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Draft Environmental Assessment for Otero County Electric Cooperative Transmission Line

Lincoln National Forest

Smokey Bear Ranger District

Lincoln County, NM

T10S R14E Sections 19, 20, 26, 29, 33, and 34

T11S R14E Sections 02, 11, 14, and 35

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SUMMARY

The Lincoln National Forest Land and Resource Management Plan (LRMP), approved in 1986 and amended over time, reflects the agency mission of human and community development and facilities within the forest. While focusing on the need to maintain forest sustainability, the plan also emphasizes the need to consider "[m]anagement of National Forest system lands in a manner that is sensitive to economic efficiency; and responsiveness…to changing social and economic demands of the American people."

This Environmental Assessment (EA) presents the results of an analysis of the direct, indirect, and cumulative environmental consequences of the proposed action and no action alternatives. The proposed action alternative would issue right-of way access for the construction of an approximately 9-mile, 115kV power line and a new substation. One alternative to the proposed action was considered: no action. Under the no action alternative, no construction would take place and no changes to the environment would occur. Environmental resources such as soils and vegetation would remain in their current condition. Nearby communities and residents would continue to experience unreliable electrical service as the current substation continues to be overloaded.

The proposed action would issue a right-of-way for the construction of approximately 9 miles of new transmission line from near Ruidoso Downs to near Alto , New Mexico. A new substation would be constructed at the north end of the project area near Alto. The substation would cover up to 2 acres of a 5-acre site. The substation is designed to be a 10 MVA, 115kV-24.9/14.4kV station located on a parcel of land owned by OCEC. The total amount of disturbance for the proposed project would be up to 60 acres. Approximately 24 acres of disturbance would occur on National Forest System (NFS) lands, and 36 acres of disturbance would occur on private lands. The transmission line would be constructed using single poles approximately 80 feet in height. The substation would cover approximately 2 acres. An easement across NFS land would also be authorized for private land access. Implementation of this action —that is, the construction of transmission line and a new substation to increase area electrical service —would affect environment resources including impacts to soils and vegetation for construction and maintenance activities. Small portions of habitat for wildlife would also be affected by the removal of trees and other vegetation. Construction of the proposed project would result in visual impacts within the vicinity of the project area. Electrical service to nearby landowners and communities would increase and become more reliable. The environmental consequences to these affected environments are evaluated in this EA. Specific project information regarding the precise number of power poles to be installed is unknown at this time, and therefore, discussions of impacts to some resources, such as the exact number of acres to be disturbed and precise number of trees to be removed, are generic. Discussions of impacts would evaluate the maximum possible impact anticipated to occur as a result of the proposed project. The proposed project addresses the LRMP objectives of responding to changing social and economic conditions in the consideration of economic efficiency within the project vicinity. The Forest Service action for this project is the approval of a right-of-way permit for the proposed electric line and for an easement for private land access through the Lincoln National Forest.

In the short term, construction of the new facilities could impact several resources; whereas the no action would result in fewer impacts to all natural resources because no construction would occur in the area. In the long term, the no action alternative could exacerbate socioeconomic concerns through continued power surges and outages in the area. The proposed action alternative would address the purpose and need for the project, while project design features specific to this alternative would minimize potential short- and long-term impacts to natural resources.

CHAPTER 1 – PURPOSE AND NEED

Document Structure

Otero County Electric Cooperative, Inc. (OCEC) proposes to construct approximately 9 miles of new 115kV transmission line and a new substation in Lincoln County, New Mexico. The proposed new line would begin in Ruidoso Downs and continue north and west, ending east of Alto, New Mexico (Figures 1 and 1A). The Forest Service has prepared this EA in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- Introduction: The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.

- Comparison of Alternatives, including the Proposed Action: This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.

- Environmental Consequences: This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by resource - affected environment, environmental consequences, and mitigation. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative, which provides a baseline for evaluation and comparison of the other alternatives that follow.

- Agencies and Persons Consulted: This section provides a list of preparers and agencies consulted during the development of the EA.

- Appendices: The appendices provide more detailed information to support the analyses presented in the EA.

