

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Farmington District  
Farmington Field Office  
6251 N College Blvd., Ste. A  
Farmington, NM 87402

**Finding of No Significant Impact**

**Dam Road Electric Utility Line Project  
NEPA No. DOI-BLM-NM-FO10-2015-0169-EA**

**FINDING OF NO SIGNIFICANT IMPACT**

I have determined that the proposed action, as described in Environmental Assessment (EA) DOI-BLM-NM-FO10-2015-0169-EA will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an Environmental Impact Statement is not required.

In making this determination, I considered the following factors:

***Context***

The Farmington Field Office (FFO) is located in northwestern New Mexico. The field office boundaries include approximately 7,800,000 acres; 1.4 million surface acres and an additional 1 million acres of mineral estate are managed by the BLM. The distribution of BLM-managed lands is fairly well consolidated in the north and becomes increasingly mingled with Tribal lands to the south. BLM-managed lands abut the Navajo Reservation to the west and south, Jicarilla Apache Nation Reservation to the east, and the Ute Mountain Reservation and Southern Ute Indian Reservation to the north. Aztec Ruins National Monument and Chaco Culture National Historical Park, managed by the National Park Service, lie within the field office boundaries. The BLM manages approximately 18% of lands within a 10 mile radius of Chaco Culture National Historical Park.

The FFO encompasses the New Mexico portion of the San Juan Basin. The San Juan Basin and surrounding areas have been occupied by varied cultures since the Paleo Indian period (circa 10,000 BC). The San Juan Basin and Four Corners area have one of the most extensive prehistoric and protohistoric occupations in the United States. The most commonly known archaeological resources are the Anasazi structures at Chaco Culture National Historical Park, Mesa Verde National Park, and other National Park Service sites. Scattered across BLM-managed lands are similar, but smaller structures, which were probably related to these larger sites. Twenty-three Chacoan outliers are known to exist within the FFO. Each contains at least one Chacoan structure and most have associated communities, prehistoric roads, and great kivas along with features such as herraduras and special use areas. The FFO contains an extensive system of finely engineered roads radiating out from Chaco Canyon and extending a considerable distance to outlying sites through the San Juan Basin and beyond. These roads are remarkably straight and carefully constructed. The most notable is the Great North Road, which starts at Chaco Canyon and run north to the Aztec Ruins.

Located within the boundary of the FFO is much of Dinétah, the ancestral homeland to the Navajo. Here the Navajo constructed forked-stick hogans, shades, sweat lodges, and other structures over a several hundred year span. During a short period between 1680 and the mid-1700s, pueblitos were constructed, often associated with other structures. Although not firmly dated, extensive Navajo pictograph and petroglyph sites were painted, etched, pecked, or ground onto the sandstone cliffs of the canyons of Dinétah. Most are believed to be ceremonial art which is no longer traditionally executed in a permanent form.

Native American Traditional and Sacred Areas are known to exist across the FFO. Many are associated with narrative accounts of origin or other traditional stories. Most of the identified sacred areas are associated with the Navajo culture. These places are still important in Navajo ceremonies and daily activities.

Historic Hispanic or Spanish and Anglo sites within the San Juan Basin primarily date from the late 1800s to the present. Although there are some early Spanish land grants in the southern portion of the FFO, most historic sites located on public lands are either Hispanic or Anglo homesteads with associated structures from the late 1800s and early 1900s. Associated with many clusters of homesteads were a school house and often a church which was visited every few months by a priest.

Cultural resource inventories have been conducted throughout the FFO for project undertakings, management studies, and scientific inquiries. As of April 2014, approximately 760,000 acres of the 7,800,000 acres in the FFO boundaries have been inventoried. Over 46,000 sites have been identified ranging from small artifacts to the 800-room structures in Chaco Canyon. Many of these sites are listed on the National Register of Historic Places and Chaco Culture National Historical Park along with several of the Chacoan sites which have been placed on the World Heritage List. The FFO manages 79 Areas of Critical Environmental Concern (ACECs) for relevant and important cultural values, including five World Heritage Sites.

The San Juan Basin is an important area for mammalian and reptilian fossils. A variety of paleontological resources exist in the FFO including animal fossils, fossil leaves, palynomorphs, petrified wood, and trace fossils occurring in the Triassic, Jurassic, Cretaceous, and Tertiary rocks. Dinosaur and other fossils have made significant contribution to the scientific record have been found and excavated in the FFO. Paleontological resources are present in the Bisti De-Na-Zin Wilderness Area, Ah-Shi-Sle-Pa Wilderness Study Area, Fossil Forrest Research Natural Area, and seven fossil areas identified in the 2003 Farmington Resource Management Plan.

The San Juan Basin is one of the largest natural gas fields in the nation and has been under development for more than 60 years. Oil was discovered by accident in the Seven Lakes area of McKinley County in 1911. Natural gas was discovered near Aztec, New Mexico, in 1920-1921 with oil of commercial quantity discovered near the Hogback in 1922 (Barnes 1951). Several small pipelines were built to carry the oil and gas from these discoveries to Aztec and Farmington, respectively. Development began in earnest in the late 1940s and early 1950s as the demand for natural gas increased. The FFO manages 2,765 active oil and gas leases in the San Juan Basin consisting of 2.1 million acres. Leasing began in the mid-1930s and accelerated in the late 1940s. By 1950, over 1 million acres were under lease.

In 1951, El Paso Natural Gas completed the first interstate pipeline out of the San Juan Basin to California. That same year, oil was discovered in the Mancos Shale in Dogie Canyon (Barnes 1951). Since that time, over 30,000 oil and gas wells have been drilled in the San Juan Basin with approximately 16,000 associated rights-of-way. Approximately 23,000 wells are currently producing. Since Stanolind Oil introduced hydraulic fracturing in 1949, nearly every well in the San Juan Basin has been fracture stimulated.

### ***Intensity***

1. The activities described in the proposed action do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). Per 40 CFR 1500.1(b), the EA concentrated on issues that are truly significant to the action in question, rather than amassing needless detail. Issues have a cause and effect relationship with the proposed action or alternatives; are within the scope of the analysis; have not been decided by law, regulation, or previous decision; and are amendable to scientific analysis rather than conjecture (BLM 2008, page 40). The following issues were identified related to the proposed action:

- Would the proposed action affect air quality by increasing dust and other pollutants, or result in a changed climate of the region?
- Do soils in the project area have a higher than normal erosion potential that could complicate reclamation? What affects to soils would result from exposure and disturbance of project area soils? How would biological soil crusts be impacted if present?

- How would the proposed action alter area vegetation?
- How would the proposed action affect the establishment and distribution of noxious weeds in the project area and vicinity?
- How would the proposed action affect Special Status Species habitat and prey distribution?
- Would the proposed action impact any cultural resources eligible for inclusion on the National Register of Historic Places?
- Would the proposed action impact road networks or traffic?

The EA includes a description of the expected environmental consequences of the proposed activities for those issues in Chapter 3.

2. The activities included in the proposed action would not significantly affect public health or safety (40 CFR 1508.27(b)(2)). The following design features have been included in the proposed action to address any impacts to public health and safety:

Appropriate traffic control measures will be utilized as needed during project construction.

3. The proposed activities would not significantly affect any unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas (40 CFR 1508.27(b)(3)). Unique characteristics are generally limited to those that have been identified through the land use planning process or other legislative, regulatory or planning processes (BLM 2008, page 71). The FFO does not contain any prime and unique farmlands, suitable or designated wild and scenic rivers, or designated caves. Table 1 discloses the distance of the proposed activities to identified wetlands. Table 2 discloses the distance of the proposed activities to National Park Service units and Congressionally designated areas. The proposed action is not located within an Area of Critical Environmental Concern. Impacts to historic or cultural resources are described in the Cultural Resources section of the EA and discussed further under item 8.

**Table 1. Distance of the Proposed Activities from Identified Wetlands**

Identified Wetlands	Distance from Proposed Activities
Bancos	9.4 miles
Blanco	7.8 miles
Bloomfield	7.4 miles
Cutter Canyon	14.3 miles
Carrizo Oxbow	16.2 miles
Desert Hills	9.9 miles
Valdez	6.8 miles

**Table 2. Distance of the Proposed Activities from Park Lands and Ecologically Critical Areas**

Park Land or Ecologically Critical Area	Distance from Proposed Activities
Ah-Shi-Sle-Pah Wilderness Study Area	39.6 miles
Aztec Ruins National Monument	2.8 miles
Bisti De-Na-Zin Wilderness Area	29.3 miles
Chaco Culture National Historical Park	46 miles
Fossil Forest Research Natural Area	37.5 miles

4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)). Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives (BLM 2008, page 71). Oil and gas development has occurred in the San Juan Basin for more than 60 years. While there may be controversy over the appropriateness of oil and gas development, there is not a high level of controversy or substantial scientific dispute over the impacts of that activity. The impacts of the proposed activities are described in Chapter 3 of the EA.

5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)). As described under Context, oil and gas development has occurred in the San Juan Basin since the late 1940s and early 1950s. The field office has permitted over 30,000 wells and 16,000 rights-of-way. Hydraulic fracturing has occurred on nearly every well in the San Juan Basin since the 1950s. As such, the FFO has decades of experience and is knowledgeable about the impacts and risks associated with the proposed activities.

6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)). Approval of these activities in no way assures approval of any future activities.

7. The effects of the proposed activities would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). Direct, indirect, and cumulative impacts are described in Chapter 3 of the EA.

8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). The proposed activities are not located in an ACEC containing relevant and important cultural values. Cultural resource surveys were completed for the project and a Cultural Resources Record of Review, BLM Report Number 2016(l)008F, was signed on November 13, 2015 for the City of Aztec's Dam Road Electric Utility Line Project. Effects to cultural resources will be mitigated by requiring archaeological monitoring, and site protection barriers be placed prior to construction. Pages 23-26 of the January 2016 Environmental Assessment DOI-BLM-NM-F010-2015-0169-EA describes the effects to cultural resources.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). The project area does not contain any known populations or designated critical habitat for federally listed species. Pages 21-22 of the January 2016 Environmental Assessment DOI-BLM-NM-F010-2015-0169-EA describes the effects to special status species.

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Sections 1.4 and 1.5 of the EA describe the relationship of the proposed activities to relevant laws, policies, regulations, and plans.

## REFERENCES

Barnes, Frank C., 1951. History of development and production of oil and gas in the San Juan Basin. In *The south and west sides of the San Juan Basin, New Mexico and Arizona*, Smith, C.T.; Silver, C. ed(s), New Mexico Geological Society, Guidebook, 2<sup>nd</sup> Field Conference, pp. 155-160.

BLM. 2008. *National Environmental Policy Handbook. H-1790-1*. Bureau of Land Management. National Environmental Policy Act Program.

## APPROVED:

/s/ Maureen Joe for  
\_\_\_\_\_  
Dave Mankiewicz  
Field Manager (Acting)  
BLM Farmington Field Office

03/08/2016  
\_\_\_\_\_  
Date

**United States Department of the Interior  
Bureau of Land Management**

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**Environmental Assessment DOI-BLM-NM-F010-2015-0169-EA**

*City of Aztec  
Dam Road Electric Utility Line Project  
(NMNM-134534)*

**January 2016**

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New Mexico • Farmington Field Office



**It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.**

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# 1. PURPOSE AND NEED FOR THE ACTION

## 1.1. Background

City of Aztec Electric Department (Aztec Electric) has filed an application for right-of-way (ROW) with the Bureau of Land Management's Farmington Field Office (FFO) for the Dam Road electric utility line project. The proposed project would extend electric utility service from an existing overhead Aztec Electric line to an existing City of Aztec municipal water tank and pump station. This action is being proposed on public lands administered by the Bureau of Land Management (BLM) and on fee lands.

