

Wildlife ^{6/}

Affected Environment

There are two habitat types that would be affected by the proposed action or any of the alternatives. These are sagebrush identified as Management Area (MA) 12 in the forest plan and piñon-juniper types (MA 8), and are fairly equally distributed in a mosaic pattern across the analysis area (see *Vegetation*, Figure 14). Grasslands and dry washes or arroyos are inclusions or components in the major habitat types. Some grassland were created by woodland removal projects and reseeding. These areas are identified as MA 11 – Revegetation Areas. These revegetation areas have gradually begun to revert to sagebrush and piñon-juniper. However, it is likely that much of the analysis area will lose the majority of the piñon to disease and will become juniper grasslands habitat in the next few years. Wildlife common throughout the analysis area include large ungulates, carnivores, small mammals, raptors, songbirds, reptiles and amphibians associated with the piñon-juniper and sagebrush habitat types.

Avian Species

Breeding season inventories in northern New Mexico (Stahlecker 1989 and LaGory 2001) indicate a variety of avian species use these habitat types. Greater species diversity is expected in the piñon-juniper type with the increase in structural diversity. Birds common to the piñon-juniper habitat include the ash-throated flycatcher, Bewick's wren, bushtit, chipping sparrow, house finch, juniper titmouse, spotted towhee, scrub jay, black-throated gray warbler, blue-gray gnatcatcher, brown-headed cowbird, common nighthawk, gray flycatcher, gray vireo, lesser goldfinch, mountain bluebird, mountain chickadee, mourning dove, piñon jay, dark-eyed junco, broad-tailed hummingbird, northern flicker and solitary vireo.

Avian species common to the sagebrush habitat type include the sage sparrow, vesper sparrow, Brewer's sparrow, green-tailed towhee, mountain blue bird, western meadowlark, broad-tailed hummingbird, common nighthawk, horned lark, mourning dove and sage thrasher.

The most likely bird of prey to nest in the analysis area is the American kestrel. Species known to nest in nearby cliff areas and likely to use the area for hunting include the red-tailed hawk, great-horned owl, prairie falcon and golden eagle. A wider variety of raptors may frequent the area during migration periods including flammulated owl, Swainson's hawk, ferruginous hawk, rough-legged hawk and northern goshawk.

Mammals

Wild ungulates include Rocky mountain elk and mule deer. Common predators include the mountain lion, coyote, gray fox, long-tailed weasel, bobcat and striped skunk.

Small mammals common to the analysis area include the porcupine, rock squirrel, desert cottontail, eastern cottontail, black-tailed jackrabbit, Colorado chipmunk, Gunnison's prairie dog, Bottas pocket gopher, Ord's kangaroo rat, deer mouse, piñon mouse and white-throated wood rat.

Fish

No fisheries occur within or reasonably close enough to the analysis area to be affected by the proposed action or alternatives.

Amphibians and Reptiles

Reptiles that are likely to occur within the analysis area include the prairie rattlesnake, gopher snake, western hognose snake, Chihuahuan spotted whiptail, fence lizard, short horned lizard, collared lizard and the New Mexico spadefoot.

Environmental Consequences

Given the nature of the proposal, there are some environmental effects that are common to all alternatives. All of the alternatives, including the no action, would either create or maintain some openings through the woodland type. There would be minor changes in overall disturbance from motor vehicle access over time. The Forest Service portion of the analysis area is currently designated open to both vehicle and all-terrain-vehicle (ATV) use. The BLM portion is limited to existing roads and trails. There would be some additional activity during construction for any of the action alternatives. Alternatives B and D would have a slight increase in public access capability due to the access routes created during construction.

Some habitat disturbance would occur during the construction of a transmission line. The construction process would result in habitat disturbance in any of the alternative locations for approximately a year. The disturbance factors would be fairly similar for any alternative. Generally, the larger species would experience more displacement than smaller species. This is fairly common across orders. Large predators, big game, upland game and larger birds of prey would all likely exhibit more temporary avoidance of an area during active construction. Smaller species, including small mammals and passerine birds, may not experience much displacement at all. Ground dwelling species would be displaced in the area where access ways are used for construction or at pole placement sites.

Any of the action alternatives would be relatively insignificant from the disturbance caused during construction. There are over 300,000 acres of piñon-juniper and over 80,000 acres of sagebrush on the forest, and only a fraction of a percent of these habitats would be involved in any of the alternatives.