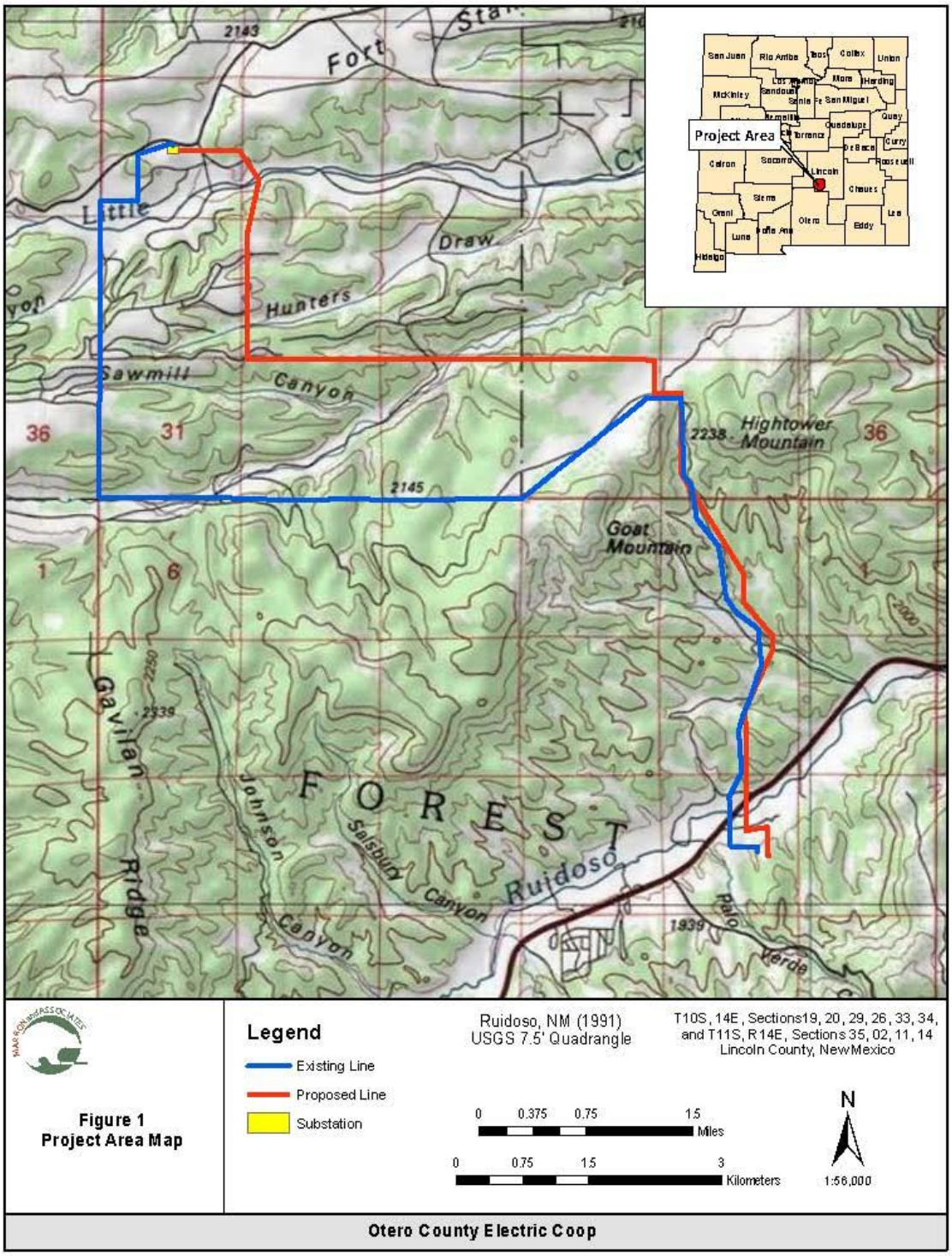

Figure 1 – Proposed Action: Transmission Line Route

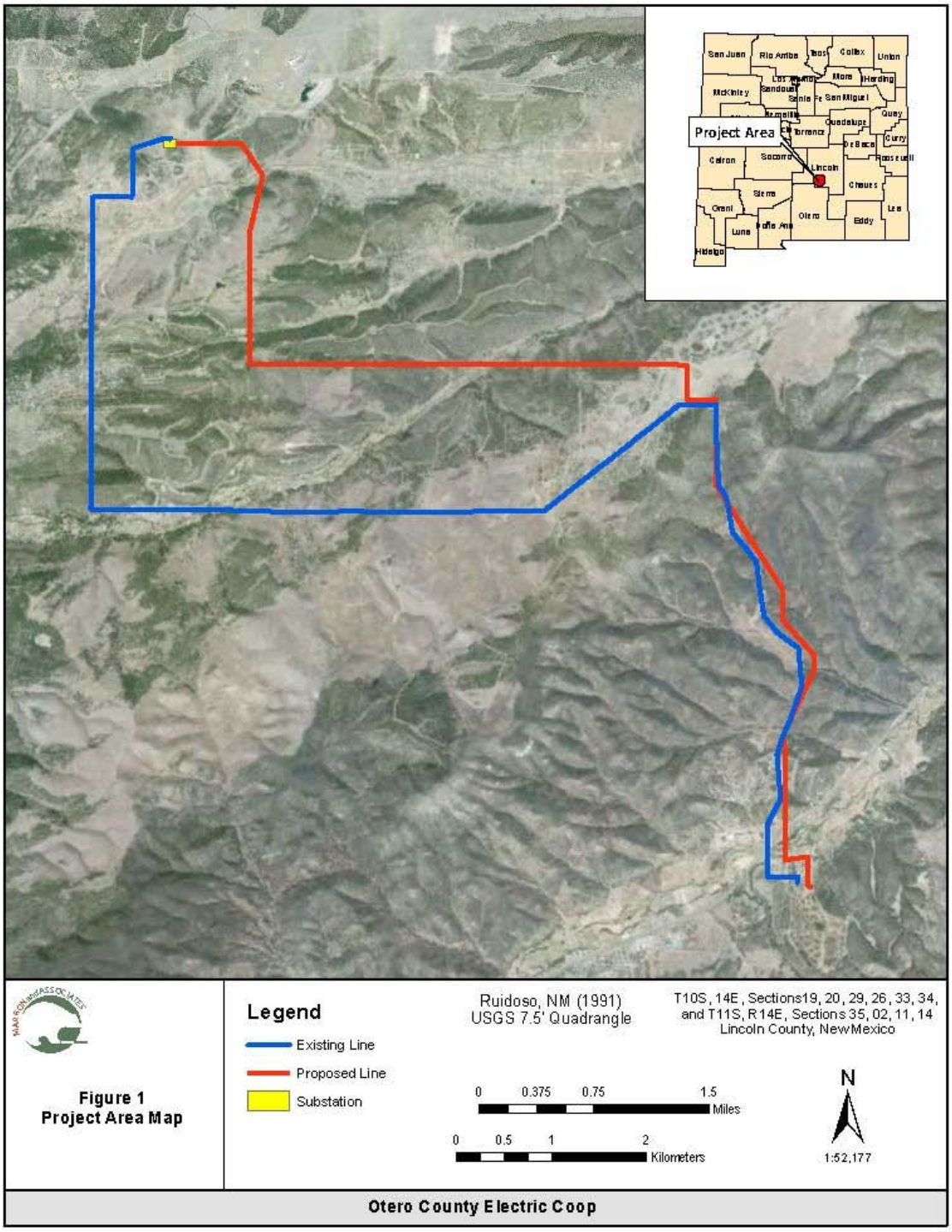

Figure 1A – Proposed Action: Transmission Line Route on Aerial Background

Background

The proposed project area occurs within lands owned by the U.S. Forest Service and neighboring private lands between Ruidoso Downs and Alto, Lincoln County, New Mexico. Some scattered homes and local roads occur adjacent and near to the project area. OCEC currently supplies electric service to the area with a substation at Biscuit Hill and existing transmission line. Recently, population in the area has increased at a rate greater than expected. As the population has increased and development has continued in the area, the current substation has become overloaded and is unable to keep up with the growing demand. Due to the increasing demand in the area, OCEC proposes to construct approximately 9 miles of new 115kV transmission line and a new substation in Lincoln County, New Mexico. The proposed new line would begin in Ruidoso Downs and continue north and west, ending east of Alto, New Mexico (Figure 1).

Purpose and Need for Action

The capacity of the current electrical transmission system serving the communities of Alto, Ruidoso Downs and surrounding areas is insufficient to meet demand. Currently, the Biscuit Hill substation serving the area is overloaded as a result of area population growth. Overload of the substation has led to power outages and unsafe conditions for area residents and businesses. OCEC desires redundancy in their transmission system for the area in order to have a reliable source of electricity for residents and businesses. There is a need to supplement area electrical service in order to ensure reliability and redundancy of the power supply in the area. The project should reduce the current overloading of the Biscuit Hill substation and have sufficient space to expand electrical service in the future to accommodate projected area growth.

The proposed project would fulfill regulatory requirements, accepted policies and agreements. The Energy Policy Act includes provisions for providing adequately reliable electrical transmission to consumers (Title XII, Electricity) (US Department of Energy 2005). Reliable electrical transmission throughout the country is based on the enactment of the Energy Policy Act of 2005 (Public Law 109-58). The proposed action would also fulfill requirements under the Alaska National Interest Lands Conservation Act of 1980 (P.L. 96-487). The proposed project addresses the goals and objectives outlined in the Lincoln National Forest Land and Resource Management Plan (LRMP) in responding “to changing conditions of land and other resources and to changing social and economic demands of the American people” (United States Department of Agriculture Forest Service Southwestern Region 1986, page 2) by issuing a right-of-way and authorizing the construction of a 115kV transmission line on National Forest System (NFS) lands.