The proposed Dam Road electric utility line is proposed for development within the San Juan Basin of northwestern New Mexico, approximately 2.1 miles east of Aztec, in San Juan County, New Mexico (Figure 1). The legal location for the proposed Dam Road electric utility line project is the southwest quarter of Section 7, Township 30N, Range 10W, and the south half of Section 12, Township 30N, Range 11W, New Mexico Principal Meridian (NMPM), in San Juan County, New Mexico.

A grant of ROW, issued by the BLM, would authorize Aztec Electric to construct and operate the proposed electric utility line and associated facilities. The electric utility line project has been initiated in order to provide sufficient electricity to power increased water pumping capacity at a City of Aztec water tank location. The City plans to replace the existing 100 gallon per minute water pump with a 700 to 800 gallon per minute pump in order to maintain a more efficient and reliable supply of municipal water. The proposed electric utility line has been designed to accommodate the proposed increased electric load at the City's water tank facility.

This site-specific analysis tiers into and incorporates by reference the information and analysis contained in the Farmington Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) (BLM 2003a). The PRMP/FEIS is available for review at the Farmington Field Office, Farmington, New Mexico, or on the World Wide Web at [http://www.nm.blm.gov/ffo/ffo\\_home.html](http://www.nm.blm.gov/ffo/ffo_home.html). This environmental assessment (EA) addresses site-specific resources and effects of the proposed action that were not specifically covered within the PRMP/FEIS, as required by the National Environmental Policy Act of 1969 (NEPA), as amended (Public Law 91-90, 42 United States Code [USC] 4321 et seq.).

## 1.2. Purpose and Need for Action

The purpose of the action is to provide access across BLM-managed lands for the installation and operation of a new electric utility line. The need for the action is established under BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) of October 21, 1976, 43 U.S.C. 1761 et seq., as amended.

## 1.3. Decision to be Made

Based on the information in this EA, the BLM-FFO will decide whether or not to grant ROW, and if so, under what terms and conditions. Under the National Environmental Policy Act (NEPA) (Public Law [PL] 91-90, 42 USC 4321 et seq.), the BLM-FFO must determine if there are any significant environmental impacts associated with the proposed actions warranting further analysis in an Environmental Impact Statement (EIS). The BLM-FFO Field Manager is the responsible officer who will decide either:

- To grant the ROW with design features as submitted;
- To grant the ROW with additional mitigations;
- To analyze the effects of the proposal in an EIS; or
- To deny the ROW application.

## 1.4. Conformance with Applicable Land Use Plan(s)

The Proposed Action is in conformance with the 2003 BLM-FFO Resource Management Plan (RMP). Pursuant to 40 CFR 1508.28 and 1502.21, this site specific EA tiers into and incorporates by reference

the information and analysis contained in the BLM-FFO Purposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS; BLM 2003a). The RMP was approved by the September 29, 2003 Record of Decision (ROD; BLM 2003b), and updated in December 2003.

The proposed action would be located within BLM/FFO designated potential habitat for the BLM Special Management Species and State of New Mexico Endangered Brack's hardwall cactus (*Sclerocactus cloveriae* ssp. *brackii*) and Aztec gilia (*Aliciella formosa*). Per the BLM/FFO Instruction Memorandum No. NM-200-2008-001, proposed projects within Brack's cactus and Aztec gilia habitat will require a biological survey. When individual plants or suitable habitat for these plants are found within designated potential habitat, the project will be relocated or the plants transplanted. Every effort to relocate the project must be explored before BLM will approve transplanting.

## 1.5. Relationship to Statutes, Regulations or Other Plans

BLM regulates oil and gas development so as to minimize environmental effects to public lands as required by numerous federal laws, including:

- The Endangered Species Act of 1973 (P.L. 94-325),
- The Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703-712),
- The Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668-668d),
- The Federal Water Pollution Control Act of 1948 (Clean Water Act), as amended (33 U.S.C. Chap. 26),
- The Clean Air Act of 1963, as amended (P.L. 88-206),
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. Chap. 103),
- The Antiquities Act of 1906, as amended (P.L. 52-209),
- The National Historic Preservation Act of 1966, as amended (P.L. 89-665),
- The Archaeological and Historic Preservation Act of 1974 (P.L. 86-253),
- The Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95),
- The American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. 1996), and
- The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).

Aztec Electric would comply with all applicable federal and State of New Mexico laws and regulations (Appendix B). Non-point source pollution is an identified problem in the planning area that is directly associated with soil stability and water quality. The New Mexico Energy, Minerals and Natural Resources Department requires operators to follow "pit rule" guidelines contained within NMAC 19.15.17 in an effort to reduce ground water contamination from industry related activities. Mandated by the Clean Water Act (CWA), efforts to reduce non-point source pollution through implementation of erosion control and management practices are an important part of BLM's management activities. Industrial activities disturbing land may require permit coverage through a National Pollution Discharge Elimination System (NPDES) storm water discharge permit. Upon determination, a U.S. Army Corps of Engineers Section CWA 404 Permit for the discharge of dredge and fill materials may also be required. Operators are required to obtain all necessary permits and approvals prior to any disturbance activities.

Consultation with the USFWS, as required by Section 7 of the Endangered Species Act (ESA) of 1973, was conducted as part of the Farmington PRMP/FEIS (Consultation No. 2-22-01-I-389) to address cumulative effects of RMP implementation on federally listed threatened and endangered species or designated critical habitat. The consultation is summarized in Appendix M of the PRMP/FEIS. Farmington Field Office staff reviewed the action alternatives and determined they would be in compliance with threatened and endangered species management guidelines outlined in the September 2002 Biological Assessment (Consultation No. 2-22-01-I-389). No new water depletions would result. No further consultation with the U.S. Fish and Wildlife Service is required.

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful. Executive Order (EO) 13186 was signed on January 10, 2001, directing executive departments and agencies of the federal government to take

certain actions to further implement the MBTA including developing and implementing a Memorandum of Understanding (MOU) with the USFWS that would promote the conservation of migratory bird populations. A MOU was developed and entered into by the BLM and the USFWS on April 12, 2010 to accomplish EO 13186 and to ensure the successful implementation of BLM and USFWS migratory bird conservation responsibilities. The MOU To Promote the Conservation of Migratory Birds presents collaborative methods to promote the conservation of migratory bird populations by identifying and implementing strategies which avoid or minimize adverse impacts to migratory birds. The BLM and USFWS have agreed that implementation of the MOU will be in harmony with existing agency missions, and the MOU does not supersede any legal requirements or existing species conservation processes and procedures such as ESA recovery plans. It is also understood that the BLM may not be able to fulfill all aspects of the MOU upon signing (MOU Section IX (I)).

The MOU to Promote the Conservation of Migratory Birds entered into by the BLM and the USFWS was not completed during the development of the revised FFO RMP. Consultation on the Biological Assessment (BA) with the USFWS for the RMP was completed on October 2, 2002, the Environmental Impact Statement (EIS) was completed in March 2003, and the Record of Decision (ROD) for the RMP was signed in September of 2003. There are no management constraints or mitigation measures pertaining to the MBTA listed within the RMP, BA, EIS, or ROD. Revision and/or adoption of some elements of the MOU into the RMP may be required. Currently, effects to migratory birds are addressed and mitigated at the project level as outlined in the Migratory Bird Treaty Act – BLM/FFO Interim Management Policy (Instruction Memorandum No. NM-F00-2010-001, BLM 2010).

Until such time as further guidance related to the MOU is issued, the BLM will continue to analyze impacts to migratory birds in NEPA documents, list the MBTA as a Law the owner of any BLM permit must comply with, and utilize best management practices and mitigation measures that minimize impacts to migratory birds as outlined in Instruction Memorandum No. NM-F00-2010-001.

Compliance with Section 106 responsibilities of the National Historic Preservation Act are adhered to by following the BLM – New Mexico State Historic Preservation Office (SHPO) protocol agreement, which is authorized by the National Programmatic Agreement between the BLM, the Advisory Council on Historic Preservation, and the National Conference of Council of State Historic Preservation Officers.

Additionally, the ROW grant holder shall:

- Comply with all applicable Federal, State of New Mexico and local laws and regulations. A listing of selected federal laws and regulations applicable to the proposed action can be found in Appendix B.
- Obtain the necessary permits for the construction, operation, and abandonment of this utility including any water discharge permits and relevant air quality permits.
- Certify that a Surface Use Agreement has been reached with private landowners where required.

This EA considers the requirements of these and other laws and regulations, as applicable. The proposed action, including environmentally-protective design features, complies with the laws and regulations indicated above. Operators are required to obtain all necessary permits and approvals prior to any disturbance activities.

## **1.6. Scoping, Public Involvement, and Issues**

### **1.6.1. Scoping and Public Involvement**

Scoping is the initial means by which the BLM identifies potential issues related to a proposed action. External scoping was conducted through posting this project on the FFO's on-line NEPA logs ([http://www.blm.gov/nm/st/en/prog/planning/nepa\\_logs.html](http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html)). The logs track initiation and approval of environmental documents that are being or have been completed as part of the BLM's responsibilities under NEPA. The public is encouraged to provide comments or request information on projects listed in the logs. Public comments are considered during the NEPA analysis and decision-making process for the applicable project, contingent on the project's schedule status. No public comments have been received to date.

Additional issues identification occurs during FFO internal review of the proposed action and during the planning level in-field onsite inspection. Internal review of the proposed action is initiated when the project is presented by Aztec Electric to the FFO. During the onsite inspection, all areas of proposed surface disturbance are inspected by FFO to ensure that potential effects to natural resources and other elements of the human environment would be minimized. Potential issues identified prior to and/or during the onsite inspection are evaluated at the ground level. Alternatives to the different aspects of the proposed action are considered or developed as needed in order to address identified issues. These alternatives are carried forward as design features of the proposed action, viable alternatives to the proposed action, or as alternatives considered but not analyzed in detail.

The FFO conducted an onsite inspection of the proposed action area on June 23, 2015. On July 27, 2015, a team of FFO resource specialists, known as an Interdisciplinary (ID) Team, reviewed the proposed action.

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### **1.6.2. Issues to be Analyzed**

The following issues have been identified through scoping and public involvement and will be analyzed further:

- *Air Quality and Climate* – Would the proposed action affect air quality by increasing dust and other pollutants, or result in a changed climate of the region?
- *Soils* – Do soils in the project area have a higher than normal erosion potential that could complicate reclamation? What affects to soils would result from exposure and disturbance of project area soils? How would biological soil crusts be impacted if present?
- *Vegetation* – How would the proposed action alter area vegetation?
- *Noxious Weeds* – How would the proposed action affect the establishment and distribution of noxious weeds in the project area and vicinity?
- *Special Status Species* – How would the proposed action affect Special Status Species habitat and prey distribution?
- *Cultural* – Would the proposed action impact any cultural resources eligible for inclusion on the National Register of Historic Places?
- *Travel and Transportation* – Would the proposed action impact road networks or traffic?

