend. None of the alternative routes that cross USFS-administered lands are likely to cause a trend towards federal listing or a loss of viability on the Ashley, Manti-La Sal, or Uinta National Forests.

**Warbling Vireo (MIS: Ashley)**

***Environmental Consequences***

Impacts on potentially suitable warbling vireo habitat on the Ashley National Forest are presented in Table 33.

TABLE 33 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR WARBLING VIREO HABITAT ON THE ASHLEY NATIONAL FOREST								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	8	160	5.0	12	42	4	59	101
COUT-C Variation 5	4	110	3.6	2	16	2	20	90
NOTES: <sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. The warbling vireo is a management indicator species for deciduous woodland habitat on the Ashley National Forest only. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

Disturbance to warbling vireo habitat could occur on the Ashley National Forest as a result of the proposed activities but is unlikely as potentially suitable habitat is limited in the study corridor on the Ashley National Forest. The only anticipated Project-related impacts on potentially suitable warbling vireo habitat would be vegetation and minor tree clearing in the right-of-way to allow for safe operation of the transmission line and construction of new access roads to access the transmission line in the event that existing crossings of riparian areas are not sufficient. Temporary displacement of individuals as a result of habitat loss or degradation may occur. Project-related effects are anticipated to be minor and localized, and would not prevent the habitat from supporting local warbling vireo populations. Warbling vireo will readily use human-made habitat edges and smaller patches of habitat (Gardali and Ballard 2000), and would be expected to use habitat edges resulting from construction of the Project right-of-way.

Under all alternative routes that cross the Ashley National Forest, seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory bird nesting season, preconstruction nest surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active warbling vireo nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7). Warbling vireo is associated with mixed deciduous woodlands, particularly woodlands associated with riparian corridors (Gardali and Ballard 2000). Under all alternative routes that cross the Ashley National Forest, preconstruction surveys would be conducted to identify riparian areas crossed by the Project (Design Feature 3) that could be used by warbling vireo. In areas where riparian areas are identified, avoidance of sensitive resources and spanning or avoiding sensitive features (Selective Mitigation Measures 2 and 7) and selective removal of trees taller than 5-feet in riparian and tree nesting habitats

(Selective Mitigation Measure 4) would be implemented to avoid or reduce impacts on riparian areas. Due to the anticipated span distances between transmission line structures (refer to Section 2.3 of the Project Final EIS [BLM 2016]), construction of permanent transmission line structures and work areas in riparian areas and potentially suitable warbling vireo habitat likely would be avoided completely.

The Project would affect 5.0 percent or less of the total available potentially suitable habitat in the cumulative impact analysis area on the Ashley National Forest (Table 33). Alternative COUT-B would affect more potentially suitable warbling vireo habitat than COUT-C Variation 5. Alternative COUT-B follows an existing transmission line and forest roads, resulting in minor modification to existing habitats. COUT-C Variation 5 is located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest where habitat has largely remained unaffected by anthropogenic disturbance. Current habitat effectiveness for warbling vireos is likely to be high in habitats crossed by Alternative COUT-B due to lack of previous anthropogenic development.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable warbling vireo habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable warbling vireo habitat in the cumulative impact analysis area and could reduce habitat effectiveness for warbling vireos. Past and present actions on potentially suitable warbling vireo habitat include oil and gas leasing. Reasonably foreseeable future actions include the TransWest Express Transmission Project, which would likely be colocated with the Project to limit disturbance on the Ashley National Forest. Additionally, proposed forest and riparian restoration and management actions could improve habitat quality for the species over the long-term.

### ***Findings***

All alternative routes that cross Ashley National Forest could result in local losses or modifications of potentially suitable habitat and may locally reduce habitat effectiveness for warbling vireo. The magnitude of effects would be greater under Alternative COUT-B as this alternative route would affect a greater amount of potentially suitable warbling vireo habitat and would be located in areas of high habitat effectiveness. Overall, the majority of potentially suitable warbling vireo habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area and habitat effectiveness for warbling vireo would remain largely unaffected by the Project on the Ashley National Forest. None of the alternative routes would adversely affect the stable warbling vireo population trend on the Ashley National Forest.

## **Other Species of Concern – Migratory Birds**

### **Black Rosy-finch**

#### ***Environmental Consequences***

There would be no impacts on potentially suitable black rosy-finch habitat on the Ashley National Forest. Impacts on potentially suitable black-rosy finch habitat on the Manti-La Sal and Uinta National Forests are presented in Table 34.

**TABLE 34  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR BLACK ROSY-FINCH HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	6	2,331	0.3	516	4	5	525	1,806
COUT BAX-C	6	2,331	0.3	516	4	5	525	1,806
COUT BAX-E	1	555	0.2	141	4	0	145	410
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	1	555	0.2	14	4	0	145	410
COUT-I	6	2,331	0.3	516	4	5	525	1,806
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	3	1,265	2.7	19	17	3	39	1,226
COUT-A Variation 1	2	1,264	0.2	19	17	1	37	1,228
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

The species use above timberline, alpine habitat and remote breeding sites (Johnson 2002). Population trends on the three national forests are currently unknown. Disturbance to potentially suitable black-rosey finch habitat could occur on USFS-administered lands as a result of the proposed activities, but potentially suitable alpine habitat above 8,600 feet is extremely limited in the Project area on the Manti-La Sal and Uinta National Forest (Table 34).