Proposed Action

The Forest Service would issue a right-of-way to OCEC for the construction and maintenance of the proposed project on lands managed by the US Forest Service. The proposed action would also authorize OCEC to construct approximately 9 miles of new transmission line in Lincoln County, New Mexico. The proposed new line would begin in Ruidoso Downs and continue north and west, ending east of Alto,

New Mexico (Figure 1). A new substation would be constructed at the north end of the project area near the community of Alto. The substation would cover up to 2 acres of a 5-acre site. The substation is designed to be a 10 MVA, 115kV-24.9/14.4kV station located on a parcel of land owned by OCEC. The total amount of disturbance for the proposed project would be up to 60 acres. Approximately 24 acres of disturbance would occur on Forest Service lands, and 36 acres of disturbance would occur on private lands. The transmission line would be constructed using single poles approximately 80 feet in height. In some areas, the new transmission line would closely parallel an existing transmission line. An easement across NFS land would also be authorized for private land access.

Decision Framework

Given the purpose and need, the deciding official reviews the proposed action and the other alternatives in order to make the following decisions:

- Does the Proposed Action meet the project purpose and need?
- Have the key issues concerning environmental consequences of the Proposed Action been addressed?
- Does the Proposed Action align with applicable federal and state laws, Executive Orders (EOs), agency policies, and the Forest Plan direction?
- Will the Proposed Action support the surrounding communities?
- Will the Proposed Action adversely affect environmental resources (land, biology, water)?
- Will the Proposed Action adversely affect cultural resources?

Public Involvement

The proposal was provided to the public and other agencies for comment during scoping beginning February 13, 2012. Letters were sent to local and state agencies including a brief project description and project map. In addition, as part of the public involvement process, the OCEC individually contacted all private land owners who have property within the project area. An advertisement was also placed in a local newspaper, the *Ruidoso News*, asking for comments. The advertisement ran twice (February 29 and March 14, 2012) during the 30-day comment period. A copy of the March 14 advertisement is located in Appendix A. A copy of the February 29 advertisement was not received from the *Ruidoso News*. Responses from the US Fish and Wildlife Service and the New Mexico Department of Game and Fish have been received. Neither agency expressed concern regarding the proposed project. Two public comments have been received (Appendix A). One comment is strongly in support of the project. The second comment expresses concern regarding impacts to the forest.

Issues

The Forest Service separated the issues into two groups: significant and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2)

already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council for Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…".

In coordination with the Forest Service during the preparation of this EA, nine significant issues were raised. These issues include:

- Land Use: Currently, most of the project area is in an undisturbed natural state. Construction of the proposed action alternative would convert the project area from a natural state for use for electrical facilities.

- Biological Resources: Currently, most of the project area exists in a natural state. Under the Proposed Action Alternative, up to approximately 60 acres of soils and vegetation would be temporarily disturbed by excavation, equipment use, and possible clearing and grubbing of the right-of-way. Tree removal may also be needed in a few locations. This would reduce the total amount of vegetation in the area.

- Wildlife: Currently, most of the project area exists in a natural state. The proposed actions alternative would involve removal of vegetation and some trees in the project right-of-way, reducing the amount of habitat available in the area for wildlife.

- Protected Species: The Lincoln National Forest provides suitable habitat for protected species. With any project the US Forest Service is concerned with impacts to protected species. Potential habitat for the federally protected Peñasco/least chipmunk occurs upon canyon slopes adjacent to the project area.

- Socioeconomic and Environmental Justice: Power surges in the Alto, New Mexico area creates an economic burden on area residents. Power surges and unsafe conditions would continue if no action is taken. The currently overloaded electrical system would continue to fail without additional electrical supply, which the current infrastructure cannot support.

- Visual Impacts: Much of the project area exists in a natural state with undisturbed views of the Lincoln National Forest. Construction of the new transmission line and substation would mean placement of man-made facilities within a natural rural setting.

- Rangeland: Portions of the project area include rangelands. During project construction and maintenance of the facilities workers would have to enter and exit rangelands leading to the possibility of livestock escaping their enclosures.

- Transportation: Currently, there are several roadways within, adjacent to and around the project area. Heavy construction equipment would create more traffic on area roads during project construction. A maintenance trail for the power line would be created within the

cleared right-of-way, creating more open soils, which would not be revegetated upon project completion.

- Noxious Weeds: One populations of musk thistle (*Carduus nutans*) is present at the northern terminus of the project area. Construction equipment would disturb soils and potentially spread weed seeds within the project area. Equipment that was last used in weed-infested areas may also introduce new weed species to the area.

CHAPTER 2 - ALTERNATIVES

This chapter describes and compares the alternatives considered for the OCEC Transmission Line project. It includes a description and map of each alternative considered. One alternative to the proposed action was considered: no action. No other alternatives were considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the deciding official. The information used to compare the alternatives is based upon the environmental, social and economic effects of implementing each alternative (e.g., the amount of soil disturbance and tree removal or visual impacts).

Alternatives

Alternative 1 - No Action

Under the No Action alternative, current management plans would continue to guide management of the project area. No right-of-way would be granted and no construction would take place on NFS lands. The current Biscuit Hill substation would continue to be overloaded, and area users may experience periods of power outages as a result, leading to adverse socio-economic impacts. No environmental impacts would result from the No Action Alternative.

Alternative 2 - The Proposed Action

The Forest Service is proposing to issue OCEC a right-of-way and authorization to construct electrical transmission infrastructure across NFS lands. OCEC would construct approximately 9 miles of new 115KV transmission line and a new substation in Lincoln County, New Mexico. The proposed new line would begin in Ruidoso Downs and continue north and west, ending east of Alto, New Mexico (Figure 1). In some areas, the new transmission line would closely parallel an existing transmission line. The new transmission line would consist of a single-pole line approximately 80 feet in height. Pole installation procedures would be designed to minimize ground disturbance as much as possible. The poles would be buried to the necessary depth for the height and class of weight requirements to meet the current National Electrical Safety Code. The substation would be constructed at the north end of the project area near Alto. The substation would cover up to 2 acres of a 5-acre site. The substation is designed to be a 10 MVA, 115kV-24.9/14.4kV station located on a parcel of land owned by OCEC.

The entire 100-foot-wide transmission line right-of-way would be converted from a natural state. The transmission line would be constructed using digger-derrick wheeled or tracked vehicles, aerial devices (commonly called bucket trucks), and tracked equipment to establish non-system travel ways where necessary. A maintenance track would be established directly under or immediately adjacent to the power lines by trucks driving the path. After construction, the transmission line would be patrolled regularly for any issues requiring maintenance using wheeled vehicles.