Management Indicator Species (MIS)

The Bureau of Land Management does not use the concept of “management indicator species.” The Carson Forest Plan (as amended) identified 11 wildlife species as management indicator species (MIS) to monitor the conditions of the forest’s ecosystems. [5] The forest plan provides direction on managing quality habitat for management indicator species by management area. Management indicator species are considered to be representative for a variety of other species with similar life requirements and were determined to reflect the habitat needs for the majority of the forest’s species. MIS were selected because population changes are believed to indicate the effects of management activities that occur on the forest.

All eleven management indicator species or species groups were considered for the Ojo Caliente proposed 115 kV transmission line analysis. Management indicator species with representative habitats are listed in Table 17.

Table 17. Forest management indicator species with habitats present or affected

Management Indicator Species	Key MIS Habitat Component for Quality Habitat	Forest Plan Management Areas Within the Analysis Area Managed for Quality Habitat
Brewer's Sparrow	sagebrush	MA 12—Sagebrush
Plain (Juniper) Titmouse	piñon-juniper canopies	MA 8—Piñon-Juniper
Rocky Mountain Elk	general forest	MA 8—Piñon-Juniper MA 12—Sagebrush
Merriam's Turkey	old growth pine	MA 3—Mixed Conifer Under 40% Slope MA 4—Ponderosa Pine Under 40% Slope MA 5—Mixed Conifer & Ponderosa Pine Over 40% Slope MA 7—Unsuitable Timber MA 11—Revegetation Areas MA 13—Oak

Those considered but not included in detailed analysis are listed in Table 18. Representative habitats for these species are not present in the analysis area.

Table 18. Forest management indicator species with habitats not present or affected

Management Indicator Species	Key MIS Habitat Component for Quality Habitat	Forest Plan Management Areas Managed for Quality Habitat
Abert's squirrel	interlocking canopies in ponderosa pine	MA 4—Ponderosa Pine Under 40% Slope MA 5—Mixed Conifer & Ponderosa Pine Over 40% Slope MA 7—Unsuitable Timber
Hairy woodpecker	snags	MA 1—Spruce Under 40% Slopes MA 2—Spruce Under 40% Slopes MA 3—Mixed Conifer Under 40% Slope MA 4—Ponderosa Pine Under 40% Slope MA 5—Mixed Conifer & Ponderosa Pine Over 40% Slope MA 6—Aspen MA 7—Unsuitable Timber MA 14—Riparian

Management Indicator Species	Key MIS Habitat Component for Quality Habitat	Forest Plan Management Areas Managed for Quality Habitat
Red squirrel	mixed conifer	MA 3—Mixed Conifer Under 40% Slope MA 5—Mixed Conifer & Ponderosa Pine Over 40% Slope MA 6—Aspen MA 7—Unsuitable Timber
Rocky Mountain bighorn sheep	alpine, subalpine tundra, mtn. meadow grassland	MA 9—High Elevation Grassland
White-tailed ptarmigan	alpine tundra, subalpine deciduous shrub	MA 9—High Elevation Grassland
Aquatic macroinvertebrates	perennial streams and riparian	MA 14—Riparian
Resident trout	perennial streams and riparian	MA 14—Riparian

Juniper titmouse (*Baeolophus ridgwayi*)

Juniper titmouse, formerly referred to as the plain titmouse, is a resident of deciduous or mixed woodlands, favoring oak and piñon-juniper. The titmouse usually nests in natural cavities or old woodpecker holes. It occurs almost statewide and is considered rare to common. Spot mapping surveys in the Rio Grande Wild and Scenic River Recreation Area (Stahlecker 1998) produced a range of 22 to 61 breeding pair per square kilometer. Surveys on the Jicarilla Ranger District (LaGory 2001) found this species was the third most common species encountered in the piñon-juniper habitat type. This species is the only MIS on the Carson National Forest that has a declining trend in habitat and population. Based on the MIS assessment for the Carson National Forest over the period of the forest plan, it is estimated juniper titmouse habitat has decreased about 6,688 acres due to wildfire and management actions. [261]

In the western portion of the analysis area the pattern of the piñon-juniper habitat becomes much more sparse with much greater distance between trees, and suitability for the species is marginal. However, the need to remove trees to implement any of the alternatives in this area is also greatly reduced.