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### **1.6.3. Issues Considered but Not Analyzed**

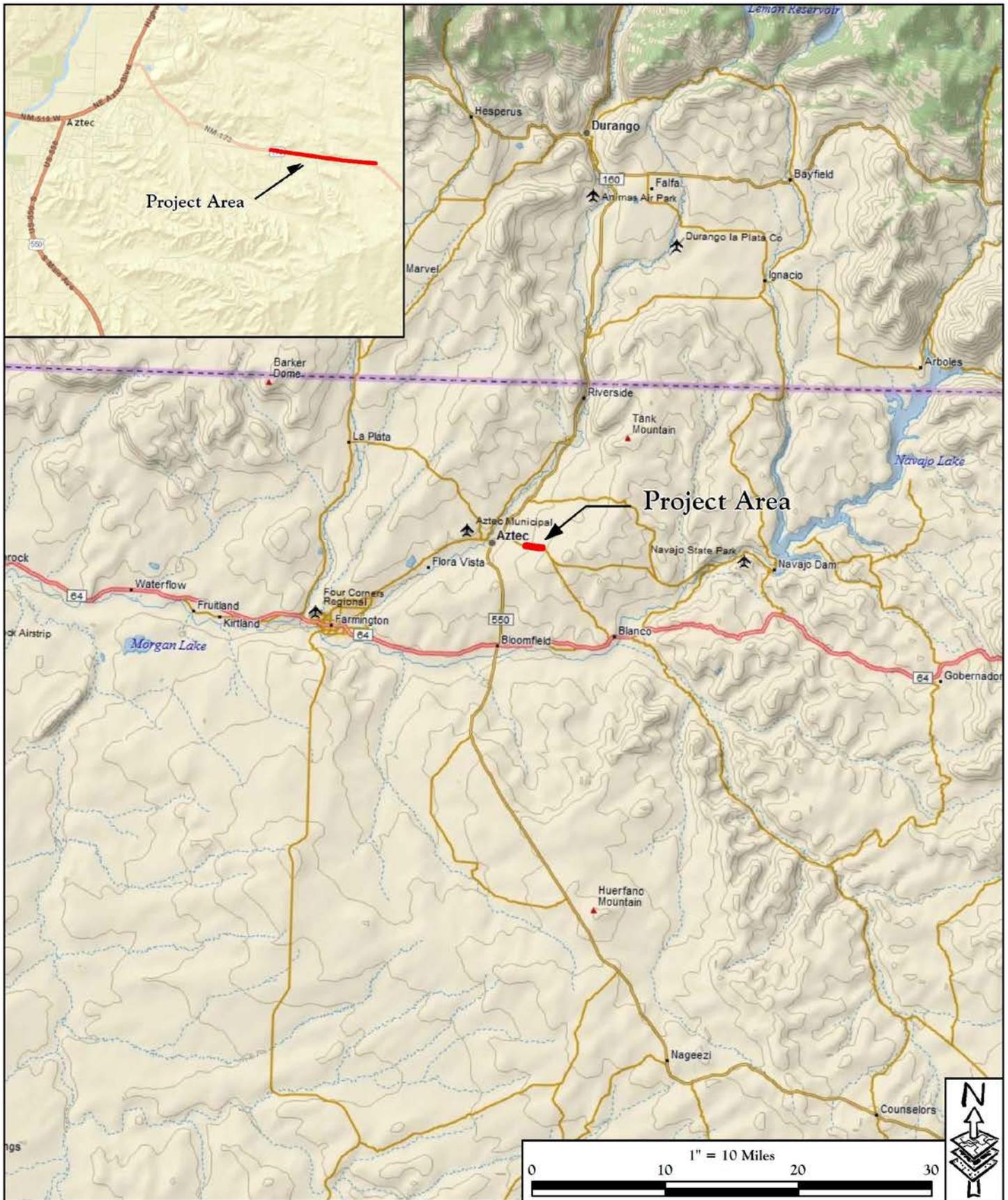
#### **Areas of Critical Environmental Concern (ACECs)**

The nearest Area of Critical Environmental Concern to the proposed action is three miles away.

#### **Native American Religious Concerns**

For the proposed action, identification efforts were limited to reviewing existing published and unpublished literature (e.g. Van Valkenburgh 1941, 1974; Brugge 1993; Kelly et al 2006), the site-specific Class III survey report prepared for the proposed action, and a review by the BLM's cultural resources program regarding the presence of TCPs identified through ongoing BLM tribal consultation efforts. There are currently no known remains that fall within the purview of the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) or the Archaeological Resources Protection Act (ARPA; 16 USC 470) within the proposed action area. The proposed action would not impact any known Traditional Cultural Properties, prevent access to sacred sites, prevent the possession of sacred objects, or interfere with or hinder the performance of traditional ceremonies and rituals pursuant to the American Indian Religious Freedom Act of 1978 (42 USC 1996) or Executive Order (EO) 13007.



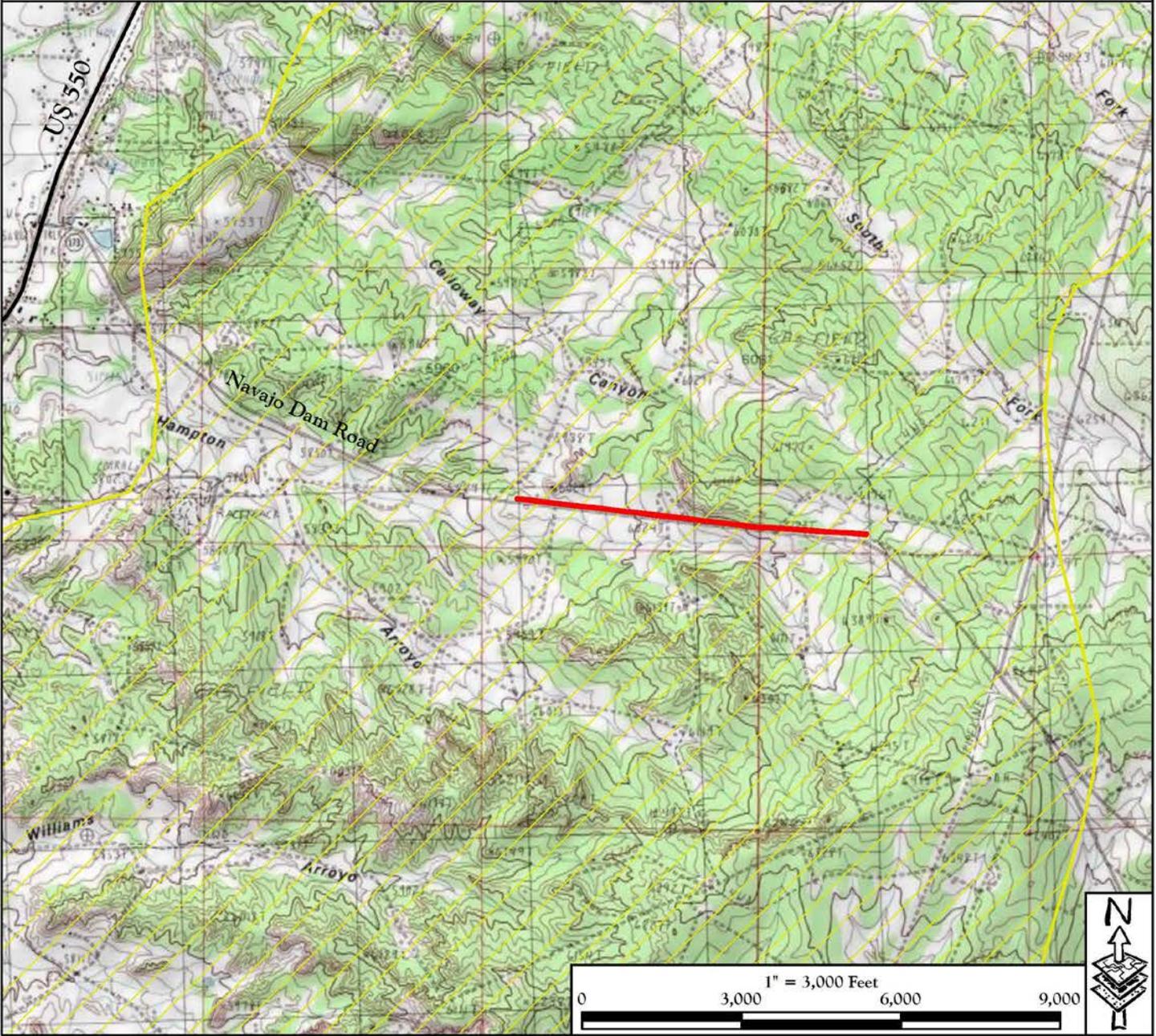


**PROJECT LOCATION:**

SW1/4 Section 7, Township 30N, Range 10W;  
S1/2 Section 12, Township 30N, Range 11W;  
New Mexico Principal Meridian,  
San Juan County, New Mexico.

**Legend**

- Proposed Alignment
- Potential SMS Plants

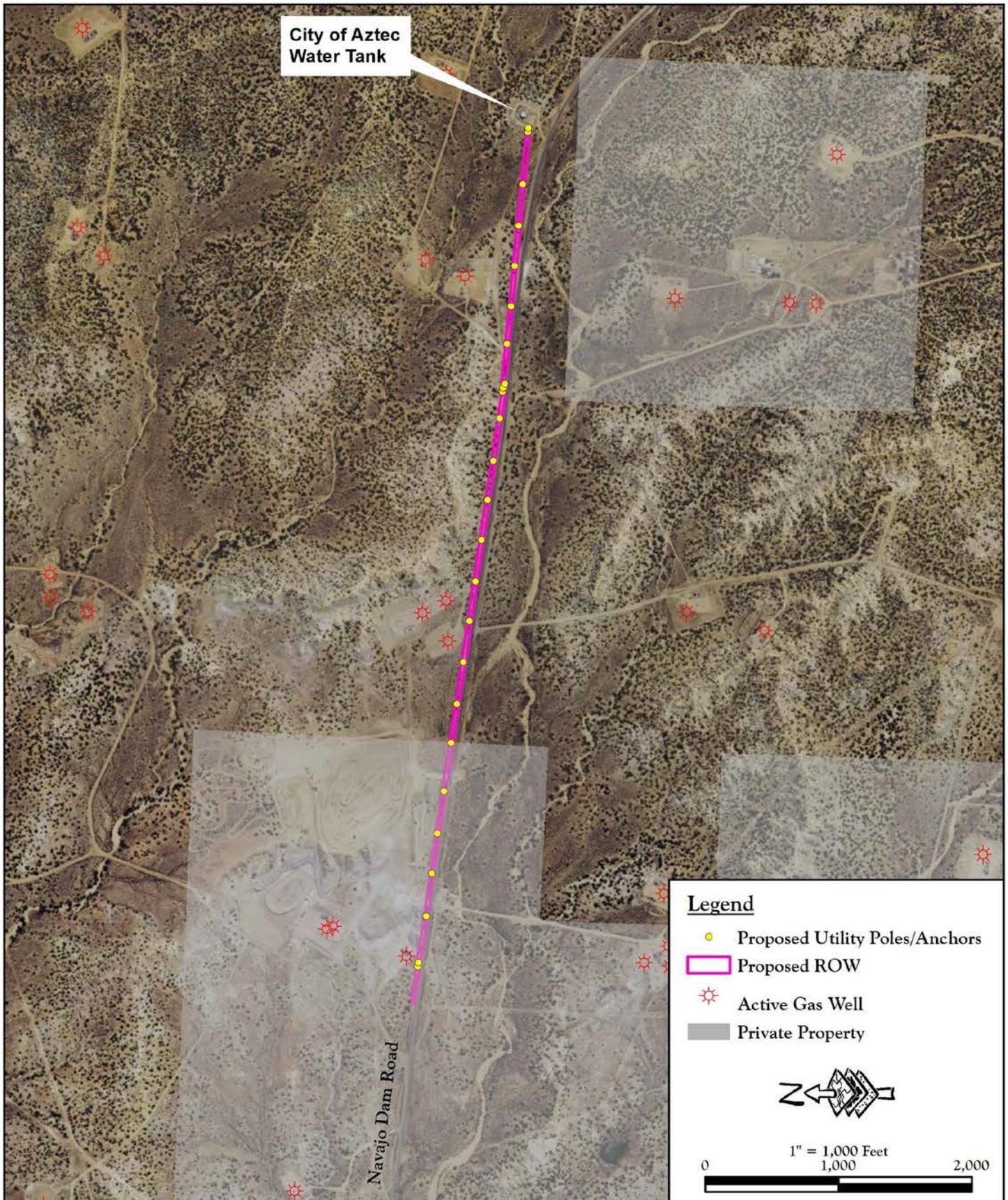


679 E. 2nd Ave. - Unit E2  
Durango, Colorado 81301  
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PROJECT LOCATION MAP  
DAM ROAD ELECTRIC LINE  
ENVIRONMENTAL ASSESSMENT