The project area is located on lands managed by the U.S. Forest Service Lincoln National Forest Smokey Bear Ranger District and private lands. The total amount of disturbance for the proposed project would be up to 60 acres. Approximately 24 acres of disturbance would occur on Forest Service lands, and 36 acres of disturbance would occur on private lands. The new electrical facilities would be designed to take the overload burden off of the Biscuit Hill substation, establish redundancy in the system, and provide space to accommodate future projected growth in the area. The Proposed Action addresses the LRMP objectives of responding to changing social and economic conditions in the consideration of economic efficiency within the project vicinity.

In addition, an easement across NFS land would also be authorized to allow a private land owner access to their parcel. The private parcel is currently inaccessible as it is located adjacent to other private land and NFS land. The parcel is adjacent to the proposed right-of-way that would be issued to OCEC for the construction of the new transmission line. The easement would be approximately 25 feet by 45 feet.

The project would be designed to minimize environmental impacts to the extent practicable (such as removing as few trees as possible and avoiding impacts to waterways) in order to meet the LRMP objectives regarding forest sustainability. Project design features have been developed to mitigate potential impacts from implementing the Proposed Action Alternative:

Project Design Features Specific to Alternative 2

- The project would be designed to minimize ground disturbance as much as possible. Ground disturbance for pole placement would only occur within 10 feet on any side of the pole locations. The maintenance road would be established by trucks driving the area. No blading or grading for roadway construction would occur.
- Gates to pastures would be closed after entry and egress during project activities.
- Impacts to floodplains and waterways would be avoided by placing poles outside of designated flood zones and riparian buffers.
- Impacts to potential wetlands are expected to be avoided by project activities with pole placement occurring outside of wetlands and waterways. If impacts cannot be avoided, the OCEC would coordinate with the US Army Corps of Engineers (USACE) regarding appropriate permitting.
- All land altering activities would be confined to the areas surveyed for cultural resources.
- If buried cultural deposits are discovered during project activities, the contractor would halt all actvities within 50 feet of the site of the discovery and immediately notify the U.S. Forest Service for consultation on the treatment of the discovery. The contractor would not resume work in the affected area unless clearance has been received.
- Currently vegetated areas that are disturbed would be replanted with certified weed-free native vegetation approved by the Lincoln National Forest.

- It is recommended that construction occur outside of the general area nesting season (March 1–September 1) to ensure no nests are impacted. If constructing during the nesting season is unavoidable, it is recommended that removal of vegetation such as trees and shrubs that provide nesting sites be completed outside of the nesting season ahead of construction. If this is not feasible, a pre-construction nest survey in compliance with USFS Region 3 protocols would be required by the LNF. If tree removal occurs within the nesting season, any nests located within the project limits would be removed prior to the onset of nesting season, or a US Fish and Wildlife Service (USFWS) permit would be required.
- Once the proposed transmission line is completed, the OCEC would comply with applicable Lincoln National Forest and US Fish and Wildlife Service (USFWS) avian protection guidelines to reduce impacts of transmission line facilities to raptor and other birds that may occur within the project area.
- Exposed and disturbed soils would be watered at a frequency sufficient to avoid fugitive dust.
- Earthmoving and other dust-producing activities would be suspended during periods of high winds, when dust control efforts are unable to prevent fugitive dust.
- Stockpiles of debris, soil, sand, or other materials would be watered or covered.
- All construction vehicles on-site would travel at a speed limit of 15 miles per hour or less.
- Materials transported on-site by truck would be covered.
- Following construction activity, the construction contractor would reseed using certified weed-free seed mix, approved by the Forest Service, in disturbed areas to mitigate any long-term impacts.
- To minimize potential visual impacts due to construction, disturbed areas would be reseeded with a certified weed-free seed mix, approved by the Forest Service. Soils and rocks excavated but not used to backfill or restore contours would be evenly spread within the construction disturbance area.
- Construction activities would be limited to predetermined areas in order to minimize short-term visual impacts resulting from construction activities.
- No paint or permanent discoloring agents would be used to delineate survey or construction activity limits; flagging would be used instead.
- Visual impacts may be minimized by placing facilities near other development to be more in keeping with the visual character of those areas and by minimizing the number of trees removed to the extent practicable.
- Poles would be placed within specific areas that would maximize natural screening of the facilities with existing vegetation and geologic formations.

- The poles would be made of self-weathering steel, as required by the Forest Service, to reduce visual impacts and frequency of maintenance. Insulators would be non-specular and wires would be non-reflective. Highway and road crossing spans would be maximized.
- The construction contractor would prepare a Storm Water Pollution Prevention Plan (SWPPP) as part of the National Pollutant Discharge Elimination System (NPDES) permit from the US Environmental Protection Agency (EPA). The SWPPP would include Best Management Practices (BMPs), identifying measures and techniques to control erosion and prevent sedimentation of arroyos during storm events. The temporary construction-related impacts to surface water quality would be avoided or minimized by complying with the NPDES permit requirements and implementing a SWPPP.
- The construction contractor would avoid placing equipment staging or construction storage yards within a floodplain. Groundwater contamination would be avoided through proper handling and storage of petroleum products, chemicals, toxic substances, and hazardous material.

CHAPTER 3 – ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for the comparison of alternatives presented above. Unless otherwise noted, the No Action Alternative is not expected to impact the resources evaluated.

3.1 Land Use/Important Farmland/Formally Classified Lands

Affected Environment

Land use in the project planning area is mostly rural, consisting of undeveloped areas, local roads and residences.

The USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2012) was reviewed for soil and prime farmland information. The soil map units in the vicinity of the project area have been rated by the NRCS as "not prime farmland".

The White Mountain Wilderness Area is located approximately 4 miles west of the north end of the project planning area. The White Mountain Wilderness Area is managed by the Lincoln National Forest. The project area crosses some rangelands. There are no wildlife refuges, wild and scenic rivers, or grasslands within or adjacent to the project area.

Environmental Consequences

The No Action Alternative would not impact land use, important farmland, or formally classified lands. Current land status in the project area would remain the same.

The Proposed Action Alternative would impact land use. More land in the project planning area would be used for utilities, particularly in the areas in which the new transmission line would not closely parallel an existing transmission line and at the site of the new substation. Transmission line construction activities would impact up to approximately 60 acres of soils and vegetation by vehicles during construction and pole placement activities, including approximately 24 acres of NFS lands. Construction of the substation would occur on non-NFS lands and would impact up to 2 acres of soils and vegetation. The proposed right-of-way and substation location would be regularly maintained, including occasional removal of vegetation within the right-of-way in order to keep the area clear for fire hazard concerns.