Alternative Comparison: In Alternatives A (No Action) and C (Existing Corridor) and the Tres Piedras Connection Option, no habitat for this species would be affected. In Alternatives B (Proposed Action) and D (285 P Tap), there would be about 2 to 3 acres of suitable habitat lost to construction activities.

The nature of the project is such that a fully cleared corridor is not necessary. Generally the lines would remain well above the tops of most trees in this habitat type. Areas where trees would have to be removed would be to allow for pole delivery access or pole placement. Generally access routes would be limited to a two-track corridor, approximately 15 feet wide. The opening(s) would be narrow enough that effects are likely to be limited to possible loss of individual trees, but habitats would remain occupied.

Cumulative Effects: The western portion of the analysis area, which is the lowest elevation and most arid area near Ojo Caliente, has lost the majority of piñon trees to drought conditions and bark beetle infestation. In some areas there is near 100 percent mortality, leaving only juniper trees remaining in the habitat type. The effects of the infestation are progressing to the east and north, but as yet mortality is generally between 20 and 50 percent. Additional avian monitoring surveys are being conducted in 2003, but results are not yet available to determine the effects of piñon mortality on juniper titmouse. Based on the 2002 aerial surveys, the Carson has lost approximately 16,240 acres to disease. This would increase as the drought continues.

The most significant of past management activities in the Southwest that altered habitat for the plain titmouse was the plowing, chaining and tree crushing in piñon-juniper woodlands to create forage areas for livestock grazing, beginning in the 1940s and continuing until the early 1970s. The Carson National Forest Plan defines these areas as Management Area (MA) 11 – Revegetation Areas. On the forest, there are approximately 83,000 acres of MA 11, including acres of sagebrush that were type converted as well. Although forest plan standards and guidelines for MA 11 direct the forest to maintain these revegetation areas, the Carson National Forest has focused on maintaining mostly the acres that would naturally convert back to sagebrush by prescribed burning. The forest has allowed piñon and juniper trees to reestablish back into many of the sites where piñon-juniper was once common. This management trend is likely to continue, which should eventually benefit the plain titmouse and its habitat.

Summary: Given the minor number of acres actually affected by tree removal, the nature of the proposed project would not result in any significant habitat loss nor would it affect population viability. The current population trend would not be affected by any of the alternatives or the option.

Brewer's Sparrow (*Spizella breweri*)

In northern New Mexico, the habitat of Brewer's sparrow is sagebrush, brushy plains and the interface of piñon-juniper woodlands and sagebrush. Brewer's sparrow prefers brushy conditions intermixed with grasses. Such habitats are common throughout the study area occurring in a mosaic pattern. The common impacts would be either running over sagebrush habitat or removal for pole placement. The forest-wide habitat trend for this species is up by about 55 percent or 29,152 acres for the sagebrush habitat type. Based on the current GIS vegetation data layer, there is now a total of 81,752 acres of sagebrush. Throughout its range, Brewer's sparrow is listed as G5, (i.e., globally secure and common, widespread, and abundant) (NatureServe 2002). Monitoring information from the North American Breeding Bird Surveys in New Mexico from 1968 to 1999 indicate population and trends are fairly stable for the entire state (Sauer et al. 2001).

On lands administered by the Bureau of Land Management just west of the Questa Ranger District in Taos County, New Mexico, a prey base analysis for peregrine falcon conducted by Eagle Environmental in spring/summer 1995 and 1986 found an average of 50 breeding pairs of Brewer's sparrow per square kilometer in the sagebrush grassland habitat type (Stahlecker et al. 1989).

Alternative Comparison: Alternative A (No Action) would not affect the species. Less than 2 miles of Alternative B would go through Brewer's sparrow habitat. The habitat is relatively sparse and is considered marginal for the species. Alternative C would involve about 7 miles of

sagebrush habitat. However, the majority of the area already has a two-track corridor and would not result in habitat loss. The eastern portion of Alternative D runs through a dense sagebrush swale. Forest Road 285P traverses through the entire length of the habitat, but would not completely align with the actual sites for pole location. Some sagebrush would be lost, but it would be insignificant compared to the total sagebrush habitat available both within the analysis area and forest-wide. The Tres Piedras Option is located along the edge of the U.S. 285 right-of-way and is occasionally mown. No loss of habitat is anticipated for this option.