**FIGURE 2**

Source: Aztec, New Mexico  
7.5' USGS Quadrangle  
Copyright: © 2010 National Geographic Society



## 2. PROPOSED ACTION AND ALTERNATIVE(S)

### 2.1. Proposed Action

BLM proposes to approve Aztec Electric's ROW application for the Dam Road electric utility line. The electric utility line project would involve connecting an existing City of Aztec water tank site to an existing electrical line through the installation of additional electrical utility infrastructure.

The proposed Dam Road electric utility line would be located along the northern edge of the Navajo Dam Road (State Highway 173) corridor approximately 2.0 miles east of US 550 and 1.0 mile northwest of State Highway 575. The proposed project area is depicted on the Aztec, New Mexico, 7.5-minute United States Geological Service (USGS) quadrangle map (Figure 2). The project area elevation ranges from 5,940 feet to 6,190 feet above mean sea level. The geographic coordinates (NAD 83) of the termini of the proposed easement are:

West	East
Latitude: 36.8216° N	Latitude: 36.8197° N
Longitude: 107.9494° W	Longitude: 107.9268° W

#### 2.1.1. Construction Phase

The proposed electric utility line would be three phase and would be constructed overhead on utility poles. The conductor wire size would be 1/0 ACSR and the operating voltage would be 12.5 kV. Access to the proposed electric utility easement would be from Navajo Dam Road. The proposed permanent utility easement would be 30 feet wide.

The alignment begins at an existing overhead electric utility line that crosses Navajo Dam Road in the vicinity of Motor Cross Road (Figure 3). The proposed easement extends from the existing line east along the northern edge of the Navajo Dam Road corridor across approximately 1,981 feet of private property to BLM lands. The alignment continues east along Navajo Dam Road 4,667 feet to a City of Aztec municipal water tank. Total linear feet of alignment would be approximately 6,648 feet. The proposed permanent easement on public lands would occupy approximately 3.21 acres.

Construction of the proposed electric utility line would include the installation of 45-foot power poles, pole cross arms, pole anchors and guy wires, conductor wire, meter, and related overhead appurtenances within the proposed alignment corridor. Poles would be set using a vehicle-mounted auger and boom. Surface disturbance from the project would result from the installation of poles and anchors. Sixteen poles and three anchors would be located on BLM lands, and six poles and one anchor would be located on fee lands. Utility poles and anchors require an installation disturbance area of approximately three feet by three feet. Estimated surface disturbance resulting for the installation of the overhead utility poles is approximately 0.005 acre. No blading or excavation would be required to set the proposed poles/anchors and string the conduit. Tree cutting may be necessary to clear the conduit route and work areas; approximately 15 trees may need trimming or removal, primarily on BLM lands. Vehicle use in the easement may crush local vegetation. Construction is anticipated to begin in late 2015 and is planned to last for two months.

A summary of the approximate acreage of disturbance associated with the proposed action is contained in Table 1 below.

**Table 1. Cumulative Acreages for the Proposed Dam Road Electric Utility Line.**

Project Components		Acreage	Linear Feet	Width (Feet)
BLM	Electric Utility ROW	3.21	4,667	30
	Bare Soil Exposure	0.004		
Fee	Electric Utility Esmt.	1.37	1,981	30
	Bare Soil Exposure	0.001		

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### **2.1.2. Operation and Maintenance**

Upon completion of construction, power pole auger holes would be backfilled and tamped, and other areas reduced to bare soils would be revegetated as needed. Reclamation and reestablishment of vegetation will reduce erosion and replace habitat thereby reducing effects to water resources, soils, vegetation, wildlife, livestock, and visual resources. A revegetation plan prepared to BLM/FFO specifications subject to the FFO Bare Soil Reclamation Procedure is not required as the area of bare surface created is anticipated to be less than 0.1 acre.

Once operating, the proposed electric utility line, poles, and appurtenances would require regular inspection. Occasionally, degraded equipment, including poles and anchors, may need replacement. Vegetation may also need trimming in order to maintain conductor clearance; however, this is likely to rarely occur in the lifespan of the electric utility line given the slow and low growth of trees in the project area.

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### **2.1.3. Abandonment Phase**

When the line is no longer necessary, it would be dismantled. Aboveground equipment would be removed. Below ground portions of poles and anchors would be removed or cut-off at ground level. Any areas left disturbed upon abandonment would be re-vegetated as specified in the approved ROW grant stipulations.

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### **2.1.4. Design Features**

Field resource investigations of the proposed well pad were conducted on June 23, 2015 by specialists from the BLM and representatives for Aztec Electric. At the onsite inspection, all areas of proposed surface disturbance were inspected to ensure that potential effects to natural resources would be minimized. Additional resource protection design features determined at the June 23, 2015 onsite include:

- All project activities will be confined to the permitted areas only.
- The applicant will be required to ensure the ROW does not turn into a road.
- Construction of the power line should follow the recommendations in *Suggested Practices For Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012) to reduce the risk of bird mortality resulting from electrocution and line collision.
- Appropriate traffic control measures will be utilized as needed during project construction.
- Tree removal should be avoided if possible in favor of limb trimming. Slash should be utilized for surface stabilization during reclamation.
- Any downed trees will be de-limbed and set aside for public firewood gathering.
- Fluids stored onsite during construction will be contained in tanks during all operations in order to reduce the risk of soil and water contamination.
- Bare soils will be reclaimed and seeded with the FFO specified seed mixture, using native species only, unless a more durable surface is needed.
- The operator will be responsible for control of invasive species and noxious weeds within the BLM portion of the project area.

Standard FFO stipulations to be included herein as design features include, but are not limited to:

- All aspects of the proposed action will be in compliance with all applicable federal and State of New Mexico regulations.
- All FFO cultural resources stipulations will be followed as indicated in the Cultural Resource Records of Review, attached to the stipulations in the ROW as the case may be. These stipulations may include, but are not limited to temporary or permanent fencing or other physical barriers, monitoring of earth disturbing construction, project area reduction and/or specific construction avoidance zones, and employee education. All employees, contractors, and sub-contractors of the project will be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to collect, damage, or disturb cultural

resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm). In the event of a cultural resources discovery during construction, the project proponent will immediately stop all construction activities in the immediate vicinity of the discovery and immediately notify the archaeological monitor, if present, or the BLM. The BLM would then evaluate or cause the site to be evaluated. Should a discovery be evaluated as significant (e.g., National Register, NAGPRA, ARPA), it will be protected in place until mitigating measures can be developed and implemented according to guidelines set by the BLM.

- If impacts to federally threatened, endangered, proposed, or candidate species; FFO Special Management Species; or migratory birds, nests, or eggs are observed during the implementation of the proposed action, the FFO will be notified, and specific mitigation measures directed at the species' needs will be implemented under the direction of the FFO.
- If an active bird nest is observed during construction, construction activities that could result in take as defined by the MBTA would halt until practicable or reasonable avoidance alternatives are identified, the birds have fledged, or a migratory bird take permit has been granted from the USFWS.
- It will be the operator's responsibility to monitor, control, and eradicate all invasive, non-native plant species within the proposed project area throughout the life of the proposed project. The operator will contact the BLM-FFO regarding acceptable weed-control methods. If the operator does not hold a current Pesticide Use Proposal, a Pesticide Use Proposal will be submitted prior to pesticide application. Only pesticides authorized for use on BLM lands will be used. The use of pesticides will comply with federal and state laws. Pesticides will be used only in accordance with their registered use and limitations. The operator will contact the BLM-FFO prior to using these chemicals.
- If significant amounts of chemicals are stored on-site, governmental agencies will be notified as required under the Emergency Planning and Community Right to Know Act (1986).
- All FFO paleontological resources stipulations will be followed as indicated in the stipulations attached to the ROW grant. All employees, contractors, and sub-contractors of the project will be informed by the project proponent that paleontological sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to collect, damage, or disturb the resource. Such activities are punishable by criminal and or administrative penalties under the provisions of the Paleontological Resources Preservation Act of 2009 (Sections 6301-6312 of the Omnibus Public Lands Act of 2009, 16 USC 470aaa).

## **2.2. No Action**

The No Action alternative would deny the approval of the proposed application, and the current land and resource uses would continue to occur in the proposed project area. The City of Aztec would not be able to supply sufficient power to their tank site as proposed. No mitigation measures would be required. The No Action Alternative provides a baseline reference, enabling decision makers(s) to compare the magnitude of environmental effects of the alternatives.

## **2.3. Alternatives Considered but Eliminated from Detailed Study**

Alternatives to the proposed action are developed to explore different ways to accomplish the purpose and need while responding to potentially controversial issues related to the proposed action. Project proponents had considered constructing the proposed line along the south side of Navajo Dam Road; however, existing pipeline ROWs and other electric utility lines would require a more cross-country alignment and would complicate construction. Proponents also considered an underground option. Constructing underground would result in increased surface disturbance as an open trench would be required for the entire length of the line. The proposed action is located along the edge of existing disturbance throughout the majority of the alignment. The proposed alignment is a direct route, thus limiting the length of alignment and associated disturbance. No other reasonable alternatives were identified that would create less disturbance to the human environment while facilitating an appropriate utility location.

## 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

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This section describes the environment that would be affected by implementation of the proposed action and any alternatives described in Section 2. The No Action alternative reflects the current situation within the project area and will serve as the baseline for comparing the environmental impacts of the analyzed alternatives. Aspects of the affected environment described in this section focus on the relevant major resources or issues.

### 3.1. Methodology

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#### 3.1.1. *Direct and Indirect Impacts*

Anticipated potential changes or alterations in the pre-existing condition of the environment produced by the proposed action, either directly or indirectly, have been considered. Effects are primarily anticipated based on the nature and scope of the proposed action, the equipment utilized, the timing of the action, and the location of the action relative to the surrounding environment.