No impacts to the White Mountain Wilderness Area would result from the Proposed Action Alternative.

Mitigation

During project activities, the construction contractor and OCEC employees would ensure all gates to pastures are closed after entry and egress. Open disturbed areas would be replanted with certified weed-free seed mix, as approved by the USFS, after the completion of construction activities.

3.2 Floodplains and Water Quality Issues

Affected Environment

As shown on a Federal Emergency Management Agency maps (FEMA 2011), the southern end of the proposed project crosses the floodplain associated with the Rio Ruidoso. The proposed project crosses the Eagle Creek floodplain approximately 2 miles from the northern terminus and Little Creek floodplain approximately 0.5 mile from the northern terminus. All floodplains are designated as Zone A, indicating an area within the 100-year floodplain with a 1 percent chance of flooding in any given year. The remainder of the project is located within Zone X, which consists of areas outside the 500-year floodplain (see FEMA mapping in Appendix A).

The project planning area is located within the Hondo Underground Water Basin (New Mexico Office of the State Engineer 2005). The Rio Ruidoso, Little Creek, and Eagle Creek are located within the project area. The depth to groundwater in the Hondo Rio Ruidoso sub-basin generally ranges from 15 feet to approximately 150 feet with some depths at surface and over 1000 feet below the surface (New Mexico Office of the State Engineer 2005). The project area crosses two perennial waterways (Rio Ruidoso and Little Creek), one named ephemeral waterway (Eagle Creek), and five unnamed ephemeral waterways.

"A Sole Source Aquifer (SSA) is an aquifer designated by EPA as the "sole or principal source" of drinking water for a given service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should the aquifer become contaminated." The Administrator of the EPA can designate an aquifer a Sole Source Aquifer (SSA) under Section 1424(e) of the Safe Drinking Water Act. EPA's Sole Source Aquifer Program is meant to prevent federal funding of projects that might contaminate an aquifer which is the sole or principal source of drinking water for an area (EPA 2011). The project planning area does not occur within a designated Sole Source Aquifer System (Appendix A).

Environmental Consequences

No impacts to floodplains or waterways would occur as a result of either alternative. Under the Proposed Action Alternative, designated floodplains and riparian buffers would be spanned with aerial crossing. Poles would be located outside the 100-year floodplain. Pole placement for project activities would occur outside of the waterways. If avoidance of waterways is not possible, OCEC would coordinate with the USACE regarding Clean Water Act permitting.

The No Action Alternative would have no effect on groundwater quality. The Proposed Action Alternative is unlikely to impact groundwater quality. Project-related construction activities would likely

involve the use of heavy equipment, thereby leading to the possibility of contaminant releases (e.g. fuel, hydraulic fluid, etc.) associated with equipment malfunctions.

Mitigation

In accordance with Executive Order 11988, the Proposed Action would not cause adverse changes in the flood hazard potential in the project area nor have any adverse effects on floodplains. Project planning would ensure that the proposed construction is compatible with the floodplain areas. The new facilities, located outside of designated floodplains, would not be expected to create additional flood hazards.

The construction contractor would prepare a SWPPP as part of the NPDES permit from the EPA. The temporary construction-related impacts to surface water quality would be avoided or minimized by complying with the NPDES permit requirements and implementing a SWPPP. The SWPPP would include Best Management Practices (BMPs) identifying measures and techniques to control erosion and prevent sedimentation of arroyos during storm events.

The construction contractor would avoid placing equipment staging or construction storage yards within a floodplain or riparian buffer. Groundwater contamination would be avoided through proper handling and storage of petroleum products, chemicals, toxic substances, and hazardous materials.

3.3 Wetlands

Affected Environment

Wetlands are lowland areas that are inundated or saturated with water for a sufficient time to allow a prevalence of hydrophytic vegetation to develop. Jurisdictional wetlands, those protected from unauthorized dredge-and-fill activities under Section 404 of the Clean Water Act and Executive Order 11990, have three essential characteristics: dominance by hydrophytic vegetation, hydric soils, and wetland hydrology. Hydrophytic vegetation requires inundated or saturated soil for its existence. Hydric soils are ponded or flooded for a sufficient time during the growing season to develop anaerobic conditions. Wetland hydrology is the availability of surface water or groundwater to create the wetland environment.

Two potential wetlands occur along the project route in association with waterways. The first potential wetland is located where the proposed line crosses the Rio Ruidoso near the southern terminus. The second potential wetland occurs where the project crosses Little Creek near the northern terminus.

Environmental Consequences

No impacts to potential wetlands would occur under either alternative.

Mitigation

Potential wetlands would be avoided by construction activities, and transmission line poles would be placed outside of the possible wetlands. The NPDES permit would include BMPs to prevent sediment from entering potential wetlands. If impacts to potential wetlands cannot be avoided, the OCEC would coordinate with the USACE regarding appropriate permitting.

3.4 Cultural Resources

Under Section 106 of the National Historic Preservation Act, a federal agency is required to consult with the State Historic Preservation Officer (SHPO) on a proposed undertaking. As part of the project planning process, an inventory is conducted for cultural resources within the Area of Potential Effect (APE) and a determination is made regarding the effect of the Proposed Action on cultural resources. The SHPO then concurs or makes recommendations to the federal agency (in this case, the U.S. Forest Service) regarding the Proposed Action.

Affected Environment

Cultural resources within the project area were inventoried (Eidenbach 2012). Between August 2010 and February 2012, a 100-percent coverage cultural resource survey of the project planning area was completed. One hundred foot-wide corridor was surveyed. No eligible or potentially eligible historic properties were identified within the right-of-way. The SHPO concurred with the findings on January 2, 2013.

Environmental Consequences

No impacts to cultural resources would occur under either alternative.

Mitigation

No mitigations measures are needed. If buried cultural deposits are discovered during project activities, the contractor would follow project design features specific to Alternative 2.

3.5 Biological Resources

Affected Environment

The project area was surveyed by a qualified biologist in January 2012 to document vegetation (including noxious weeds), wildlife, and to determine the possible impact to endangered, threatened and sensitive species. A survey corridor of 50 feet on either side of the proposed transmission line centerline and block survey of the proposed 5-acre substation site was evaluated for potential impacts to biological resources. This section summarizes the findings of the biological survey, which are discussed in greater depth in a separate report (Marron and Associates 2012).

Vegetation

The project area primarily occurs within a Pinyon/Juniper vegetation community type (Dick-Peddie 1993). Dominant plant species observed within the project area are one-seed juniper *(Juniperus monosperma*), alligator juniper (*Juniperus deppeana*), pinyon (*Pinus edulus*), Ponderosa pine (*Pinus ponderosa*), blue grama (*Bouteloua gracilis*), side oats grama *(B. curtipendula*), and wavyleaf oak (*Quercus undulata*).