Cumulative Effects: Many of the piñon-juniper and sagebrush acres that were converted to grasses have gradually transitioned from grasslands to sagebrush. This accounts for the significant upward trend in Brewer's sparrow habitat. Given the current loss of piñon to disease, this trend is likely to continue for several years.

Summary: None of the alternatives or the option would affect the current habitat and population trend for Brewer's sparrow. In addition, the nature of the proposed project would not affect population viability.

Rocky Mountain Elk (*Cervus elaphus*)

This large ungulate is both a grazer and browser. It is generally thought that elk populations are increasing across most of the state. The analysis area includes portions of Game Management Units 50 and 51. The New Mexico Department of Game and Fish has increased license sales and provided a limited number of late season cow permits to help hold the population at current levels in both of these game management units. The portions of the analysis area within either unit are considered mostly to be of marginal quality elk habitat, but some year-round occupancy has developed over time.

Alternative Comparison: Under Alternatives B-D, some displacement of elk would occur where active construction is taking place. Long-term disturbance effects are estimated to result from access ways that become part of the permanent back-country road network and are at least 200 meters from any existing access. Given the sandy soil conditions and existing access management for the area that is open to off-road use, it is likely that some access ways would become part of the road network over time. It is estimated that both Alternatives B and D could have about 2 miles of increased road access from the project. Alternatives A and C would remain the same. Since the Tres Piedras Connection would be within the existing highway right-of-way, no habitat would be affected if the option were implemented.

Cumulative Effects: Disturbance to elk would occur only during the construction phase of the project. Periodic examination of the line for maintenance purposes would have little to no disturbance. While construction took place, continued intermittent disturbance by ATV and vehicle use would also occur. This area is remote and not heavily used, but larger species such as elk are more susceptible to disturbance and temporary displacement would be likely. Also the effects of the piñon die off would not necessarily result in loss of habitat but it would change the nature or use of the habitat, reducing cover components and increasing foraging areas.

Summary: Since 1986, the Carson National Forest has been experiencing an upward trend in both elk habitat and populations. Alternatives B-D and the Option would not affect the current habitat or population trend or the viability of the species.

Merriam's Turkey (*Meleagris gallopavo*)

The habitat component for which this species is to be evaluated is old ponderosa pine that provides roost tree habitat. However, the forest plan calls for managing quality habitat for turkey in MA 11 - Revegetation Areas. The analysis area does include revegetation areas, but there are no old ponderosa pine stands near the location of any alternative. This habitat feature is not present and would not be affected by any of the alternatives or the option.

Threatened, Endangered and Proposed Species

The following are brief summaries of the status of each Federally listed species as provided by the U.S. Fish and Wildlife Service [265, 266.1] and the management implications of the proposed project. These are Federally listed threatened or endangered species potentially occurring in Taos County or with historical habitat occurring in Taos County. A biological assessment will be prepared once the preferred alternative is identified and included as part of the project record. No alternative comparison is made where there is no occurrence of the species or suitable habitat.

Black-footed Ferret (*Mustela nigripes*)

Endangered: The black-footed ferret was listed as endangered on March 11, 1967. It is considered extirpated in New Mexico. The historic range of this species is almost identical to that of three prairie dog species that use prairies, grassland plains, and surrounding mountain basins. Based on: (1) the absence of the species in New Mexico; (2) the lack of exceptionally large prairie dog towns that may provide potential habitat; and (3) this type of project having little or no effect on such populations of prairie dogs, there would be no effect on the species or its future population viability.

Bald Eagle (*Haliaeetus leucocephalus*)

Threatened: The bald eagle was listed as “endangered” under the Endangered Species Act on February 14, 1978. In 1995, the U.S. Fish and Wildlife Service reclassified the listing to “threatened” in the lower 48 states. Bald eagles regularly migrate along the Rio Grande drainage in the winter, but are generally confined to areas of large cottonwood trees near the river for roosting. The analysis area is outside the normal migration route along the Rio Grande and Alternatives A-D and the Option would not have any effect on the species, its habitat or population viability.

Mexican Spotted Owl (*Strix occidentalis lucida*)

Threatened: The analysis area does not contain any suitable habitat for the Mexican spotted owl and the proposal would not have any effect on the species.