#### 3.1.2. *Cumulative Impacts*

A Reasonably Foreseeable Development scenario (RFD) was prepared for the FFO in October 2014 (Engler, et al., 2014). The RFD identified high, moderate, and low potential regions for oil development of the Mancos-Gallup Formation. Within the high potential region, full development would include 5 wells per section, resulting in 1,600 completions. Within the moderate potential region, full development would include one well per section, resulting in 330 completions. Within the low potential region, full development would include one well per township, resulting in 30 well completions. Additionally, the RFD predicted 2,000 gas wells could be development in the northeastern corner of the FFO.

The following methods and assumptions were used to predict the potential impact of the development predicted in the RFD.

#### **Past Oil and Gas Development**

Past oil and gas wells were identified using Ongard. Following interim reclamation, the average wellpad size for past development is 0.75 acres per wellpad.

#### **Present and Future Oil Development**

Based on previous development, it was assumed that development of the high potential region would involve the twinning of wellpads. This is the placement of two or more wells on one wellpad. The assumption for the analysis is that the development of a section would include two twinned wellpads and one single wellpad, resulting in three wellpads for five wells. In the moderate and low potential regions, it was assumed that development would involve single wellpads. The proposed action is located outside of the high, moderate, and low potential regions.

The average wellpad size for a twinned wellpad was assumed to be 500 feet by 530 feet, or 6.08 acres. An additional 0.6 acres was added to account for any associated road or pipeline development, resulting 6.68 acres of short-term disturbance. Following completion of the well, interim reclamation of the wellpad and reclamation of any pipelines would occur, resulting in 1.5 acres of long-term disturbance.

The average wellpad size for a single wellpad was assumed to be 500 feet by 500 feet, or 5.74 acres. Again, an additional 0.6 acres was added to account for associated road or pipeline development, resulting in 6.34 acres of long-term disturbance. Following completion of the well, interim reclamation of the wellpad and reclamation of any pipelines would occur, resulting in 1.5 acres of long-term disturbance.

The Random Point Tool in ArcMap was used to randomly assign points representing wellpads and associated disturbance based on the RFD assumptions: five wells per section in the high potential region, one well per section in the moderate potential region, and one well per township in the low potential region. This allowed both long-term and short-term disturbance from oil development of the Mancos-Gallup Formation to be calculated for the analysis areas used in this EA.

## **Present and Future Gas Development**

The RFD predicted 2,000 wells could be developed in the gas prone area. The average wellpad size was assumed to be 555 feet by 410 feet, or 5.22 acres. An additional 0.6 acres of disturbance was added to account for associated roads and pipelines, resulting in total disturbance of 5.82 acres. Following completion of the well, interim reclamation of the wellpad and reclamation of any pipelines would occur, resulting in 1.5 acres of long-term disturbance.

The Random Point Tool in ArcMap was used to randomly assign points representing one wellpad and associated disturbance. This allowed both long-term and short-term disturbance from gas development in the northeastern corner of the FFO to be calculated for the analysis areas used in this EA.

## **3.2. Air Resources**

### **3.2.1. Affected Environment**

The proposed utility corridor is located in San Juan County, New Mexico. Additional general information on air quality in the area is contained in Chapter 3 of the Farmington PRMP/FEIS. In addition, new information about greenhouse gases (GHGs), and their effects on national and global climate conditions has emerged since this document was prepared. On-going scientific research has identified the potential impacts of GHG emissions such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), water vapor, and several trace gases on global climate. Through complex interactions on a global scale, GHG emissions may cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon sources have caused GHG concentrations to increase measurably, and may contribute to overall climatic changes, typically referred to as global warming.

Much of the information referenced in this section is incorporated from the Air Resources Technical Report for BLM Oil and Gas Development in New Mexico, Kansas, Oklahoma, and Texas (herein referred to as Air Resources Technical Report; (BLM 2014)). This document summarizes the technical information related to air resources and climate change associated with oil and gas development and the methodology and assumptions used for analysis.

The Environmental Protection Agency (EPA) has the primary responsibility for regulating air quality, including six nationally regulated ambient air pollutants (criteria pollutants). These criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>) and lead (Pb). EPA has established National Ambient Air Quality Standards (NAAQS) for criteria air pollutants. The NAAQS are protective of human health and the environment. EPA has approved New Mexico's State Implementation Plan and the state enforces state and federal air quality regulations on all public and private lands within the state, except for tribal lands and within Bernalillo County. Air quality is determined by atmospheric pollutants and chemistry, dispersion meteorology and terrain, and also includes applications of noise, smoke management, and visibility. Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. EPA has proposed or completed actions recently to implement Clean Air Act requirements for greenhouse gas emissions. Climate has the potential to influence renewable and non-renewable resource management.

## Air Quality

### Criteria Air Pollutants

The Air Resources Technical Report describes the types of data used for description of the existing conditions of criteria pollutants, how the criteria pollutants are related to the activities involved in oil and gas development, and provides a table of current National and state standards. EPA's Green Book web page (USEPA 2013) reports that all counties in the Farmington Field Office area are in attainment of all National Ambient Air Quality Standards (NAAQS) as defined by the Clean Air Act. The area is also in attainment of all state air quality standards (NMAAQS). The current status of criteria pollutant levels in the Farmington Field Office are described below.

"Design Values" are the concentrations of air pollution at a specific monitoring site that can be compared to the NAAQS. The 2012 Design Values for criteria pollutants are listed below in Table 2. There is no monitoring for CO and lead in San Juan County, but because the county is relatively rural, it is likely that these pollutants are not elevated. PM10 design values are not available for San Juan County.

**Table 2. 2012 Criteria Pollutant Monitored Design Values in San Juan County**

Pollutant	2012 Design Concentration	Averaging Time	NAAQS	NMAAQS
O <sub>3</sub>	0.071 ppm	8-hour	0.075 ppm <sup>1</sup>	
NO <sub>2</sub>	13 ppb	Annual	53 ppb <sup>2</sup>	50 ppb
NO <sub>2</sub>	38 ppb	1-hour	100 ppb <sup>3</sup>	
PM <sub>2.5</sub>	4.7 µg/m <sup>3</sup>	Annual	12 µg/m <sup>3,4</sup>	60 µg/m <sup>3,6</sup>
PM <sub>2.5</sub>	14 µg/m <sup>3</sup>	24 hour	35 µg/m <sup>3,3</sup>	150 µg/m <sup>3,6</sup>
SO <sub>2</sub>	19 ppb	1-hour	75 ppb <sup>5</sup>	

Source: U.S. Environmental Protection Agency, 2014

<sup>1</sup> Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years

<sup>2</sup> Not to be exceeded during the year

<sup>3</sup> 98th percentile, averaged over 3 years

<sup>4</sup> Annual mean, averaged over 3 years

<sup>5</sup> 99<sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years

<sup>6</sup> The NMAAQS is for Total Suspended Particulate (TSP)

In 2005, the EPA estimates that there was less than 0.01 ton per square mile of lead emitted in FFO counties, which is less than 2 tons total (USEPA 2012). Lead emissions are not an issue in this area, and will not be discussed further.

Air quality in a given region can be measured by its Air Quality Index value. The air quality index (AQI) is reported according to a 500-point scale for each of the major criteria air pollutants, with the worst denominator determining the ranking. For example, if an area has a CO value of 132 on a given day and all other pollutants are below 50, the AQI for that day would be 132. The AQI scale breaks down into six categories: good (AQI<50), moderate (50-100), unhealthy for sensitive groups (100-150), unhealthy (>150), very unhealthy and hazardous. The AQI is a national index, the air quality rating and the associated level of health concern is the same everywhere in the country. The AQI is an important indicator for populations sensitive to air quality changes.

Mean AQI values for San Juan County were generally in the good range (AQI<50) in 2013 with 80% of the days in that range. The median AQI in 2013 was 42, which indicates "good" air quality. The maximum AQI in 2013 was 156, which is "unhealthy".

Although the AQI in the region has reached the level considered unhealthy for sensitive groups on several days almost every year in the last decade, there are no patterns or trends to the occurrences (Table 3). On 8 days in the past decade, air quality has reached the level of "unhealthy" and on two days, air quality reached the level of "very unhealthy". In 2009 and 2012, there were no days that were "unhealthy for sensitive groups" or worse in air quality. In 2005 and 2013, there was one day that was "unhealthy" during each year. In 2010, there were five "unhealthy" days and two "very unhealthy days".

**Table 3. Number of Days classified as “unhealthy for sensitive groups” (AQI 101-150) or worse**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Days	3	6	9	18	1	0	12	9	0	1

Source: U.S. Environmental Protection Agency, 2013a

### **Hazardous Air Pollutants**

The Air Resources Technical Report discusses the relevance of hazardous air pollutants (HAPs) to oil and gas development and the particular HAPs that are regulated in relation to these activities (BLM 2014). The EPA conducts a periodic National Air Toxics Assessment (NATA) that quantifies HAP emissions by county in the U.S. The purpose of the NATA is to identify areas where HAP emissions result in high health risks and further emissions reduction strategies are necessary. A review of the results of the 2005 NATA shows that cancer, neurological and respiratory risks in San Juan County are generally lower than statewide and national levels as well as those for Bernalillo County where urban sources are concentrated in the Albuquerque area (USEPA 2012).

### **Climate**

The analysis area is located in a semiarid climate regime typified by dry windy conditions and limited rainfall. Summer maximum temperatures are generally in the range of 80 or 90 degrees Fahrenheit (°F), and winter minimum temperatures are generally in the teens to 20s. Temperatures occasionally reach above 100°F in June and July and have dipped below zero in December and January. Precipitation is divided between summer thunderstorms associated with the southwest monsoon and winter snowfall as Pacific weather systems drop south into New Mexico. Table 4 shows climate normals for the 30-year period from 1981 to 2010 for the Farmington, New Mexico, area.

**Table 4. Climate Normals for the Farmington Area, 1981-2010**

Month	Average Temperature (OF (1))	Average Maximum Temperature (OF)	Average Minimum Temperature (OF)	Average Precipitation (inches)
January	30.5	40.8	20.3	0.53
February	35.8	46.8	24.8	0.59
March	43.2	56.1	30.3	0.78
April	50.4	64.7	36.2	0.65
May	60.4	74.8	46.1	0.54
June	69.8	85.1	54.5	0.21
July	75.4	89.6	61.2	0.90
August	73.2	86.5	59.8	1.26
September	65.4	79.1	51.7	1.04
October	53.3	66.4	40.1	0.91
November	40.5	52.2	28.8	0.68
December	31.0	41.2	20.7	0.50

Source: Data collected at New Mexico State Agricultural Science Center - Farmington  
<sup>(1)</sup> degrees Fahrenheit

Very recently, pioneering research using space-borne (satellite and aircraft) determination of methane concentrations have indicated anomalously large methane concentrations may occur in the Four Corners region (Kort, Frankenberg, Costigan, Lindenmaier, Dubey, & Wunch, 2014). A subsequent study (Schneising, Burrows, Dickerson, Buchwitz, Reuter, & Bovensmann, 2014) indicated larger anomalies over other oil and gas basins in the U.S. Methane is 34 times more potent at trapping greenhouse gas emissions than CO<sub>2</sub> when considering a time horizon of 100 years (Intergovernmental Panel on Climate Change, 2013). While space-borne studies can determine the pollutant concentration in a column of air, these studies cannot pinpoint the specific sources of air pollution. Further study is required to determine the sources responsible for methane concentrations in the Four Corners region; however, it is known that a significant amount of methane is emitted during oil and gas well completion (Howarth, Santoro, &

A.Ingraffea, 2011). Methane is also emitted from process equipment, such as pneumatic controllers and liquids unloading, at oil and gas production sites. Ground-based, direct source monitoring of pneumatic controllers conducted by the Center for Energy and Environmental Resources (Allen, et al., 2014) show that methane emissions from controllers exhibit a wide range of emissions and a small subset of pneumatic controllers emitted more methane than most. Emissions measured in the study varied significantly by region of the U.S., the application of the controller and whether the controller was continuous or intermittently venting. The Center for Energy and Environmental Resources had similar findings of variability of methane emissions from liquid unloading (Allen, et al., 2014a). In October 2012, USEPA promulgated air quality regulations controlling VOC emissions at gas wells. These rules require air pollution mitigation measures that reduce the emissions of volatile organic compounds. These same mitigation measures have a co-benefit of reducing methane emissions. Future ground-based and space-borne studies planned in the Four Corners region with emerging pollutant measurement technology may help to pinpoint significant, specific sources of methane emissions in the region.