Noxious Weeds

One Class B New Mexico noxious weed species, musk thistle (*Carduus nutans*), was present at one location at the northern terminus of the project area. No other noxious weed species were present.

Wildlife

During the survey, nine species of birds and nine species of mammals or their signs were observed.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) protects native and non-game migratory birds, occupied nests, eggs, and parts from take without a permit (16 U.S.C. 703-712). Many migratory birds may occur within the project area. No nests were observed within the project area; however, suitable nesting habitat is present.

Management Indicator Species

Management Indicator Species are addressed in order to implement the National Forest Management Act (NFMA) regulations. They are selected because their population changes are believed to indicate the effects of management activities (36 CFR 219.19(a) (l)). The Management Indicator Species approach is designed to function as a means to provide insight into effects of forest management on plant and animal communities. Species are selected to represent several categories, such as commonly hunted or fished species, non-game and threatened and endangered species (TES). They may be used as a tool for assessing changes in specialized habitats, formulating habitat objectives, and establishing standards and guidelines to provide for a diversity of wildlife, fish, and plant habitats. Potential impacts to three species were evaluated: juniper titmouse (*Baeolophus ridgwayi*), pygmy nuthatch (*Sitta pygmaea*), and mule deer (*Odocoileus hemiounus*). All three species are considered indicators for the pinyon-juniper woodland and ponderosa pine habitats that occur within the project area.

- Juniper titmouse is a small passerine bird which is commonly seen year-round on the Lincoln National Forest. The juniper titmouse requires large, mature trees that provide cavities for nesting and roosting. The juniper titmouse prefers mature, open woodland habitat with large trees and snags and canopy openings.

- Pygmy nuthatch is a small songbird that is found year-round on the Lincoln National Forest. The nuthatch needs mature or older ponderosa pine stands with relatively open understories, and prefers open, park-like stands.

- Mule deer occur across the Lincoln National Forest. Montane forests and pinyon-juniper woodlands with good shrub understory are often favored winter ranges for mule deer. It is very important to the survival of this species to have sufficient openings in the forest with grasses, forbs and shrubs to meet their year-round foraging needs.

Threatened and Endangered Species

The Endangered Species Act of 1973 (ESA) requires the evaluation of potential impacts on federally listed species and their critical habitat. Prior to the biological field survey, the USFWS and New Mexico Department of Game and Fish (NMDGF) lists of protected, monitored, and sensitive species for Lincoln County, and the Region 3 Forest sensitive species list were reviewed to identify status species that could be impacted by project activities.

Potential impacts to over 80 protected, sensitive, or monitored species were evaluated. Most species were eliminated from further consideration because no suitable habitat is present within the project area. Potential impacts to four species were evaluated in detail as they could occur with the project area. Those species are:

- Kuenzler's hedgehog cactus (*Echinocereus fendleri var. kuenzleri*): Suitable habitat occurs on gentle, gravelly to rocky slopes and limestone in Great Plains grassland, oak woodland, or pinyon-juniper woodland at elevations of approximately 5,000-6,500 feet.

- Gray vireo (*Vireo vicinior*): This species normally occurs in open woodland, scrubland, and dry chaparral. It is found in arid lands, typically in pinyon-juniper habitat with steep slopes.

- Gray-footed chipmunk (*Neotamias canipes*): primarily is a forest-dwelling chipmunk. It also occurs in dense stands of mixed timber and on brushy hillsides, particularly where crevices in rocks offer retreats. Potentially suitable gray-footed chipmunk habitat occurs in forested areas adjacent to the proposed transmission line.

- Peñasco least chipmunk (*Tamias minimus atristriatus*): Historically, the Peñasco subspecies was reported mainly in open habitats, including fence rows bordering agricultural fields and in less dense stands of ponderosa pine and the upper edges of pinyon-juniper woodland (NMDGF 2012). Potential habitat for this species occurs upon canyon slopes adjacent to the project area.

No federally-protected species or species that appear on the Region 3 sensitive species list were observed within the project area during the January 2012 biological resources survey (Marron and Associates 2012).

Environmental Consequences

Biological Resources would be unaffected by the No Action Alternative. No soils or vegetation disturbance would take place. No impacts to habitat would occur.

Under the Proposed Action Alternative, up to approximately 60 acres of soils and vegetation would be temporarily disturbed by excavation, equipment use, and possibly clearing and grubbing if needed. The entire right-of-way would be cleared for project activities. Tree removal of pinyon pine, juniper and some ponderosa pine may be needed in a few locations. When trees are cut on Forest Service land, due

to the installation of the power line, the Forest Service would provide the opportunity for fuelwood, either through commercial operators or personal use, or a combination thereof, where it is accessible.

Project activities would involve the use of trucks and heavy machinery to complete installation of new poles and substation. As a result, noxious weeds present within the project area could be spread to new locations along the route or in entirely new locations. Equipment that last operated in weed-infested areas may spread weed seeds.

Impacts to wildlife species due to the proposed project would be limited primarily to temporary soil and vegetation disturbance associate with construction activities. Construction activities may require the removal or disturbance of shrubs and trees. No raptor or other bird nests were identified; however, suitable nesting habitat for migratory bird species is present and nesting may occur during the breeding season (March 1 – August 31).

Impacts to management indicator species are expected to be minimal since portions of the project area are currently occupied by an existing transmission line, and the noise and activity associated with this project would be brief. The impacts of this project when added to the impact of other activities in the surrounding area would not substantially change the habitat conditions for juniper titmouse, pygmy nuthatch and mule deer that currently exist.

No federally-listed species or species that appear on the Region 3 sensitive species list were observed within the project area during the January 2012 biological resources survey (Marron and Associates 2012). Thus, no impacts to these species are anticipated under the proposed action alternative. The following summarizes the survey findings for the four species analyzed in detail:

- Kuenzler's hedgehog cactus: No suitable habitat was identified within the project route for this species as no characteristic limestone benches are present. No individuals or populations were identified.

- Gray vireo: No suitable habitat for the gray vireo was identified along the proposed project route. Although pinyon-juniper habitat is present in some areas, tree densities are too high to provide suitable nesting habitat.

- Gray-footed chipmunk: Potentially suitable gray-footed chipmunk habitat occurs in forested areas adjacent to the proposed transmission line, but this species is unlikely to occur along the project route. Proposed construction activities are not expected to take or alter suitable habitat for the gray-footed chipmunk. Individuals could be present within the area but the project is not expected to impact populations or status of this species.

- Peñasco least chipmunk: Potential habitat for this species occurs upon canyon slopes adjacent to the project area. However, the Peñasco least chipmunk was not present during the biological resources survey of the area, and the proposed action would not result in a loss of characteristic habitat.