Southwestern Willow flycatcher (*Empidonax traillii extimus*)

Endangered: The southwestern willow flycatcher was listed as endangered on March 29, 1995. Occupied breeding habitat does occur in Taos County, but no suitable habitat occurs within the analysis area.

Whooping Crane (*Grus americana*)

Nonessential Experimental: The whooping crane in the Central Flyway is an experimental population, where a few individuals were raised by sandhill cranes at Gray Lake Idaho and migrate to the Rio Grande Valley in central New Mexico. The population was not self-sustaining and the experiment was concluded in 1989.

Mountain Plover (*Charadrius montanus*)

Proposed Threatened: The mountain plover is a prairie grassland species. It does occur in northern Taos County, but is associated with the winterfat, fringed sage, western wheatgrass communities west of the Rio Grande and north of NM 64. No suitable habitat occurs within the analysis area. Alternatives A-D and the Option would not jeopardize the mountain plover, its habitat or population viability.

Forest Service Sensitive Species

The Regional Forester has designated certain species as “sensitive” for the Southwestern Region of the Forest Service. [270] Ripley milk-vetch (*Astragalus ripleyi*) is the only species with potential to occur within the analysis area. Ripley milk-vetch does occur on the Tres Piedras Ranger District and may occur within the analysis area. It occasionally can be found where sagebrush transitions into piñon-juniper, but is much more likely to be found near edges of ponderosa pine forests in association with Arizona fescue understories (elevation approximately 7,000 - 9,500 feet). [270] The nearest known occurrence is several miles north of the northernmost point of any of the action alternatives or the option. [270] This milk-vetch requires a fairly open canopy, occurring at forest edges or openings on heavier and less friable soils than are generally found on the majority of the analysis area. A biological evaluation will be prepared on the preferred alternative and included as part of the project record.

Chances are greater that this species could occur along the Tres Piedras Connection option than the alternative routes. However, this location is within the highway right-of-way and is occasionally mowed up to or near the fence line. Implementing the Option should not have any impact on this plant species.

Migratory Birds

Migratory birds have often been referred to as neotropical migratory birds. These are birds that breed north of, and winter south of, the Tropic of Cancer. However, from a biological perspective, there are vast variations in migration between species and, for the most part, wildlife reports on migratory birds include species that migrate south of the United States for winter. Based on the nature of this analysis, all large raptors that could directly suffer from collision and/or electrocution accidents are included in this section and are of the greatest concern with regard to migratory birds.

Raptors and Waterfowl

Collision accidents occur when birds inadvertently strike conductors (lines). This problem occurs mainly with migratory birds, such as waterfowl, at times of poor visibility. Collisions can be a major concern for some structures such as high towers with multiple support cables. Problems can occur in very specific, localized situations where certain factors exist or interact to create high

collision potential. Such instances take place when high use feeding areas are on one side of a line and roosting or nesting areas are on the other (Brown 1994). Problems are also not common with transmission lines unless conductors are located in and perpendicular to a major migration flyway. None of which is the case in the proposed action or any of the alternatives. Collision accidents are not likely to occur.

Electrocution problems occur when conductors are close enough that an animal, typically a large raptor, can span the distance between conductors or the conductor and a ground making skin-to-skin contact. This situation should be avoided both to protect wildlife, as well as to avoid the disruption of power. The conductors on a 115 kV transmission line are too far apart to allow skin-to-skin contact of any bird of prey. There is no measurable conductivity up to 70,000 volts through dry feathers although electrocutions do increase during wet periods. Most raptors naturally stay put in rainy conditions and usually dry quickly in flight. The offset design proposed for the 115 kV portion of any of the action alternatives is identified as a raptor safe configuration in the “Suggested Practices for Raptor Protection on Power Lines – The State of the Art in 1996 by the Avian Power Line Interaction Committee” (Raptor Research Foundation 1996). The New Mexico Avian Protection Working Group has identified and mapped the high raptor density areas in New Mexico. None of the alternatives fall within the high raptor density areas for the state. [270] Nevertheless, the actual design including the underbuilt portions, will incorporate mitigation measures to prevent electrocution of raptors and any other species such as bobcats that could climb poles.