Project-related impacts on black rosey-finch could include minor and localized removal, alteration, and damage to vegetation during construction of the Project and could also include the displacement of individuals as a result of habitat loss or degradation. However, Project-related impacts are not anticipated to prevent the habitat from supporting local black rosey-finch populations. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory birds nesting season, preconstruction nest surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active black rosey-finch nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 0.3 percent or less of the total available potentially suitable black rosey-finch habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 34). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect comparatively more black rosey-finch habitat than Alternatives COUT BAX-E and COUT-H. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I follow existing linear facilities

including transmission lines and roads and have been locally affected by development of pipelines, residential developments, coal mining, and recreation. Habitats along Alternative COUT BAX-E also have been affected by wildfires that could reduce habitat effectiveness for black rosy-finch in the short-term but may improve vegetation growth and seed and insect availability that represent the main food source for black rosy-finch over the long-term. However, black rosy-finch forage and nest above the tree line in open tundra habitat where fires are infrequent due to limited fuel and moist conditions. Potentially suitable black rosy-finch habitat in the study corridor for these alternative routes maintain high levels of functionality due to the mountainous, forested nature of habitats in this area.

The Project would affect 2.7 percent or less of the total available potentially suitable black rosy-finch habitat in the cumulative impact analysis area on the Uinta National Forest (Table 34). Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project and forest roads that have previously fragmented and altered potentially suitable black rosy-finch habitat. Habitat effectiveness for the species on the Uinta National Forest is likely to be high due to the mountainous and forested terrain in the area that limits the effects of development.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendment on black rosy-finch would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable black rosy-finch habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable black rosy-finch habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for black rosy-finch. Past and present actions in potentially suitable black rosy-finch habitat include oil and gas leasing and a coal mine, although minimal development is anticipated with past oil and gas leasing. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a coal mine, and transportation and residential development that could impact habitat effectiveness for the species.. The remoteness of breeding habitat and the males use of floating territories (i.e., protection of territory wherever the female nests) could protect black rosy-finch populations from the majority of human activity (Johnson 2002) and help the species accommodate impacts that do occur.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, black rosy-finch habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007), the 47,587-acre Seeley Fire (2012), one smaller fire, the West Scofield Burn Project, and multiple other vegetation management activities affect black rosy-finch habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, multiple smaller fires, and the Sheep Creek Vegetation Management Project affect black rosy-finch habitat in the cumulative impact analysis area. Wildfires could reduce habitat effectiveness for black rosy-finch in the short-term, but may increase the availability of seeds and insects that represent the main food source for black rosy-finches over the long-term. Moreover, black rosy-finches forage and nest above the tree line in open tundra habitat where fires are infrequent due to limited fuel and moist conditions. Vegetation management activities may result in initial temporary losses to black rosy-finch habitat, but are designed to benefit wildlife habitat conditions in the long-term. The West Scofield Burn Project, for example, is intended to reduce the intensity of wildfires.

## Findings

The Project would have no impacts on potentially suitable black rosy-finch habitat on the Ashley National Forest. Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-H, and COUT-I could result in local losses or modifications of potentially suitable black rosy-finch habitat, and could locally reduce habitat effectiveness for the species. The magnitude of impacts would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, and COUT-I as these alternative routes affect a greater amount of potentially suitable alpine habitat compared to other alternative routes and would be located in areas of high habitat effectiveness. Overall, the majority of potentially suitable black rosy-finch habitat on the Uinta and Manti-La Sal National Forests would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area. When analyzed as a migratory bird species representing alpine habitat, the Project is unlikely to affect regional black rosy-finch population trends.

## Black-throated Gray Warbler

### *Environmental Consequences*

Impacts on potentially suitable black-throated gray warbler habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 35.

TABLE 35 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR BLACK-THROATED GRAY WARBLER HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	44	4,551	1.0	210	141	31	382	4,169
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	19	1,617	1.2	562	31	27	619	998
COUT BAX-C	19	1,617	1.2	562	31	27	619	998
COUT BAX-E	10	658	1.5	12	3	17	32	627
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	15	2,027	0.7	77	94	56	227	1,800
COUT-A Variation 1	16	2,027	0.8	77	94	56	227	1,800
COUT-B	15	2,027	0.7	77	94	55	226	1,801
COUT-C	16	2,027	0.8	77	94	57	229	1,798
COUT-C Variation 1	16	2,027	0.8	77	94	57	229	1,798
COUT-C Variation 2	16	2,027	0.8	77	94	58	229	1,798
COUT-C Variation 5	18	2,027	0.9	77	297	64	235	1,792

**TABLE 35  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR BLACK-THROATED GRAY WARBLER HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
COUT-H	11	658	1.7	12	3	18	33	625
COUT-I	21	1,617	1.3	562	31	29	621	996
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	66	5,368	1.2	312	246	121	679	4,689
COUT-A Variation 1	66	5,358	1.2	312	246	122	679	4,679
COUT-B	93	8,750	1.1	1,931	210	42	2,183	5,188
COUT-C	98	8,750	1.1	543	381	168	1,092	7,658
COUT-C Variation 1	85	8,143	1.0	499	353	193	1,045	7,098
COUT-C Variation 2	106	9,315	1.1	596	405	188	1,189	8,126
COUT-C Variation 5	117	9,315	1.3	596	405	209	1,209	8,106

NOTES:  
<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

The majority of black-throated gray warbler habitat that would be affected by alternative routes that cross the Ashley, Manti-La Sal, and Uinta National Forests is breeding habitat. Pinyon-juniper and mountain shrub habitats are used during the spring breeding season as well as during the summer (Parrish et al. 2002; Guzy and Lowther 2012). Disturbance to potentially suitable black-throated gray warbler habitat could occur on USFS-administered lands as a result of the proposed activities. Project-related impacts on black-throated gray warbler could include minor and localized removal, alteration, and damage to vegetation during construction of the Project, and could also include the displacement of individuals as a result of habitat loss or degradation. However, potentially suitable habitat is widespread both in and outside of the Ashley, Manti-La Sal, and Uinta National Forest boundaries. Additionally, human activity appears to have had little effect on habitat selection by the species as black-throated gray warblers appear to use habitats that have been severely altered (Guzy and Lowther 2012). Therefore, Project-related impacts are not anticipated to prevent the habitat from supporting local black-throated gray warbler populations. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6) under all alternative routes. In the event that construction activities cannot be avoided during the primary migratory birds nesting season, preconstruction nest surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active black-throated gray warbler nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 1.0 percent or less of the total available potentially suitable black-throated gray warbler habitat in the cumulative impact analysis area on the Ashley National Forest (Table 35). The majority of potentially suitable black-throated gray warbler habitat affected by Alternative COUT-B occurs in Sowers Canyon. Alternative COUT-B follows an existing transmission line and forest roads

through the canyon that have resulted in only minor modification to existing habitats. Local populations of black-throated gray warbler have likely adapted to existing disturbance and potentially suitable habitat is likely to maintain high levels of functionality for the species.