The Air Resources Technical Report summarizes information about greenhouse gas emissions from oil and gas development and their effects on national and global climate conditions. While it is difficult to determine the spatial and temporal variability and change of climatic conditions; what is known is that increasing concentrations of GHGs are likely to accelerate the rate of climate change.

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### **3.2.2. *Impacts from the Proposed Action***

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

Air quality would temporarily be directly impacted with pollution from exhaust emissions and dust. Air pollution from the motorized equipment and dust dissemination would discontinue at the completion of the project. Other factors that currently affect air quality in the area include dust from livestock herding activities, dust from recreational use, dust from use of roads for vehicular traffic, and emissions from oil and gas production activities. Impacts to air quality attributable to this project would be temporary and minor.

#### **Cumulative Impacts**

The primary activities that contribute to levels of air pollutant and GHG emissions in the Four Corners area are electricity generation stations, fossil fuel industries, and vehicle travel. The Air Quality Technical Report includes a description of the varied sources of national and regional emissions that are incorporated here to represent the past, present, and reasonably foreseeable impacts to air resources (BLM 2014). It includes a summary of emissions on the national and regional scale by industry source. Sources that are considered to have notable contributions to air quality impacts and GHG emissions include electrical generating units, fossil fuel production (nationally and regionally), and transportation.

The proposed project could result in a very small direct and indirect increase in several criteria pollutants, HAPs, and GHGs as a result the short term construction activity. The very small increase in emissions from short term construction activity would not be expected to result in exceeding the NAAQS for any criteria pollutants in the analysis area.

The very small increase in GHG emissions that could result from implementing the proposed alternative would not produce climate change impacts that differ from the No Action alternative. This is because climate change is a global process that is impacted by the sum total of GHGs in the Earth's atmosphere. The incremental contribution to global GHGs from the proposed action cannot be translated into effects on climate change globally or in the area of this site-specific action. It is currently not feasible to predict with certainty the net impacts from the proposed action on global or regional climate.

The Air Resources Technical Report (BLM 2014) discusses the relationship of past, present, and future predicted emissions to climate change and the limitations in predicting local and regional impacts related to emissions. It is currently not feasible to know with certainty the net impacts from particular emissions associated with activities on public lands.

## **3.3. Soil Resources**

### **3.3.1. Affected Environment**

Surface geological material in the project area is composed of surficial deposits weathered from the Nacimiento formation. The project area is located in a gradually sloped basin formed by Hampton Arroyo and its tributaries. Slopes within the project area range from 0 to 15%. Extensive biological soil crusts were observed within open woodlands in the eastern half of the project area during field surveys.

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service) has surveyed the soils in the proposed action area. Complete soil information is available online at the NRCS's Web Soil Survey website (USDA 2007). Soils of the proposed action are mapped as the Gypsiorthids-Badland-Stumble complex, moderately steep (50%) and Stumble-Fruitland association, gently sloping (50%). The NRCS describes the soil units as follows:

The Gypsiorthids-Badland-Stumble soil unit is found on hills, knolls, and breaks with slopes of 30 percent, and in valleys. This unit is about 35 percent Gypsiorthids, 35 percent badlands, 15 percent Stumble loamy sand, and 15 percent other soil inclusions. The Gypsiorthids portions of this soil unit have variable attributes and may be very shallow to deep, available water capacity is very low to high, runoff is slow to medium, water erosion potential is slight to moderate. This soil is generally well drained, and formed in material derived dominantly from gypsum. Badland consists of nonstony, barren shale uplands that are dissected by deep, intermittent drainageways and gullies. The Stumble soil is deep and somewhat excessively drained. It formed in alluvium derived dominantly from sandstone and shale. Typically, the surface layer is yellowish brown and pale brown loamy sand. Permeability is rapid, Available water capacity is low, is very slow, and the hazard of water erosion is slight. The potential plant communities in this soil unit include Indian ricegrass, giant dropseed, alkali sacaton, and bottlebrush squirreltail.

The Stumble-Fruitland soil unit is found on fans and valley sides with slopes of 0 to 8 percent. This unit is about 40 percent Stumble loamy sand, 30 percent Fruitland sandy loam, and 30 percent other soil inclusions. The Stumble soil is deep and somewhat excessively drained, and it formed in alluvium derived dominantly from sandstone and shale. The surface layer is typically brown loamy sand about 6 inches thick. This soil has rapid permeability, low available water capacity, slow runoff, and the water erosion hazard is slight to none. The Fruitland soil is deep and well drained, and it formed in alluvium derived dominantly from sandstone and shale. The typical surface layer is brown sandy loam about 7 inches thick. This soil has moderately rapid permeability, moderate available water capacity, slow runoff, the hazard of water erosion is slight. The potential plant community for this soil unit is Indian ricegrass, giant dropseed, sand dropseed, and alkali sacaton (USDA 2007).

BLM-FFO reviewed Natural Resource Conservation Service (NRCS) soil surveys and has identified the Gypsiorthids-Badland-Stumble complex, moderately steep as potentially fragile depending on percent slope and area of disturbance. While the project is located on slopes that reach 15%, the area of bare soil created would be less than 0.1 acre. Therefore, soils in the project area are not considered fragile for the purposes of this analysis.

### **3.3.2. Impacts from the Proposed Action**

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

The proposed action has the potential to impact all soils within the proposed 3.21-acre ROW. Impacts within the majority of the ROW would be limited to those related with vehicle use (1.74 acres). Vehicle use within the project area may compact soils, diminish vegetative cover, and crush biological soil crusts. Soils that would be exposed and excavated for the placement of power poles (0.005 acre) would be structurally mixed, displaced and exposed to the elements of wind and water erosion. Once disturbed, these soils can be subject to increased erosion, dependent upon storm events of water and/or wind. Disturbed areas would be susceptible to wind and water erosion until reseeding had been established

(three to five growing seasons). The effects to soils would be low based on the small area of disturbance, overall low slope angles, and proposed design features. Effects would primarily be short-term until re-vegetation and natural recruitment establish vegetative cover in the project area. Soil crusts are not expected to fully recover during the life of the project.

Erosion stipulations for the proposed action are detailed in Section 2.1.4. All bare areas not needed for aboveground equipment or vehicular travel will be reclaimed. Re-establishment of permanent, perennial vegetation will decrease long term soil erosion effects.

## Cumulative Impacts

Past, present, and reasonably foreseeable future actions within the analysis area, the USGS hydrologic unit code (HUC) 1408010410 watershed, that may also impact soils resulting from surface disturbance include the following:

- Oil and gas development, including associated roads and pipelines
- Livestock grazing
- Residential, commercial, and industrial development, primarily in the vicinity of the communities of Farmington, Aztec, Flora Vista, and Cedar Hill
- Agricultural development, primarily along the Animas River
- Off-highway vehicle use

The HUC 1408010410 watershed is 144,189 acres in area, and 3,238 oil and gas wells have been developed in the watershed. These wells have resulted in 6,596.47 acres of surface disturbance (4.6% of the watershed). Based on the RFD (Engler, et al., 2014), oil and gas development in the HUC 1408010410 watershed may result in 851.54 acres of short-term disturbance and 295.50 acres of long-term disturbance. This results in a total of 7,743.51 acres of surface disturbance from oil and gas development in the HUC 1408010410 watershed (5.4% of the watershed). Oil and gas development impacts soils through exposure of soils to erosion for the clearing of wellpads, wellpad cut and fill slopes, access roads, and pipeline ROWs. Cleared areas are either seeded upon interim reclamation, or left bare where equipment and vehicle access is needed.

Effects of ongoing grazing on soils can include loss of cover vegetation, disturbance of soil surface crusts and biological components, soil compaction, and potential long-term indirect effects associated with erosion and changes in vegetation. Grazing in the FFO is managed to control the effects of grazing on soils through rest, rotation, and range improvement measures.

Extensive areas within and around the communities listed above have been converted to urban and semi-urban uses. Soils have been stabilized with durable surfaces such as asphalt and concrete, covered by buildings, or covered by lawn grasses or otherwise landscaped. Other areas have been cleared by development and use, but have not been stabilized. These areas are susceptible to wind and water erosion. Similarly, agricultural areas occasionally clear vegetation and expose soils to wind and water erosion. Total surface disturbance from residential, commercial, industrial, and agricultural development has not been determined, but is presumed to be considerable.

Off-highway vehicle use was widespread and evident in the project area vicinity. Similar off-highway vehicle use occurs throughout the outskirts of the communities listed above, primarily in upland hills at the fringes of the watershed. Vehicle use creates ruts that can concentrate flows and erosion and creates bare areas susceptible to wind and water erosion. The extent of off-highway surface disturbance has not been calculated, but is presumed to be moderate.

The total calculated surface disturbance from past, present, and reasonably foreseeable actions in the HUC 1408010410 watershed is 7,743.51 acres. The proposed action would contribute no more than 3.21 acres to that total and represents 0.04% of the cumulative impacts to soils.

## 3.4. Upland Vegetation

### 3.4.1. Affected Environment

Vegetation within the proposed project area is comprised of a mixed composition of mid-seral aged piñon-juniper (*Pinus edulis-Juniperus osteosperma*) community and sagebrush (*Artemisia tridentata*) community. There are approximately 638,884 acres of piñon-juniper community and 551,198 acres of sagebrush community in the BLM/FFO planning area (BLM 2013). The proposed ROW contains approximately 35 trees and snags, approximately 5% canopy cover. The understory vegetative cover was approximately 60% throughout the proposed project area. The vegetative community was generally dominated by big sagebrush (*Artemisia tridentata*), fourwing saltbush (*Atriplex canescens*), broom snakeweed (*Gutierrezia sarothrae*), galleta grass (*Pleuraphis jamesii*) and Indian ricegrass (*Achnatherum hymenoides*). See the project Biological Survey Report, on file with the FFO, for a detailed list of vegetation observed in the project area.

### 3.4.2. Impacts from the Proposed Action

#### Direct and Indirect Impacts

Effects to vegetation would result from the removal and modification of vegetation. Installation of power poles would result in 0.005 acre of direct vegetation removal at the surface. Tree trimming or removal may be necessary to create suitable conductor clearance; this is expected to be minimal due to the low stature of trees and the low number of trees. Vehicle use within the 3.21-acre ROW (1.74 acres) may also crush vegetation and soils crusts, and may increase soil erosion in the short term. Vehicle use may directly and indirectly limit plant growth and regeneration in the project area in the short-term. The area of native vegetation to be removed or disturbed would be minimal relative to the overall area of similar habitat in the FFO planning area. With the implementation of design features, the proposal is projected to have low short and low long term effects on area vegetation.