Alternative Comparison: The proposed design is a single pole with the transmission line above the distribution lines. Raptors are most often attracted to the highest perch site on a structure, which helps to mitigate underbuilt crossbars carrying distribution lines. However, it would still be possible to make contact between conductors or a conductor and the ground wire on any section where the 25 kV line would be underbuilt on a crossbar. All of the action alternatives will have Rural Utility Service approved safety measures installed on any new construction associated with the project where distance between conductors or ground is less than 60 inches. These would be an insulated snap-on covering design, and would be safer than the existing line in Alternative A (MM WL1).

Cumulative Effects: The most likely possibility for electrocution accidents occurs where transformers step down the power from a 25 kV distribution line or smaller to household use. This is where skin-to-skin contact can easily be made. Any new poles placed for step down transformers in association with this project will require insulating covers over conductors. There are other locations where the possibility of electrocution could occur. Of particular concern are “preferred poles” which are frequented by large birds of prey such as eagles or red-tail hawks. Just because the potential exists does not mean that there is likelihood of occurrence. It is estimated that “95 percent of all electrocutions could be eliminated by correcting 2 percent of the pole problems (Raptor Research Foundation 1996).” The public is encouraged to contact Kit Carson Electric Cooperative regarding any pole location that is causing wildlife electrocution so that it may be corrected.

Other Migratory Birds

Partners In Flight (PIF) has identified physiographic areas and high priority breeding species by broad habitat types. This information is available from the PIF Web site (partnersinflight.org).

The U.S. Fish and Wildlife Service (FWS) has also developed a list of priority bird species by bird conservation region in the “Birds of Conservation Concern 2002.” [270]

Of the birds previously listed as occurring within or adjacent to the analysis area, certain birds have also been identified as migratory birds that are protected under the migratory conventions of the Migratory Bird Treaty Act (16 USC, 703-711) and as directing Federal agency compliance with the act under Presidential Executive Order 13186 published in the “Federal Register” on January 17, 2001 (66 FR 3853). Executive Order 13186 requires Federal agencies to comply with the conventions of the Migratory Bird Treaty Act.

Federal agencies, such as the Forest Service, are to integrate bird conservation principles, measures and practices into agency activities and avoid or minimize, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions. Listed below are “Priority Species” identified by the Partners in Flight planning group (as authorized by Presidential Executive Order 13186, Sec. 3(e)(5)). Priority species are species that have known or suspected declining population trends, limited geographical ranges, and deteriorating habitats. In addition to the Partners in Flight priority species, the list includes other species identified by the Fish and Wildlife Service as being a priority.

Direct effects to any of the migratory birds in Table 19 could result from clearing vegetation (nesting habitat) during the breeding season. This can be mitigated, especially in the piñon-juniper habitat, by limiting removal of any trees to the nonbreeding season. Under any action alternative and the option, a mitigation measure prohibiting the clearing of trees for construction purposes between April 1 and August 1 will be applied (MM WL2).

Indirect effects would be minor as loss of habitat is only a few acres for any habitat type for any of the alternatives. Construction activities would have some temporary displacement of birds, but human presence typically does not have much displacement effect on smaller passerine birds that are most likely to be encountered during construction.

Table 19. Migratory birds with potential habitat or occurrence within the study area

Species	FWS	Habitat	GBDS	PMG	PJ	PP	MC	MS
Owl, Burrowing	X	Great Basin desert shrub, open country	HR	HR				
Shrike, Loggerhead		Open brushy areas, w/posts, wires, scattered trees	HP					
Thrasher, Sage		Sagebrush, brushy slopes, mesas	HP					
Sparrow, Sage	X	Sagebrush, open arid desert	HP					
Eagle, Golden	X	Open mountains, foothills, canyons, plains	H					
Owl, Short-eared	X	Open country, marshes, tundra	H					
Thrasher, Bendire’s	X	Open grasslands, brushy desert	HP	HP	HP			
Hawk, Ferruginous	X	Piñon-juniper woodlands		HP	HP			

Table 19. Migratory birds with potential habitat or occurrence within the study area