The Project would affect 1.7 percent or less of the total available potentially suitable black-throated gray warbler habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 35). Alternatives COUT BAX-E and COUT-H would affect marginally more potentially suitable black-throated gray warbler habitat than Alternatives COUT BAX-B, COUT BAX-C, COUT-B, COUT-A, and COUT-C and route variations, and COUT-I on the Manti-La Sal National Forest. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of roads, pipelines, transmission lines, residential developments, coal mining, and recreational development. These developments have fragmented black-throated gray warbler habitat. Potentially suitable habitat in the study corridor for Alternatives COUT-H and COUT BAX-E maintains high levels of functionality for black-throated gray warbler due to the mountainous, forested nature of the area that limits the effects of development. Alternatives COUT-A, COUT-B, and COUT-C and route variations parallel existing transmission lines, U.S. Highways 6 and 89, and the Rio Grande Western Railroad along the northern boundary of the Manti-La Sal National Forest. The northern boundary of the Manti-La Sal National Forest also is heavily modified by residential and agricultural development, livestock grazing, and recreational use. These developments have likely reduced habitat effectiveness for black-throated gray warbler in the area and resulted in individual black-throated gray warblers that are habituated to frequent noise and human presence associated with operation of the transportation infrastructure.

The Project would affect 1.3 percent or less of the total available potentially suitable black-throated gray warbler habitat in the cumulative impact analysis area on the Uinta National Forest (Table 35). COUT-C Variation 1 would affect marginally more black-throated gray warbler habitat than Alternative COUT-C and other COUT-C route variations, COUT-B, and COUT-A and COUT-A Variation 1. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat for the species. Habitats adjacent to these alternative routes are subject to occasional human disturbance during transmission line maintenance or inspection. Black-throated gray warblers have likely adapted to the modification of habitat in the right-of-way and occasional disturbance, and potentially suitable habitat in the study corridor for these alternative routes maintain high levels of functionality due to the mountainous, forested nature of habitats in this area. Habitat under Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development from two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. These developments have reduced habitat effectiveness for the species, although black-throated gray warblers have likely habituated to frequent noise and human presence from previous development.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on black-throated gray warblers would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable black-throated gray warbler habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable

black-throated gray warbler habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for the species. A large percentage of the past and present impacts reported in Table 35 are a result of oil and gas leasing and a coal mine. Minimal surface disturbance is anticipated from oil and gas leasing, and coal mining is currently being conducted using underground methods that have minimal surface disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a pipeline, a reservoir, and recreational and residential development, which could decrease habitat effectiveness for black-throated gray warbler.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, black-throated gray warbler habitat affected by wildfires and vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, the 7,189-acre Church Camp fire (2012) affects black-throated gray warbler habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the 25,913-acre Salt Creek fire (2007) and one smaller fire, the Dry Canyon Fuels Project, and several other vegetation management activities affect black-throated gray warbler habitat in the cumulative impact analysis area. On the Uinta National Forest, the Salt Creek fire, one smaller fire, and the Sheep Creek Vegetation Management Project affect black-throated gray warbler habitat in the cumulative impact analysis area. Wildfire is a natural ecological process that can promote long-term forest health, and may increase black-throated gray warbler habitat quality in the long-term. Vegetation management activities, such as the Dry Canyon Fuels Project, may result in initial temporary losses to black-throated gray warbler habitat, but are designed to benefit wildlife habitat conditions in the long-term.

### ***Findings***

All alternative routes that cross USFS-administered lands could result in local losses or modifications of potentially suitable black-throated gray warbler habitat and could reduce habitat effectiveness for the species. The magnitude of impacts would be greater under Alternatives COUT BAX-E, COUT-A and COUT-A Variation 1, and COUT-H as these alternative routes affect a greater amount of potentially suitable habitat on the Manti-La Sal and Uinta National Forests. Overall, the majority of potentially suitable black-throated gray warbler habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area. When analyzed as a migratory bird species representing pinyon-juniper habitat, impacts resulting from any of the alternative routes on the Ashley, Manti-La Sal, and Uinta National Forests are unlikely to affect regional black-throated gray warbler population trends.

### **Grasshopper Sparrow**

#### ***Environmental Consequences***

Impacts on potentially suitable grasshopper sparrow habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 36.

**TABLE 36  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR GRASSHOPPER SPARROW HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	45	226	19.9	43	38	25	106	120
COUT-C Variation 2	1	14	7.1	0	2	0	3	11
COUT-C Variation 5	1	14	7.1	0	2	0	3	11
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	25	179	14.0	46	1	17	64	115
COUT BAX-C	25	179	14.0	46	1	17	64	115
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-I	27	179	15.1	46	1	19	65	113
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	6	74	9.7	5	12	7	25	49
COUT-A Variation 1	7	70	11.9	5	12	7	25	46
NOTES: <sup>1</sup> Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

The majority of grasshopper sparrow habitat that would be affected by alternative routes that cross the Ashley, Manti-La Sal, and Uinta National Forests is breeding habitat. Moderately open grassland habitats with patchy bare ground are used during the spring breeding season (Vickery 1996).