Mitigation

The following measures would reduce effects to biological resources:

- Reseed disturbed areas with certified weed-free seed mix as approved by the Lincoln National Forest to restore herbaceous ground cover;
- Spread and control of musk thistle would be managed according to US Forest Service (USFS) management strategies. Equipment utilized for the project would be cleaned prior to use to prevent bringing in weeds from previously visited locations. Weed infestations would be flagged for avoidance, and equipment operation would avoid travel through weed-infested areas. All equipment used to construct the project facilities where weeds are present would be cleaned once construction in that area is complete to prevent stray seeds from germinating elsewhere. Staging areas would be located in weed-free locations. To the extent possible, project activities would minimize soil disturbance that creates large patches of exposed soil.
- Periodically survey the project area for new or expanded populations of invasive plants. Where new or expanded populations are discovered, update invasive plants inventory and apply appropriate eradication or control measures as authorized by the Lincoln National Forest noxious weed program authorized under an existing decision.
- Project activities in areas where suitable habitat for federally-listed species or species that appear on the Region 3 sensitive species list may exist shall be avoided to the extent practicable. If any federally-listed or Region 3 sensitive species is observed during project implementation, the contractor shall immediately notify the USFS.

3.6 Socioeconomic and Environmental Justice

Affected Environment

Impacts to minority and low-income communities are given special consideration under Executive Order 12898, Environmental Justice (EJ), and Title VI of the Civil Rights Act. These seek to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations, and ensure the full and fair participation by all potentially affected communities in the decision-making process. Minority and low-income communities are referred to as Communities of Concern.

According to data collected during the 2010 Census (U.S. Census Bureau 2011), Ruidoso Downs at the southern end of the project area has a population of 2,815. Ruidoso Downs has a higher minority representation than Lincoln County, but lower than for the state. Economic data from the 2010 Census is not yet available for the State of New Mexico and Lincoln County. Economic data from the 2000 Census is not available for Ruidoso Downs. In 1999, the poverty level for Lincoln County is considerably lower than that of the state (Table 1). In terms of minority status and income data, the Ruidoso Downs is not a Community of Concern for environmental justice impacts.

Table 1. Population and Economic Characteristics

	New Mexico	Lincoln County	Ruidoso Downs
2010 Population	2,059,179	20,497	2,815
2010 Minority Representation			
- White	68.4%	85.1%	73.0%
- Black or African American	2.1%	0.5%	1.0%
- American Indian	9.4%	2.4%	5.2%
- Asian	1.4%	0.4%	0.3%
- Pacific Islander	0.1%	0.0%	0.2%
- Some other race	15.0%	9.2%	18.1%
- Two or more races	3.7%	2.5%	2.2%
- Hispanic or Latino (also included in race categories above)	46.3%	29.8%	50.1
1999 Economic Characteristics			
- Median household income	$34,133	$33,886	---
- Per capita income	$17,261	$19,338	---
- Poverty rate for families	14.5%	10.8%	---
- Poverty rate for individuals	18.4%	14.9%	---

Source: U.S. Census Bureau, 2010 and 2000 Census Data.

Environmental Consequences

Under the No Action Alternative, the current Biscuit Hill substation would continue to be overloaded. Area businesses and residents would continue to experience electrical problems resulting from the overloading (such as outages and power surges). If the population in the area continues to grow, the overloading would increase, further exacerbating electrical problems.

No residents or businesses would be relocated as a result of the Proposed Action Alternative. Area businesses and residents would benefit from improved electrical service. Increased capacity would allow residences and commercial facilities to safely connect to the system in the future if the area population continues to increase. The proposed project is considered to be consistent with environmental justice policies.

Mitigation

The project is expected to benefit the community within the project planning area. No mitigation is needed for socioeconomic or environmental justice issues.

3.7 Climate and Air Quality

Affected Environment

The project planning area has a semiarid climate typical of the mountain regions of the southwestern United States. The climate is characterized by abundant sunshine, low relative humidity, light precipitation, and wide diurnal temperature fluctuations. Temperatures in nearby Ruidoso, NM range from an average maximum of 81.8 degrees F in June to an average minimum of 18.7 degrees F in January. The average annual precipitation is 21.76 inches (Western Regional Climate Center 2011). Summer precipitation supplies almost half of the annual moisture from June through September.

Under the Clean Air Act, the EPA established National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants considered harmful to public health and the environment above certain concentrations. The six criteria pollutants are carbon monoxide (CO), lead, nitrogen oxides (NO_x), particulate matter (PM), ozone, and sulfur oxides (SO_x). Lincoln County is in attainment of federal ambient air quality standards.

Environmental Consequences

Climate and air quality would be unaffected by the No Action Alternative.

Installation of the proposed facilities under the Proposed Action Alternative would disturb up to approximately 60 acres of soils and vegetation for construction of the new transmission line. Construction equipment would produce exhaust emissions, and ground disturbing activities would temporarily create an increase in airborne particulates by removing vegetation and disturbing soils. Dust produced by construction equipment and vehicles may produce moderate air quality impacts. Increased dust and locally elevated levels of particulate matter (PM-10) may be created downwind of construction activities. Construction activities would meet federal air quality standards by following mitigation measures.

Mitigation

To minimize air pollution impacts during construction, the construction manager would ensure that the following practices are implemented:

- Exposed and disturbed soils would be watered at a frequency sufficient to avoid fugitive dust.
- Earthmoving and other dust-producing activities would be suspended during periods of high winds, when dust control efforts are unable to prevent fugitive dust.
- Stockpiles of debris, soil, sand, or other materials would be watered or covered.
- All construction vehicles on-site would travel at a speed limit of 15 miles per hour or less.
- Materials transported on-site by truck would be covered.

- Following construction activity, the construction contractor would re-seed the area to mitigate any long-term impacts.

Similarly, operation of gasoline- or diesel-powered construction equipment would result in temporary and minor increases in SO_x, NO_x, volatile organic compounds (VOCs), and CO. All construction equipment would be required to use approved emission control devices and limit unnecessary idling. Due to light traffic volumes in the proposed project area, no violations of NAAQS would occur.

3.8 Visual Impacts

Affected Environment

Located in Lincoln National Forest in central New Mexico, the project planning area is in a rural mountain setting. Terrain is steep and rugged on higher slopes with rock outcrops. Areas adjacent to waterways are lined with riparian vegetation. The existing visual quality of the area is influenced by historical and current land uses, including residential development, power lines, and roads. In some areas, the new line would closely parallel an existing transmission line.