Species	FWS	Habitat	GBDS	PMG	PJ	PP	MC	MS
Falcon, Prairie	X	Canyons, open mountains, plains, prairies, deserts		HP				
Plover, Mountain	X	Dry upland prairies, plains, semidesert		HP				
Bunting, Lark		Sagebrush, plains, prairies		HP				
Hawk, Swainson's	X	Dry open plains, prairies		H				
Harrier, Northern	X	Open grasslands, marshes		H				
Flycatcher, Gray		Piñon-juniper, sagebrush			HP			
Vireo, Gray	X	Brushy mountain slopes, mesas, scrub oak			HP			
Warbler, Black-throated Gray	X	Dry oak slopes, piñons, junipers			HP			
Jay, Piñon	X	Piñon-juniper, ranges into sagebrush			HR			
Warbler, Virginia's	X	Oak canyons, brushy slopes, piñons			P	HP		P
Goshawk, Northern		Northern forests, mountain woodlands, possible fall/winter migrant				HP	HP	
Owl, Flammulated	X	Open pine and fir forests in mountains fall migrant				HP	P	
Towhee, Green-tailed		Dry, brushy mountain slopes, open pines, sage						HP

Source: USFWS 2002.

PP = Ponderosa Pine

FWS = Identified as Birds of Conservation Concern by U.S. Fish and Wildlife Service

MC = Mixed Conifer

GBDS = Great Basin Desert Shrub

MS = Montane Shrub

PMG = Plains and Mesa Grassland

HP = Highest Priority; P = Priority; HR = High Responsibility; H = Species utilizes this habitat.

PJ = Piñon-juniper

Table 20. FWS listed or Partners in Flight species with little potential of occurring within analysis area

Species	FWS	Habitat	GBDS	PMG	PJ	PP	MC	MS
Hummingbird, Lucifer		Canyons in extreme SW NM	HP					
Thrasher, Crissal	X	Montane shrub (southern NM)	P					

Table 20. FWS listed or Partners in Flight species with little potential of occurring within analysis area

Species	FWS	Habitat	GBDS	PMG	PJ	PP	MC	MS
Warbler, Red-faced		High mountains (southwestern NM only, Gila NF)		HP				
Pewee, Greater		Mountain pine-oak woodlands (AZ, southwestern NM)			HP			
Warbler, Olive		High mountains (southwestern NM, Gila NF and SE AZ)			HP			
Warbler, Grace's	X	Pine-oak forests of mountains				HP		
Owl, Mexican Spotted		Thickly wooded canyons, mixed conifer				HP	HP	
Woodpecker, Lewis's	X	Middle elevation riparian				P		
Sapsucker, Williamson's	X	Higher conifer forests				P	HP	
Flycatcher, Olive-sided		Conifer forests, burns					HP	
Flycatcher, Dusky		Open coniferous forest					HP	
Warbler, MacGillivray's		Low dense undergrowth; shady damp thickets						HP
Sparrow, Black-chinned		Brushy mountain slopes, open chaparral, sage in southern NM						HP
Curlew, Long-billed		High plains, rangeland; eastern NM						HP
Flycatcher, Scissor-tailed		Semiopen country; eastern NM						HP
Dicksissel		Alfalfa fields, prairies; eastern NM						HP
Falcon, Peregrine	X	Open wetlands near cliffs	No Habitat					
Grouse, Gunnison Sage	X	Sagebrush, foothills, plains; not found in NM	No Habitat					
Godwit, Marbled	X	Migrates through central NM	No Habitat					
Plover, Snowy	X	Barren sandy beaches, and flats, southern NM	No Habitat					
Pipit, Sprague's	X	Rare migrant in alpine meadows	No Habitat					
Sandpiper, Solitary	X	Migrates through central and eastern NM	No Habitat					

Table 20. FWS listed or Partners in Flight species with little potential of occurring within analysis area

Species	FWS	Habitat	GBDS	PMG	PJ	PP	MC	MS
Swift, Black	X	High elevation riparian, cliffs, waterfalls	No Habitat					
Phalarope, Wilson's	X	Wet meadows	No Habitat					
Longspur, Chestnut-collared	X	Moist upland prairie	No Habitat					
Cuckoo, Yellow-billed	X	Woods, orchards, streamside willow/alder	No Habitat					
Swallow, Cave		Caves in southern NM	No Habitat					

Alternative Comparison:

Alternative A, No Action—The No Action Alternative would normally be considered an alternative with minimal or possibly no impacts to migratory birds. However in this case, the original distribution line design is such that an electrocution accident is possible for large birds of prey. As part of this analysis, significant portions of the existing line were either driven or walked. No signs of such accidents from electrocution were detected or that specific problem poles exist, although evidence of remains may not last very long. Nevertheless, all the action alternatives will require protective insulation (MM WL1), which would be an improvement over the existing situation. An old hawk nest (likely a red-tailed hawk) was discovered on BLM lands on a pole with a double cross member. The nest was not active at the time and showed signs of deterioration.