Disturbance to potentially suitable grasshopper sparrow habitat could occur as a result of the Project on USFS-administered lands. Potentially suitable habitat in the study corridor has a patchy distribution and grasshopper sparrows are more likely to occupy large tracts of habitat rather than small patches of fragmented habitat (Vickery 1996). Project-related impacts on grasshopper sparrow could include minor and localized removal, alteration, and damage to vegetation during construction of the Project and displacement of individuals as a result of habitat loss or degradation. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory bird nesting season, preconstruction nest surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active grasshopper sparrow nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 19.9 percent or less of the total available potentially suitable grasshopper sparrow habitat in the cumulative impact analysis area on the Ashley National Forest (Table 36). Alternative COUT-B would affect substantially more grasshopper sparrow habitat than Alternative

COUT-C and route variations on the Ashley National Forest. Alternative COUT-B follows existing linear developments (lower-voltage transmission lines and forest roads) that have resulted in only minor habitat modification through Sowers Canyon. Although the estimated amount of total available habitat affected by Alternative COUT-B is substantial due to the small area of the cumulative impact analysis area for this species, there is abundant habitat available outside of the cumulative impact analysis area on the Ashley National Forest that would remain unaffected and would not prevent the habitat from supporting local grasshopper sparrow populations on the national forest. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest, which remains largely unmodified by anthropogenic developments. Potentially suitable habitat for grasshopper sparrow is extremely limited in the area.

The Project would affect 15.1 percent or less of the total available potentially suitable grasshopper sparrow habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 36). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect similar amounts of grasshopper sparrow habitat on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, and COUT-I have been locally affected by the development of roads, transmission lines, residential developments, coal mining, and recreational development that has likely fragmented grasshopper sparrow habitat locally and reduced habitat effectiveness. Potentially suitable grasshopper sparrow habitat is extremely limited and patchy in the study corridor for these route variations and habitat effectiveness is likely to be limited by natural habitat distribution in this area.

The Project would affect 11.9 percent or less of the total available potentially suitable grasshopper sparrow habitat in the cumulative impact analysis area on the Uinta National Forest (Table 36). COUT-A Variation 1 would affect marginally more grasshopper sparrow habitat than Alternative COUT-A on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 follow the Bonanza-Mona Transmission Project that previously fragmented and altered potentially suitable habitat. Habitats in the areas are subject to occasional human disturbance during transmission line maintenance or inspection. Potentially suitable grasshopper sparrow habitat is extremely limited and patchy in the study corridor of these route variations and habitat effectiveness is likely to be limited by natural habitat distribution in this area.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on grasshopper sparrows would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable grasshopper sparrow habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable grasshopper sparrow habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for grasshopper sparrow. Past and present actions on potentially suitable grasshopper sparrow habitat include oil and gas leasing and a coal mine. Minimal surface disturbance is anticipated from oil and gas leasing, and coal mining is currently being conducted using underground methods that have minimal surface disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project and a coal mine that could further decrease habitat effectiveness for the species.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, grasshopper sparrow habitat affected by vegetation management occurs in the cumulative

impact analysis area. On the Ashley National Forest, no vegetation management activities appear to affect grasshopper sparrow habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the Pipeline Reforestation Project and a timber sale affect grasshopper sparrow habitat in the cumulative impact analysis area. On the Uinta National Forest, the Sheep Creek Vegetation Management Project affects grasshopper sparrow habitat in the cumulative impact analysis area. Vegetation management activities, such as the Sheep Creek Vegetation Management Project, may result in initial temporary losses to grasshopper sparrow habitat, but are designed to benefit wildlife habitat conditions in the long-term.

***Findings***

Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, COUT-C and route variations, and COUT-I could result in local losses or modifications of potentially suitable grasshopper sparrow habitat on the Ashley, Manti-La Sal, and Uinta National Forests and could reduce habitat effectiveness for the species. The magnitude of effects would be greatest under Alternative COUT-B on the Ashley National Forest; Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest; and Route Variation COUT-A Variation 1 on the Uinta National Forest as these alternative routes affect more potentially suitable grasshopper sparrow habitat. Overall, the majority of potentially suitable grasshopper sparrow habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area, and abundant habitat is available outside of the cumulative impact analysis area on all three national forests. When analyzed as a migratory bird species representing grassland habitat, impacts resulting from any of the alternative routes on the Ashley, Manti-La Sal, and Uinta National Forests are unlikely to affect regional grasshopper sparrow population trends.

**Sage Sparrow**

***Environmental Consequences***

Impacts on potentially suitable sage sparrow habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 37.

TABLE 37 SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES) FOR SAGE SPARROW HABITAT								
Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	50	449	11.1	49	115	25	190	259
COUT-C Variation 2	3	39	7.7	1	10	1	12	27
COUT-C Variation 5	4	66	6.1	1	16	3	20	46

**TABLE 37  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR SAGE SPARROW HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	57	566	10.1	253	20	31	305	261
COUT BAX-C	56	566	9.9	253	20	31	304	261
COUT BAX-E	40	522	7.6	159	77	4	240	282
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-H	44	522	8.5	159	77	4	240	282
COUT-I	60	566	10.6	253	20	33	306	259
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	112	955	11.7	58	101	120	279	676
COUT-A Variation 1	82	759	10.8	48	87	94	229	530
COUT-B	34	404	8.4	74	79	40	193	212
COUT-C	36	404	8.9	74	79	42	195	209
COUT-C Variation 1	32	379	8.4	64	77	42	184	196
COUT-C Variation 2	36	427	8.4	78	82	43	203	224
COUT-C Variation 5	40	427	9.4	78	82	48	208	219
NOTES:								
<sup>1</sup> Cumulative effects were estimated for all habitats in the cumulative impact analysis area, regardless of land jurisdiction.								
Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.								