Following completion of the proposed electric utility line, bare soils would be seeded with an FFO prescribed seed mixture. The re-establishment of vegetation is expected to take at least three (3) to five (5) growing seasons, depending on precipitation. Initial vegetation in interim reclaimed areas is likely to be dominated by grasses of the reclamation seed mix and ruderal forbs. Natural re-establishment of the native sagebrush community may take 15 to 30 years (Bunting 1984). Natural re-establishment of the native piñon-juniper community may take 100 to 300 years (Erdman 1970).

#### Cumulative Impacts

Past, present, and reasonably foreseeable future actions within the analysis area, the USGS HUC 1408010410 watershed, which may also impact upland vegetation resulting from surface disturbance include the following:

- Oil and gas development, including associated roads and pipelines
- Livestock grazing
- Residential, commercial, and industrial development, primarily in the vicinity of the communities of Farmington, Aztec, Flora Vista, and Cedar Hill
- Agricultural development, primarily along the Animas River
- Off-highway vehicle use

Past, present, and reasonably foreseeable future actions have or will clear vegetation, disrupt soils (indirectly impacting vegetation), and/or replace native vegetation with non-native species. As described above in Section 3.3.2 (Cumulative Effects), the proposed action would result in a 0.04% increase in surface disturbance (almost entirely short-term) when added to other past, present, and reasonably foreseeable development in the HUC 1408010410 watershed.

Other potential actions affecting vegetation in the action area can include wildfires, prescribed fires, mechanical and chemical vegetation treatments, and firewood gathering. There was no evidence of recent wildfires in the action area, and BLM GIS data of known fires does not indicate any documented

wildfires or prescribed burn in the action area in recent history. There were also no signs of effects to vegetation from treatments or firewood gathering in the action area.

## **3.5. Noxious and Invasive Weeds**

### **3.5.1. Affected Environment**

Scotch thistle (*Onopordum acanthium*), a State Class A noxious weeds species, and Halogeton (*Halogeton glomeratus*) (Class B) were observed within the western portion of the project area on private lands. Halogeton was not widespread at the time of the August 18, 2015 on-site inspection and there was only one Scotch thistle observed. Class A species have limited distribution in New Mexico; preventing new infestations and eradicating existing infestations is the State's highest priority (NMDA 2009). Class B species are limited to portions of New Mexico; areas of severe infestation should be contained and further spread stopped (NMDA 2009).

### **3.5.2. Impacts from the Proposed Action**

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

Invasive species are generally tolerant of disturbed conditions, and disturbed soils at project sites may provide an opportunity for the introduction and establishment of non-native invasive species. Seeds or other propagules of invasive species may be transported to a project site from infested areas by heavy equipment or other vehicles that are used at the site. Invasive species may also spread from established populations near a project site and colonize soils disturbed by project activities. The longer time periods required for the re-establishment of plant communities in arid regions may create an increased potential for the establishment and spread of invasive species. Invasive plant species typically develop high population densities and tend to exclude most other plant species, thereby reducing species diversity and potentially resulting in long-term effects. The establishment of invasive species may greatly reduce the success of native plant community restoration efforts in project areas and create a source of future colonization and degradation of adjacent undisturbed areas. It will be the operator's responsibility to monitor, control, and eradicate all noxious/invasive weeds within the proposed project area during the life of the project.

#### **Cumulative Impacts**

Past, present, and reasonably foreseeable future actions within the analysis area, the USGS HUC 1408010410 watershed, that may also impact the extent of noxious and invasive weeds within the analysis area include the following:

- Oil and gas development, including associated roads and pipelines
- Livestock grazing
- Agricultural development, primarily along the Animas River
- Residential, commercial, and industrial development, primarily in the vicinity of the communities of Farmington, Aztec, Flora Vista, and Cedar Hill
- Off-highway vehicle use

Past, present, and reasonably foreseeable future actions have or will clear native vegetation and/or distribute non-native seed to disturbed areas. As described above in Section 3.3.2 (Cumulative Effects), the proposed action would result in a 0.04% increase in surface disturbance (almost entirely short-term) when added to other past, present, and reasonably foreseeable development in the HUC 1408010410 watershed. Vehicle use related to the project would be minimal relative to other vehicle uses in the analysis area, and would be limited to the project area, and paved roads accessing the project area.

## 3.6. Special Status Species

### 3.6.1. Affected Environment

In accordance with BLM Manual 6840, the Farmington Field Office of the Bureau of Land Management (FFO) has prepared a list of special management species to focus species management efforts toward maintaining habitats under a multiple use mandate, called FFO Special Management Species (SMS). The BLM manages certain sensitive species not federally listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. The authority for this policy and guidance is established by the Endangered Species Act of 1973, as amended; Title II of the Sikes Act, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and Department of Interior Manual 235.1.1A. FFO SMS and BLM Sensitive Species (SS) are listed below in Table 5.

The proposed action area provides potential habitat for the FFO SMS and State of New Mexico Endangered Brack's hardwall cactus (*Sclerocactus cloveriae* ssp. *brackii*) and Aztec gilia (*Aliciella formosa*). The proposed action also provides limited foraging habitat for SMS raptors including American peregrine falcon (*Falco peregrinus anatum*), prairie falcon (*Falco mexicanus*), golden eagle (*Aquila chrysaetos*), and ferruginous hawk (*Buteo regalis*). Refer to the Biological Survey Report, on file with the FFO, for analysis of these species.

Woodlands in the project area may be suitable to support piñon jay (*Gymnorhinus cyanocephalus*) nesting. Foraging habitat may be less than ideal as the proportion of piñon pine to juniper in the project area woodland is relatively low at approximately 10% or less. Spotted bat (*Euderma maculatum*) roost and forage habitat in the action area is limited, but the species is wide ranging and can occur far from roost sites and preferred foraging habitat.

Table 5, listed below, provides an evaluation of the potential for Special Management Species and Sensitive Species to occur in the proposed action area. The species' potential presence determinations are based on evaluation of the proposed action area habitat and the known habitat requirements of the listed species. None of these species were observed during the field survey of the proposed action.

**Table 5. Special Management Species (SMS) and Sensitive Species (SS) of the BLM/FFO and their Potential to Occur in the Action Area**

Species	Conservation Status		Habitat Associations	Potential to Occur in the Proposed Action Area
	BLM/FFO	New Mexico		
<b>Mammals</b>				
Spotted bat ( <i>Euderma maculatum</i> )	SS	NM-T	Roost in cracks and crevices within rocky cliffs, typically near open water. Show apparent seasonal change in habitat, occupying ponderosa pine woodlands in the reproductive season and lower elevations at other times of the year.	Small areas of exposed ledge rock within the action area are unlikely to provide suitable roost habitat, water is lacking.
<b>Birds</b>				
American peregrine falcon ( <i>Falco peregrinus anatum</i> )	SMS	NM-T	Open country near lakes or rivers with rocky cliffs and canyons. Tall city bridges and buildings also inhabited.	Proposed action area contains suitable habitat for foraging, but not nesting.
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	SMS/SS	NM-T	Near lakes, rivers and cottonwood galleries. Nests near surface water in large trees. May forage terrestrially in winter	Proposed action area does not contain suitable habitat for nesting, foraging opportunities unlikely.

Species	Conservation Status		Habitat Associations	Potential to Occur in the Proposed Action Area
	BLM/FFO	New Mexico		
Bendire's thrasher ( <i>Toxostoma bendirei</i> )	SS		Fairly open areas with sparser vegetation, avoids riparian areas or arroyos with dense vegetation. On the Colorado Plateau, the thrasher inhabits sagebrush with scattered junipers.	Edge habitat between woodlands and sagebrush-grasslands may provide some limited habitat, unlikely to be sufficient in size to support nesting.
Ferruginous hawk ( <i>Buteo regalis</i> )	SMS		Grasslands and semi-desert shrub; occasionally piñon-juniper edge habitat. Nest on rock spires in NW New Mexico.	Proposed action area contains suitable habitat for foraging, nesting unlikely
Golden eagle ( <i>Aquila chrysaetos</i> )	SMS		In the West, mostly open habitats in mountainous, canyon terrain. Nests primarily on cliffs and trees.	Proposed action area contains suitable habitat for foraging, but not nesting.
Piñon jay ( <i>Gymnorhinus cyanocephalus</i> )	SS		Large areas of piñon-juniper woodland. Reliant on piñon seeds.	Suitable woodland habitat may occur in higher elevations or shadier portions of the action area. Little to no suitable habitat occurs within the project area.
Prairie falcon ( <i>Falco mexicanus</i> )	SMS		Arid, open country, grasslands or desert scrub, rangeland; nests on cliff ledges, trees, power structures.	Proposed action area contains suitable habitat for foraging, but not nesting.
<b>Plants</b>				
Aztec gilia ( <i>Aliciella formosa</i> )	SMS/SS	NM-E	Salt desert scrub communities in soils of the Nacimiento Formation (5,000-6,000 ft).	Nacimiento formation occurs in the project and action area, but no individuals were observed during the August 18, 2015 onsite.
Brack's hardwall cactus ( <i>Sclerocactus cloveriae</i> ssp. <i>brackii</i> )	SMS/SS	NM-E	Sandy clay of the Nacimiento Formation in sparse shadscale scrub (5,000-6,000 ft).	Nacimiento formation occurs in the project and action area, but no individuals were observed during the August 18, 2015 onsite.

BLM/FFO 2008, BLM/FFO 2012

### 3.6.2. Impacts from the Proposed Action

#### Direct and Indirect Impacts

The proposed action would result in the direct loss of 0.003 acre of potentially suitable habitat for Brack's hardwall cactus and Aztec gilia for the installation of power poles. Potentially suitable habitat for Brack's hardwall cactus and Aztec gilia within the ROW (approximately 1.74 acres) may also be impacted through vehicle use and worker activity in the ROW. Use of the ROW during construction has the potential to compact soils, crush vegetation and soils crusts, and may increase soil erosion in the short term, thereby reducing habitat suitability for the species. Construction activities may temporarily increase human intrusion into the area with associated increases in noise, dust, and vehicle traffic. This may temporarily displace SMS and SS wildlife or their prey. Effects to SMS/SS would be limited due to the small area impacted and the availability of adjacent suitable habitat. No night work is planned. Impacts to migratory birds would be limited through design features and MBTA conventions (Section 1.4). The effects to SMS/SS are anticipated to be low in the short and long term.

#### Cumulative Impacts

Past, present, and reasonably foreseeable future actions within the analysis area, the USGS HUC 1408010410 watershed, that may also impact special status species resulting from surface disturbance and human encroachment include the following:

- Oil and gas development, including associated roads and pipelines

- Residential, commercial, and industrial development, primarily in the vicinity of the communities of Farmington, Aztec, Flora Vista, and Cedar Hill
- Agricultural development, primarily along the Animas River
- Livestock grazing
- Off-highway vehicle use

Past, present, and reasonably foreseeable future actions have or will increase human activity in the analysis area, remove and fragment habitat, or otherwise degrade habitat. As described above in Section 3.3.2 (Cumulative Effects), the proposed action would result in a 0.04% increase in surface disturbance (almost entirely short-term) when added to other past, present, and reasonably foreseeable development in the HUC 1408010410watershed.