The Forest Service maintains Visual Quality Objective (VQO) classifications for the forest (United States Department of Agriculture Forest Service Southwestern Region 1986, replacement page 28). Acceptable variation in VQOs is:

- Preservation – No change
- Retention - $\pm$ 2 percent in foreground, $\pm$ 5 percent in middle ground and background
- Partial Retention: $\pm$ 5 percent in foreground, $\pm$ 10 percent in middle ground and background
- Modification - $\pm$ 10 percent in all zones

Environmental Consequences

Under the No Action Alternative, visual resources within the vicinity of the project area would remain unchanged. Along some portions (length) of the proposed transmission line route, the existing power line would remain visible.

The Proposed Action Alternative includes construction of approximately 9 miles of new single-pole transmission line. Due to construction activities, the proposed action would result in two types of potential impacts on visual resources: short-term impacts resulting from construction activities, related materials, and equipment staging; and permanent impacts due to the presence of the new transmission line. In some areas the new transmission line would be visible from residences and businesses. The project would fit within the modification VQO classification. The project is located approximately 4 miles from the White Mountain Wilderness. No visual impacts would occur for the wilderness area as a result of the proposed project.

Mitigation

To minimize potential visual impacts resulting from construction of the proposed facilities, disturbed areas would be re-seeded with a certified weed-free native seed mix or sterile annual grass seed, and soils and rocks excavated but not used to backfill or restore contour would be evenly spread within the construction disturbance area.

Project activities would meet with forest management guidelines for visual impacts and electronic sites (United States Department of Agriculture Forest Service Southwestern Region 1986, p. 43). The guidelines adhered to are:

- Clearing of vegetation would be limited to that which poses a hazard to facilities and operational efficiency.
- All site operation technical standards would be incorporated into all permits.
- Site plans would be completed in accordance with the total required facilities concept.
- Structural density at sites would be "in accordance with Forest Service policies, sound engineering practices, and approved site operation technical standards."
- Maintenance of sites and trails would be accomplished through the terms and conditions of the special use permit.

The poles would be made of self-weathering steel, which is required by the Forest Service, to reduce visual impacts and frequency of maintenance. Insulators would be non-specular and wires would be non-reflective. Highway and road crossing spans would be maximized.

3.9 Noise

Affected Environment

The project planning area is primarily located in a rural setting within the Lincoln National Forest with somewhat urban areas in Ruidoso Downs and Alto. The primary noise producer within the project area is traffic traveling along nearby local roads.

Environmental Consequences

The No Action Alternative would have no impact on noise in the project vicinity. During project activities, the proposed action would result in two types of potential noise impacts within and adjacent to the project area: short-term impacts resulting from construction activities and equipment staging; and long-term impacts caused by vehicles during maintenance activities.

Mitigation

By limiting construction activities to weekdays and daylight hours, noise impacts would be reduced during the peak times when outdoor activities take place by residents and visitors to the Lincoln National Forest (weekends), and limited to hours when ambient noise levels are typically higher (daytime versus nighttime).

3.10 Recreation

Affected Environment

The project planning area is primarily located in a rural setting within the Lincoln National Forest with somewhat urban areas in Ruidoso Downs and Alto. Recreation within the area primarily consists of hunting.

Environmental Consequences

The No Action Alternative would have no impact on recreation in the project vicinity. Under the Proposed Action, hunting within the immediate vicinity of the project area may be interrupted during construction if project construction occurs during the area hunting season.

Mitigation

OCEC would coordinate with the Forest Service regarding possible impacts to hunting if construction activities occur during the hunting season.

3.11 Transportation

Affected Environment

Several roads are present with the project area. The proposed project crosses US Highway 70 (US 70) at the south end. Several local roads and two-track roads traverse the project area.

Environmental Consequences

The No Action Alternative would have no impact on transportation. Under the Proposed Action, traffic on roadways within and adjacent to the project area would increase slightly during construction. After project construction is completed, there would be no increase on area roads as a result of the project. Construction and maintenance trucks would travel existing roads for access to the project area. No roadway improvements would occur as part of the project. As part of project activities, a non-system travel way for project construction and maintenance would be established underneath or immediately adjacent to the proposed power line. The non-system travel way would be created by driving the area in trucks. No bulldozing, plowing or grading would be used to create the non-system travel way. Existing

roads would be used wherever possible. No roadway construction would occur as part of the proposed project.

Mitigation

OCEC would ensure the establishment of a non-system travel way for the power line would be located directly underneath or immediately adjacent to the proposed power line to minimize impacts from the driving the project area.

3.12 Cumulative Effects

Cumulative environmental effects are defined as those environmental changes resulting from the accumulative or interactive effects of one action with the effects of one or more actions. Cumulative effects can result from individual minor impacts as collectively significant actions that take place over a period of time. They can occur in succession or synergistically, be piecemeal or slow degradation, and can occur on-site or off-site.

Several unrelated projects which are currently planned or in the planning process may impact the general vicinity of the proposed project. Projects may include transportation network improvements, land development, fuel thinning or other forestry management activities may all be undertaken within the foreseeable future. In combination with other projects, the proposed project would decrease the amount of vegetation in this portion of the Lincoln National Forest. Removal of trees and vegetation over time leads soil instability and erosion, as well as decreasing habitat for wildlife and protected species.

Two major wildfires have occurred in the project vicinity since 2000. The Cree Fire occurred in May 2000. This was a primarily high-severity fire which burned a total of 6,519 acres, 4,926 acres of NFS land. The proposed power line crosses through part of the burn area along the middle and northern sections of the project area. The White Fire, located south of the Cree Fire, occurred during April 2011. More than 10,000 acres were burned by this fire. The southern and middle sections of the proposed power line cross the burn area of the White Fire. Both fires have reduced the number of trees and amount of vegetation in the project area, affecting the amount and quality of habitat available for nesting birds, small mammals, and forage available to ungulates in the area in the area. For construction of the proposed project, vegetation and tree removal would occur, further increasing the amount of bare ground within the project area by 60 acres. While this would compound the loss of nest sites and food sources in the general area resulting from the wildfires described above, the 60 acre impact from the project is insignificant in comparison to the total approximately 15,000 acre loss due to fire.

CHAPTER 4 – CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, Federal, state and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

Marron Team Members:

Marcel Browne – GIS
Reggie Fletcher - Biologist
Heather Parmeter – Biologist
Jessica Sebring – Environmental Project Manager

Federal and State Officials and Agencies

Natural Resources Conservation Service – Dennis Alexander, State Conservationist
New Mexico Department of Game and Fish – Terra Manasco, Assistant Chief, CSD
New Mexico Environment Department – Julie Roybal – Environmental Impact Review Coordinator
U.S. Fish and Wildlife Service – Wally Murphy, Field Supervisor

Other Team Members:

Peter Eidenbach - Archaeologist
Gilbert Sanchez – Otero County Electric Cooperative Project Manager

All land owners of private lands located within the project area were contacted by OCEC.

CHAPTER 5 - REFERENCES

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CHAPTER 6 – LIST OF PREPARERS

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Appendix A

Supporting Documentation