The analysis of potentially suitable sage sparrow habitat is conservative as it included vegetation communities that sage sparrow are associated with, including big sagebrush, low sagebrush, and shrub-steppe communities (e.g., greasewood, saltbrush and Mormon tea that also have a sagebrush component). Sage sparrows often show a preference for big sagebrush and semi-open habitats with evenly spaced shrubs 1 to 2 meters high as vertical structures. Habitat patchiness and vegetation density also are important habitat selection criteria for this species and would affect species distribution on the landscape (Martin and Carlson 1998).

Disturbance to potentially suitable sage sparrow habitat could occur on USFS-administered lands as a result of the proposed activities. The effects of the Project would not prevent the habitat from supporting local sage sparrow populations on the Ashley, Manti-La Sal, and Uinta National Forests and there is abundant sage brush habitat available on USFS-administered lands that would remain unaffected. Project-related impacts on sage sparrow habitat could include minor and localized removal, alteration, and damage to vegetation during construction of Project access roads, transmission line towers, and associated facilities and temporary displacement of individuals as a result of habitat loss or degradation. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction

activities cannot be avoided during the primary migratory bird nesting season, preconstruction surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active sage sparrow nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 11.1 percent or less of the total available potentially suitable sage sparrow habitat in the cumulative impact analysis area on the Ashley National Forest (Table 37). Alternative COUT-B would affect comparatively more potentially suitable sage sparrow habitat than COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows existing linear developments (lower-voltage transmission lines and forest roads) through Sowers Canyon that have resulted in minor habitat modification. Habitat effectiveness in the area is likely to be high for sage sparrow. Alternative COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest. This area remains largely unmodified by anthropogenic developments, and habitat effectiveness for grasshopper sparrow is likely to be high in the Reservation Ridge area.

The Project would affect 10.6 percent or less of the total available potentially suitable sage sparrow habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 37). Alternatives COUT BAX-B, COUT BAX-C, and COUT-I would affect more sage sparrow habitat than Alternatives COUT BAX-E and COUT-H on the Manti-La Sal National Forest. Habitats crossed by Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of pipelines, residential developments, coal mining, transmission lines, roads, and recreation. Potentially suitable sage sparrow habitat in the study corridor for these alternative routes maintains high levels of functionality. Habitats along Alternatives COUT BAX-E and COUT-H also have been affected by wildfires that could temporarily reduce habitat effectiveness for sage sparrow by removing vegetation structure, depleting native perennial grass seed banks on which this species depends, and replacing native vegetation with exotic annuals (Martin and Carlson 1998). Sage brush communities may take years to recover to pre-fire conditions; however, wildfires may result in long-term benefits such as increased native vegetation.

The Project would affect 11.7 percent or less of the total available potentially suitable sage sparrow habitat in the cumulative impact analysis area on the Uinta National Forest (Table 37). Alternative COUT-A and COUT-A Variation 1 would affect more sage sparrow habitat than Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project and forest roads that previously fragmented and altered potentially suitable sage sparrow habitat, although habitat effectiveness for the species is likely to be high in areas crossed by the alternative routes. Habitat under Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development including two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. These developments have reduced habitat effectiveness for the species.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest, and an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest. The effects of the plan amendments on sage sparrows would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable sage sparrow habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable sage sparrow habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for the species. Past and present actions on potentially suitable sage sparrow habitat include oil and gas leasing. Minimal surface disturbance is anticipated from oil and gas leasing, and coal mining is currently being conducted using underground methods that have minimal surface disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project. The two transmission lines would likely be colocated if developed in the same corridor, which would limit disturbance on the Ashley, Manti-La Sal, and Uinta National Forests by concentrating impacts in one area. Incremental Project disturbance is anticipated to be minor compared to anticipated reasonably foreseeable future actions on the Ashley National Forest and minimal compared to past and present actions on the Manti-La Sal and Uinta National Forests.

### ***Findings***

Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-C and route variations, COUT-H, and COUT-I could result in local losses or modifications of potentially suitable habitat and could locally reduce habitat effectiveness for sage sparrow on the Ashley, Manti-La Sal, and Uinta National Forests. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I as these Alternatives would affect a greater amount of potentially suitable sage sparrow habitat and would be located in areas of high habitat effectiveness. Overall, the majority of potentially suitable sage sparrow habitat would remain undisturbed by the Project and cumulative actions in the cumulative impact analysis area, and habitat effectiveness for sage sparrow would remain largely unaffected by the Project. When analyzed as a migratory bird species representing big sagebrush, low sagebrush, and shrub-steppe habitat, impacts resulting from any of the alternative routes on the Ashley, Manti-La Sal, and Uinta National Forests are unlikely to adversely affect regional sage sparrow population trends.

### **Virginia's Warbler**

#### ***Environmental Consequences***

Impacts on potentially suitable warbling vireo habitat on the Ashley, Manti-La Sal, and Uinta National Forests are presented in Table 38.