Alternative B, Proposed Action or Black Mesa-Cerro Azul Tap—Alternative B would create a new utility corridor across open terrain of sagebrush and piñon-juniper habitats. Habitat disturbance from construction activities would last approximately 1 year. Ground vegetation would be overrun by equipment and some trees would have to be removed. Disturbance to migratory birds from accessing the line's location would not likely be very discernible, since the area is already heavily roaded and is also open to off-road use. Most of this alternative is close to or follows existing two-track roads and would require little additional access. It is likely that 3 to 4 miles of temporary access disturbance may be required. New access locations may be required due to very sandy soils. Future maintenance requirements are not likely to be significant.

Alternative C, Existing Corridor—The existing corridor would follow the current route replacing poles and conductors. There would be some disturbance to areas where sagebrush has grown back in since the original distribution line was installed 50 years ago. Disturbance would be limited to pole locations and driving equipment along the right-of-way for pole delivery and stringing conductors. Although the affected area has been previously disrupted, portions have had little disturbance for the past 50 years, and it is the longest of the

alternatives with the most total acres of disturbance. Some species such as Brewer's sparrow may be affected by the new construction along this route. Future maintenance requirements are not likely to be significant.

Alternative D, 285 P Tap—This alternative would involve some disturbance and removal of sagebrush for pole placement and construction along Forest Road 285P in the Canada Embudo drainage. Access in this section of the alternative would be via the existing road, which would keep disturbance to a minimum. There would be some loss of habitat for species like the sage and Brewer's sparrow. This alternative is similar to Alternative B in that after it crosses U.S. 285 it would result in habitat disturbance to some piñon-juniper habitat and additional construction access would be necessary. The section paralleling U.S. 285 about one-half mile to the north does not have as much existing road access. The portion requiring piñon-juniper habitat removal would be approximately the same as Alternative B. The effects would be temporary displacement or habitat loss for species such as the juniper titmouse using this habitat type. This alternative would also involve temporary disturbance along 6 miles of the existing corridor for removal of that portion of the line adjacent to U.S. 285. Future maintenance requirements are not likely to be significant.

Option, Tres Piedras Connection—The Option would have little habitat disturbance as the proposed location is within the highway right-of-way. The majority of this stretch of highway is mown close to the fence. Brush or trees are not anticipated to be affected. Habitat disturbance adjacent to the line location would be temporary and minimal.

Cumulative Effects: The most significant of past management activities in the Southwest that altered habitats for migratory birds found in this analysis area was the plowing, chaining and tree crushing in piñon-juniper woodlands to create forage areas for livestock grazing beginning in the 1940s and continuing until the early 1970s. The Carson Forest Plan defines these areas as Management Area 11 – Revegetation Areas. There are approximately 83,000 acres of Management Area 11, but they also include acres of sagebrush that were type-converted as well. Although forest plan standards and guidelines for MA 11 direct the forest to maintain these revegetation areas, the Carson National Forest has focused on maintaining mostly the acres that would naturally revert back to sagebrush by prescribed burning. The forest has allowed piñon and juniper trees to reestablish into many of the sites where piñon-juniper was once common. This management trend is likely to continue.

The western portion of the analysis area, which is the lowest elevation and most arid area near Ojo Caliente, has lost the majority of piñon trees to drought conditions and bark beetle infestation. In some areas there is nearly 100 percent mortality, leaving only juniper trees in the habitat type. The effects of the infestation are progressing to the east and north, but as yet mortality is generally between 20 and 50 percent. Additional avian monitoring was conducted in 2003, but results are not yet available to determine the effects of piñon mortality on avian populations using these habitats. Based on the 2002 aerial surveys, the Carson lost approximately 16,240 acres to disease. The 2003 survey indicates that around 70 percent of all piñon stands have some degree of infestation. This is likely to increase as the drought continues.

Summary: Loss of habitat from any of the action alternatives would only be a few acres, which is inconsequential compared to natural events currently taking place across the landscape. A mitigation measure minimizing the cutting of healthy piñon trees and stacking and covering branches (MM VG1 and VG2) may help prevent the spread of infestation into unaffected areas.