**TABLE 38  
SUMMARY OF ESTIMATED GROUND DISTURBANCE (IN ACRES)  
FOR VIRGINIA'S WARBLER HABITAT**

Alternative Route	Project Disturbance on the Forest Only	Cumulative Impact Analysis Area <sup>1</sup>						
		Total Available Resource	Percent of Total Available Resource Disturbed by the Project	No Action Alternative		Incremental Project Disturbance	Estimated Cumulative Development	Remaining Available Resource
				Past and Present Development	Reasonably Foreseeable Future Actions			
<b>Ashley National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-B	17	174	9.8	15	34	0	49	125
COUT-C Variation 2	5	73	6.8	2	16	0	18	55
COUT-C Variation 5	9	122	7.4	3	26	1	30	93
<b>Manti-La Sal National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Baxter Pass to Clover (COUT BAX)</b>								
COUT BAX-B	81	1,084	7.5	443	3	66	512	572
COUT BAX-C	81	1,084	7.5	443	3	65	511	573
COUT BAX-E	30	342	8.8	147	24	12	183	160
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	1	57	1.8	8	6	4	18	39
COUT-A Variation 1	1	57	1.8	8	6	4	18	39
COUT-B	1	57	1.8	8	6	4	17	40
COUT-C	2	57	3.5	8	6	4	18	39
COUT-C Variation 1	2	57	3.5	8	6	4	18	39
COUT-C Variation 2	2	57	3.5	8	6	4	18	39
COUT-C Variation 5	2	57	3.5	8	6	4	18	39
COUT-H	33	342	9.6	147	24	13	184	158
COUT-I	86	1,084	7.9	443	3	70	516	568
<b>Uinta National Forest</b>								
<b>Colorado to Utah – U.S. Highway 40 to Central Utah to Clover (COUT)</b>								
COUT-A	66	742	8.9	15	54	78	146	596
COUT-A Variation 1	74	781	9.5	15	49	86	149	632
COUT-B	19	334	5.7	20	69	36	124	210
COUT-C	20	334	6.0	20	69	37	126	208
COUT-C Variation 1	16	318	5.0	17	62	38	117	201
COUT-C Variation 2	33	479	6.9	35	80	51	167	312
COUT-C Variation 5	36	479	7.2	35	80	57	173	306

**NOTES:**

<sup>1</sup>Cumulative effects were estimated for all habitat in the cumulative impact analysis area, regardless of land jurisdiction. Acreages are approximate and have been rounded to the nearest acre; therefore, the columns may not total.

The analysis of impacts on potentially suitable Virginia's Warbler habitat is conservative as it included all mountain shrub/oak woodland vegetation communities. Virginia's warbler often has a strong association with habitat characteristics such as steep draws, drainages, or slopes with oak or other shrubby vegetation for breeding (Olson and Martin 1999). Furthermore, Virginia's warbler may use alternative vegetation types at various elevation ranges in addition to oak and pinyon-juniper woodlands (Olsen and Martin 1999). Disturbance to potentially suitable Virginia's warbler habitat could occur on USFS-administered

land as a result of the proposed activities but is unlikely to prevent the habitat from supporting local Virginia's warbler populations on the Ashley, Manti-La Sal, and Uinta National Forests. There is abundant mountain-shrub/oak woodland habitat available on USFS-administered lands that would remain unaffected. Project-related impacts on Virginia's warbler could include minor and localized removal, alteration, and damage to vegetation during construction of Project and the displacement of individuals as a result of habitat loss or degradation. Seasonal restrictions on construction and maintenance activities would be implemented during the migratory bird nesting season between February 1 and August 31 (Design Feature 6). In the event that construction activities cannot be avoided during the primary migratory bird nesting season, preconstruction surveys would be conducted and appropriate species-specific nest buffers would be implemented on identified active Virginia's warbler nests to limit human disturbance and noise levels in the vicinity of breeding individuals (Design Feature 7).

The Project would affect 9.8 percent or less of the total available potentially suitable Virginia's warbler habitat in the cumulative impact analysis area on the Ashley National Forest (Table 38). Alternative COUT-B would affect comparatively more Virginia's warbler habitat than Alternative COUT-C route variations on the Ashley National Forest. Alternative COUT-B follows existing linear developments (lower-voltage transmission lines and forest roads) through Sowers Canyon that have resulted in minor habitat modification. Potentially suitable habitat for Virginia's warbler likely maintains high levels of functionality in this corridor. COUT-C route variations are located in the vicinity of Reservation Ridge on the southern edge of the Ashley National Forest, which largely remains unmodified by anthropogenic developments. Habitat effectiveness for Virginia's warbler likely remains high in this area.

The Project would affect 9.6 percent or less of the total available potentially suitable Virginia's warbler habitat in the cumulative impact analysis area on the Manti-La Sal National Forest (Table 38). Alternatives COUT BAX-E and COUT-H would affect comparatively more Virginia's warbler habitat relative to total available habitat in the cumulative impact analysis area than Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, COUT-C and route variations, and COUT-I on the Manti-La Sal National Forest. Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-H, and COUT-I have been locally affected by development of transmission lines, roads, pipelines, residential developments, coal mining, and recreation. Habitats along Alternatives COUT BAX-E and COUT-H have further been affected by wildfires that could reduce habitat effectiveness for Virginia's warbler in the short-term. However, wildfires promote long-term forest health that would be beneficial to the species.

The Project would affect 9.5 percent or less of the total available potentially suitable Virginia's warbler habitat in the cumulative impact analysis area on the Uinta National Forest (Table 38). Alternative COUT-A and COUT-A Variation 1 would affect more Virginia's warbler habitat than Alternatives COUT-B and COUT-C and route variations on the Uinta National Forest. Alternative COUT-A and COUT-A Variation 1 parallel the Bonanza-Mona Transmission Project and forest roads that previously fragmented and altered potentially suitable Virginia's warbler habitat. Habitat effectiveness for the species is likely to be high in the study corridor for these alternative routes due to the mountainous and forested terrain in the area that limits the effects of development. Habitats crossed by Alternatives COUT-B and COUT-C and route variations have been heavily modified by previous development of two 345kV transmission lines, several lower voltage transmission lines, U.S. Highway 6, the Rio Grande Western Railroad, residential developments, livestock grazing, and recreational use. These developments have locally reduced habitat effectiveness for the species.

As described in Chapter 5 – Land-use Plan Amendments of the Final EIS (BLM 2016), an amendment to the Manti-La Sal National Forest LRMP would be required for authorization of Alternatives COUT-A, COUT-B, and COUT-C on the Manti-La Sal National Forest, an amendment to the Uinta National Forest LRMP would be required for authorization of COUT-A Variation 1 on the Uinta National Forest, and an

amendment to the Ashley National Forest LRMP would be required for authorization of COUT-C Variation 2 on the Ashley National Forest. The effects of the plan amendments on Virginia's warblers would be the same as the impacts of constructing, operating, and maintaining the Project.

### ***Cumulative Effects***

Project-related loss, fragmentation, and modification of potentially suitable Virginia's warbler habitat would contribute to the cumulative loss, fragmentation, and modification of potentially suitable Virginia's warbler habitat in the cumulative impact analysis area and could locally reduce habitat effectiveness for the species. Past and present actions on potentially suitable Virginia's warbler habitat include oil and gas leasing and a coal mine. Minimal surface disturbance is anticipated from oil and gas leasing, and coal mining is currently being conducted using underground methods that have minimal surface disturbance. Reasonably foreseeable future actions include the TransWest Express Transmission Project, a coal mine, and residential development that could further reduce habitat quality for Virginia's warbler.

In addition to the effects of the past, present, and reasonably foreseeable future actions analyzed quantitatively, Virginia's warbler habitat affected by vegetation management occurs in the cumulative impact analysis area. On the Ashley National Forest, no vegetation management activities appear to affect Virginia's warbler habitat in the cumulative impact analysis area. On the Manti-La Sal National Forest, the Pipeline Reforestation Project and a timber sale affect Virginia's warbler habitat in the cumulative impact analysis area. On the Uinta National Forest, the Sheep Creek Vegetation Management Project affects Virginia's warbler habitat in the cumulative impact analysis area. Vegetation management activities, such as the Sheep Creek Vegetation Management Project, may result in initial temporary losses to Virginia's warbler habitat, but are designed to benefit wildlife habitat conditions in the long-term.

### ***Findings***

Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-B, COUT-C and route variations, COUT-H, and COUT-I could result in local losses or modifications of potentially suitable Virginia's warbler habitat, and could locally reduce habitat effectiveness for the species. The magnitude of impacts would be greater under Alternatives COUT-A, COUT-B, and COUT-H, as these alternative routes affect a greater amount of potentially suitable mountain shrub/oak woodland habitat in the cumulative impact analysis area on the Ashley, Manti-La Sal, and Uinta National Forests. Overall, the majority of potentially suitable Virginia's warbler habitat would remain unaffected by the Project and cumulative actions in the cumulative impact analysis area on the Ashley, Manti-La Sal, and Uinta National Forests. When analyzed as a migratory bird species representing mountain shrub habitat, impacts resulting from any of the alternative routes are unlikely to affect regional Virginia's warbler population trends.

## ***Summary of Effects***

### **Land and Resource Management Plans Consistency Determination**

Based on this analysis, construction, operation, and maintenance along any of the alternative routes would be consistent with the Ashley, Manti-La Sal, and Uinta National Forests LRMPs, as amended. Forest plan compliance is documented in the Project record.

## **Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Executive Order 13186**

Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practical, adverse impacts on migratory birds' resources when conducting agency actions. Executive Order 13186 directs agencies to further comply with the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and other pertinent statutes. This analysis is compliant with the National Memorandum of Understanding between the USFS and the FWS to promote the conservation of migratory birds (USFS 2008). In addition, the Ashley, Manti-La Sal, or Uinta National Forests are compliant with a letter of understanding between USFS and the FWS Utah Field Office concerning compliance with the Migratory Bird Treaty Act and Executive Order 13186.

## **Effects on U.S. Forest Service Sensitive, Management Indicator Species, and Other Species of Concern**

Impacts on designated or potentially suitable habitat for USFS-sensitive, MIS, and migratory bird species and their habitats would occur with implementation of certain Project alternative routes on USFS-administered land. Surveys would be conducted in suitable habitat as identified by or approved by the USFS, the results of which would be used to determine the application of selective mitigation measures and micro-siting of Project facilities. None of the alternative routes analyzed in this report would affect species listed as threatened or endangered under the ESA on USFS-administered land. Habitat for some USFS-sensitive species, MIS, and migratory birds of concern are present in the Project area on USFS-administered land. Habitat effectiveness for each of the species analyzed in this report would remain largely unaffected by the Project. The alternative routes analyzed in this report may affect individuals, but none of the alternative routes that cross USFS-administered lands are likely to cause a trend to federal listing or loss of viability for any of the USFS-sensitive species discussed in this report. Additionally, none of the alternative routes would affect existing Ashley, Manti-La Sal, or Uinta National Forests forest-wide population trends for MIS. The alternative routes analyzed in this report would not be expected to alter existing regional population trends for migratory bird species of concern.

## **U.S. Forest Service Sensitive Species and Management Indicator Species**

### **American Beaver (MIS: Uinta)**

Alternative COUT-A and COUT-A Variation 1 could result in local and minor losses or modifications of potentially suitable beaver habitat for beaver on the Uinta National Forest but would not prevent the habitat from supporting current or future beaver populations.

### **Bald Eagle (USFS Sensitive: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on USFS-administered lands, as these alternative routes affect more potentially suitable bald eagle habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Elk (MIS: Ashley and Manti-La Sal)**

No elk calving grounds, crucial spring/fall, or crucial year-long habitats would be affected by any of the alternative routes on the Ashley or Manti-La Sal National Forests. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-B, and COUT-I as these alternative routes affect more elk crucial and substantial habitat, and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Flammulated Owl (USFS Sensitive: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest; COUT-B on the Ashley National Forest; and COUT-A and COUT-A Variation 1 on the Uinta National Forest as these alternative routes affect a greater amount of potentially suitable flammulated owl habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Golden Eagle (MIS: Ashley and Manti-La Sal; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on the Ashley, Manti-La Sal, or Uinta National Forests, as these alternative routes affect a greater amount of potentially suitable golden eagle habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Greater Sage-grouse (ESA: candidate; USFS Sensitive: Ashley, Uinta, and Manti-La Sal; MIS: Ashley)**

None of the alternative routes would affect sage-grouse brood-rearing, occupied, or winter habitat on the Ashley or Uinta National Forests. None of the alternative routes would be located in sage-grouse habitats within 4 miles of active sage-grouse leks on the Ashley, Manti-La Sal, or Uinta National Forests. The magnitude of impacts would be greater under Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest as these alternative routes affect more brood-rearing and occupied habitat.

### **Lincoln's Sparrow (MIS: Ashley; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternative COUT-A and COUT-A Variation 1 on the Uinta National Forest as this alternative affects a greater amount of potentially suitable Lincoln's sparrow habitat and would be located in areas of high habitat effectiveness. Any effects on riparian areas or Lincoln's sparrow habitat on the Ashley National Forest would be minor and localized and would not prevent the habitat from supporting current Lincoln's sparrow populations.

### **Mule deer (MIS: Ashley and Manti-La Sal)**

No mule deer crucial spring/fall, winter/spring, or year-long habitats would be affected on the Ashley National Forest. No mule deer crucial year-long or substantial habitat would be affected on the Manti-La Sal National Forest. The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-B, and COUT-I as these alternative routes affect more mule deer crucial and substantial habitat on the Ashley and Manti-La Sal National Forests and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Northern Goshawk (USFS Sensitive and MIS: Ashley, Uinta, and Manti-La Sal and Migratory Bird of Conservation Concern)**

The magnitude of effects on PFAs would be greater under Alternative COUT-B, as this alternative route crosses a known goshawk PFA, although delineated nest areas in this PFA would not be affected. . The magnitude of effects on potentially suitable nesting and foraging habitat would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT BAX-E, COUT-A and COUT-A Variation 1, COUT-B, COUT-H, and COUT-I, as these alternative routes affect a greater amount of potentially suitable habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Peregrine Falcon (USFS Sensitive: Ashley, Manti-La Sal, and Uinta; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternative COUT-B as this alternative route affects more potentially suitable habitat for peregrine falcon compared to other alternative routes.

### **Red-naped Sapsucker (MIS: Ashley; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternative COUT-C Variation 5 as this alternative route affects more potentially suitable habitat for red-naped sapsucker compared to other alternative routes.

### **Song Sparrow (MIS: Ashley; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternative COUT-B as this alternative route affects more potentially suitable habitat for red-naped sapsucker compared to other alternative routes.

### **Spotted Bat and Townsend's Big-eared Bat (USFS Sensitive: Ashley, Manti-La Sal, and Uinta)**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on USFS-administered lands as these alternative routes affect more potentially suitable roosting and foraging habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Three-toed Woodpecker (USFS Sensitive: Ashley, Manti-La Sal, and Uinta; MIS: Uinta); Migratory Bird of Conservation Concern**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I on USFS-administered lands as these alternative routes affect more potentially suitable three-toed woodpecker habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Warbling Vireo (MIS: Ashley; Migratory Bird of Conservation Concern)**

The magnitude of effects would be greater under Alternative COUT-B as this alternative route would affect more potentially suitable warbling vireo habitat.

## **Other Species of Concern – Migratory Birds**

### **Black rosy-finch**

There would be no impacts on potentially suitable black rosy-finch habitat on the Ashley National Forest. The magnitude of impacts would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, and COUT-I as these alternative routes affect more potentially suitable alpine habitat.

### **Black-throated Gray Warbler**

The magnitude of impacts would be greater under Alternatives COUT BAX-E, COUT-A and COUT-A Variation 1, and COUT-H as these alternative routes affect more potentially suitable habitat and would be located in areas of high habitat effectiveness compared to other alternative routes on USFS-administered lands.

### **Grasshopper Sparrow**

The magnitude of effects would be greatest under Alternative COUT-B on the Ashley National Forest; Alternatives COUT BAX-B, COUT BAX-C, and COUT-I on the Manti-La Sal National Forest; and COUT-A Variation 1 on the Uinta National Forest as these alternative routes affect more potentially suitable grasshopper sparrow habitat.

### **Sage Sparrow**

The magnitude of effects would be greater under Alternatives COUT BAX-B, COUT BAX-C, COUT-A and COUT-A Variation 1, COUT-B, and COUT-I as these alternative routes would affect more potentially suitable sage sparrow habitat and would be located in areas of high habitat effectiveness compared to other alternative routes.

### **Virginia's Warbler**

The magnitude of impacts would be greater under Alternatives COUT-A, COUT-B, and COUT-H as these alternative routes affect a greater proportion of potentially suitable alpine habitat and would be located in areas of high habitat effectiveness compared to other alternative routes on USFS-administered lands.

## **Monitoring Recommendations**

Monitoring of construction activities should be conducted by a qualified biologist if federally listed or USFS-sensitive wildlife species or important habitats for these species are located during preconstruction surveys. Monitoring construction activities will ensure that stipulations applied in the Project POD are followed to minimize impacts on special status wildlife and associated habitats and ensure avoidance of identified species where feasible. Construction monitoring also would ensure that construction activities are in compliance with appropriate standards and guidelines from applicable LRMPs. Should construction activities be unavoidable in occupied special status wildlife habitat, appropriate seasonal and spatial restrictions on ground-disturbing activities would be applied (Selective Mitigation Measure 12 and Design Feature 8). Monitoring also should be implemented to ensure reclamation methods and techniques are appropriate for restoring suitable habitat conditions for the affected species, and that reclamation goals are achieved.

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