## **3.7. Cultural Resources**

### **3.7.1. Affected Environment**

The proposed action is located within the archaeologically rich San Juan Basin of northwest New Mexico. In general, the history of the San Juan Basin can be divided into five major periods: PaleoIndian (ca. 10000 B.C. to 5500 B.C.), Archaic (ca. 5500 B.C. to A.D. 400), Basketmaker II-III and Pueblo I-IV periods (aka Anasazi; A.D. 1-1540), and the historic (A.D. 1540 to present), which includes Native American as well as later Hispanic and Euro-American settlers. Detailed descriptions of these various periods are provided in the Bureau of Land Management Farmington Field Office Final Environmental Impact Statement (2003) and will not be reiterated here. Additional information can also be found in an associated documented, Cultural Resources Technical Report (SAIC 2002).

BLM Manual 8100, The Foundations for Managing Cultural Resources (2004) defines a cultural resource as "a definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. (cf. "traditional cultural property"). Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit described in this Manual series. They may be but are not necessarily eligible for the National Register (a.k.a. "historic property")."

In the broadest sense cultural resources include sites, buildings, structures, objects, and districts/landscapes (NPS 1997). Cultural resources (prehistoric or historic) vary considerably, and can include but are not limited to simple artifact scatters, domiciles of various types with a myriad of associated features, rock art and inscriptions, ceremonial/religious features, and roads and trails. Traditional Cultural Properties (TCPs) are cultural resources that are eligible for the National Register of Historic Places (NRHP) and have cultural values, sometimes sacred, that transcend for instance the values of scientific importance that are normally ascribed to cultural resources such as archaeological sites and may or may not coincide with archaeological sites (Parker and King 1998). Historically Native American communities are most likely to identify TCPs, although TCPs are not restricted to those associations. Some TCPs are well known while others may only be known to a small group or otherwise only vaguely known. Native American tribal perspectives on what is considered a TCP are not necessarily limited by a places National Register eligibility or lack thereof.

The National Register of Historic Places (NRHP; 36 CFR Part 60) is the basic benchmark by which the significance of cultural resources are evaluated by a federal agency when considering what effects its actions may have on those resources. To summarize, to be considered eligible for the NRHP a cultural resource must meet one or more of the following criteria: a) are associated with events that have significantly contributed to the broad patterns of our history; or b) are associated with the lives of persons significant in our past; or c) embody distinctive characteristics of the type, period, or method of construction, or represents the work of a master, or possesses high artistic value, or represent a

significant and distinguishable entity whose components may lack individual distinction; or d) have yielded, or may be likely to yield, information that is important in a pre-history or history. The resource, as applicable, must possess one or more of the following aspects of integrity; location, design, setting, materials, workmanship, feeling, and association. In the event a determination of eligibility cannot be made, the resource is treated as eligible (a historic property).

Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800) requires federal agencies to consider what effect their licensing, permitting, funding or otherwise authorizing an undertaking, such as an APD or R-O-W, may have on properties eligible for the National Register. Pursuant to 36 CFR 800.16 (i), "Effect means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register." Effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. Area of Potential Effect (APE) means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is typically defined as areas to be directly disturbed and areas in immediate close proximity. Cultural resources are identified through a combination of literature review and pedestrian survey consistent with guidelines set forth in the Procedures for Performing Cultural Resources Fieldwork on Public Lands in the Area of New Mexico BLM Responsibilities (BLM 2005).

Cultural resources within the entire APE for the Proposed Action were identified by a literature review and an archaeological BLM Class III level (100%) pedestrian survey by Stratified Environmental & Archaeological Services, LLC (SEAS). The archaeological report (SEAS Report 15-078; BLM Report No.: 2016(I)008F was prepared and submitted to the BLM.

The Class III inventory identified one cultural site within the APE. Eligibility for nomination to the National Register of Historic Places (NRHP) is recommended as undetermined.

The congressionally designated route of the Old Spanish National Historic Trail (OST) lies ca. 0.7-0.8 mile south of the Proposed Action. On November 6, 1829 Santa Fe merchant Antonio Armijo led 30-60 men and pack mules on an 86 day journey from Abiquiu to San Gabriel Mission. Armijo's journal (Hafen and Armijo 1947) indicates that he passed through this area November 13-14. He left San Gabriel Mission on March 1, 1830 following the same route, arriving home on April 25, 1830, having completed the first round trip trade caravan between New Mexico and California. Armijo apparently used this route only once, and subsequently routes farther to the north took precedence. The OST is a term used largely after the period of significant use and the name Spanish Trail is attributed to John C. Fremont in 1845 and presumably takes its name from the Spanish colonies in northern New Mexico and southern California that were economically linked by this rugged route. During the period of significance (1829-1847) the trail went by the name El Camino de California and El Camino de Nuevo Mexico (Merlin, Marshall, Roney 2011:6).

There are no known traces of the OST Armijo Route in the area of the Proposed Action and its exact location remains unknown. Based on GIS analysis the Proposed Action appears to lie within view of the designated route. Field observations on 10/7/2015 demonstrated that the project area is hidden from view by a ridge and existing vegetation. The new power line will parallel existing lines with very little visual presence from the OSNHT corridor, and the proposed use of wooden poles will minimize general visibility.

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### **3.7.2. *Impacts from the Proposed Action***

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

Cultural resources tend to degrade over time from natural forces; however, many survive for hundreds or thousands of years. Any land-disturbing activity can disturb, damage, or uncover cultural resources. Direct impacts normally include alterations to the physical integrity of a historic property. If a historic property is significant for other than its information potential, direct impacts may also include the introduction of audible, atmospheric, or visual elements that are out of character for the property. A potential indirect impact from the proposed action, particularly in undeveloped areas is the increase in

human activity or access to the area with an increased potential of unauthorized damage to historic properties.

Historic properties are being avoided with the implementation of design features such as but not limited to reduction of construction areas, temporary barriers, and site monitoring. These design features are detailed in the Cultural Resource Record of Review, attached to the stipulations in the ROW. The proposed action is not known to physically threaten any TCP's, prevent access to sacred sites, prevent the possession of sacred objects, or interfere or otherwise hinder the performance of traditional ceremonies/rituals. The proposed action will have no direct or indirect impact on historic properties (no historic properties affected).

### **Old Spanish National Historic Trail**

The BLM is required to evaluate whether the proposed action would substantially interfere, or be incompatible with the nature and purposes of the National Trail (Manual 6280, Section 1.6.A.2.i-ii).

- Will the BLM's ability to effectively manage the nature and purposes of the trail, trail resources, qualities, values, uses (including public access and enjoyment) and associated settings be affected?
  - No. Public access and enjoyment of the Armijo Route of the OST in this area will not be affected.
- Will it require a major relocation of the National Trail Management Corridor in order to provide for the conservation and enjoyment of the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, or the primary use or uses of the trail?
  - No. The National Trail Management Corridor has not yet been designated.
- Are the characteristics that made the trail worthy of designation, including Federal Protection Components, including high-potential historic sites or high potential route segments located on public land, are affected?
  - No. Based on a viewshed analysis, some or all of the Proposed Action may be visible from within 0-5 miles (e.g. foreground-middle ground) of the OST. A field visit by BLM cultural staff verified a high level of existing development in this area (power lines, pipelines, improved and paved roads, natural gas wells, etc.) and concluded the impact will not be adverse. In addition there are no known high potential historic sites related to the period of significance for the OST in this area.
- Are designated National Historic Trail properties, including remnants and artifacts from the associated period of use that may be eligible or listed on the National Register and/or determined by the National Trail administering agency to qualify as possible high potential historic sites or high potential route segments affected?
  - No. Decades of cultural resources surveys have not identified any physical evidence of the OST within this area.
- Is the agency's ability to manage the trail for the purpose of identifying and protecting the historic route and its historic remnants and artifacts for public use and enjoyment, including interpretation, education, appreciation, and vicarious experiences affected?
  - No. Public use and enjoyment, including opportunities for interpretation, education, appreciation, and vicarious experiences are not affected.

Since it has been determined that the proposed action does not have the potential to substantially interfere with the nature and purposes, or constitute an incompatible activity, to the level that may cause significant adverse impact to the nature and purposes, no notification to the Deputy State Director and the NLCS Division Chief is required pursuant to BLM Manual 6280, Section 5.3.C.

## Cumulative Impacts

The Cumulative Impacts Analysis Area (CIAA) is the associated watershed(s). The United States is divided and sub-divided into successively smaller hydrologic units which are classified into six levels nested within each other, from the largest geographic area (region) to the smallest geographic area (sub-watershed). The boundaries are distinguished by hydrographic and topographic criteria that delineate an area of land upstream from a specific point on a river, stream or similar surface waters (USGS 2013, NRCS 2013). Hydrologic units can be viewed as a naturally defined landscape and impacts to cultural resources in one part of that landscape could, theoretically, affect a broader understanding of the interrelationships between sites in the landscape as a whole. The smallest hydrologic unit area, typically from 10 to 40 K acres (15 to 62 mi<sup>2</sup>; HUC 12) or combination thereof are used as the CIAA.

The CIAA for cultural resources is the proposed project area and the Estes Arroyo-Animas River sub-watershed which totals 37,011 acres. Based on New Mexico Cultural Resource Information System data (NMCRIS; July 2015), within the sub-watershed there are 346 recorded sites and approximately 20% of the sub-watershed (7,367 acres) have been inventoried for cultural resources by 755 unique investigations since 1975. The cultural inventory coverage for the CIAA is likely higher as not all survey data is digitally available (e.g., surveys since July 2015).

Aztec Ruins National Monument is within the CIAA approximately 3 miles west of the Proposed Action and is listed on the National Register of Historic Places, New Mexico State Register of Cultural Properties, and as a World Heritage Site. Other historic features of downtown Aztec are also listed on the National Register of Historic Places and New Mexico State Register of Cultural Properties. The Old Spanish National Historic Trail also intersects the CIAA.

There are no properties listed as Chaco Protection Sites within the CIAA.

- What impacts would surface disturbance for the proposed action have on historic properties in the CIAA?

There will be no negative cumulative impact on known historic properties as they are being avoided by relocating the surface disturbing components of the proposed action away from the property. There will be no known negative cumulative impact on the landscape that would affect the seven aspects of integrity (location, design, setting, materials, workmanship, feeling, association) of known historic properties. A positive cumulative effect is the additional scientific information yielded by the archaeological survey both in terms of site specific information and the amount of the landscape inventoried for cultural resources.

- What impacts would the project have on unknown (buried, not visible) historic properties in the CIAA?

Risks of impacting unknown (i.e., buried) historic properties is normally negligible as cultural resources "discoveries" during surface disturbing components of a proposed action are infrequent in the FFO. Since FY2000, 28 discoveries have occurred in association with 21,290 actions (e.g. road, well, pipeline, etc.), or 1:760. During that period 153,626 acres of land were inspected for cultural resources, with an average of 7.2 acres per action and one discovery per 5,472 acres. All authorizations (e.g., APDs, ROWs) have stipulations, under penalty of law, requiring the reporting of and avoidance of further disturbing cultural discoveries during a proposed action. Where the risk of discoveries can be reasonably expected (e.g., ≤ 100' of a known historic property, or in environmental settings known or suspected to be conducive to buried sites), archaeological monitoring by a qualified and permitted archaeologist during initial disturbance (e.g., blading, trenching) is normally required. If buried historic properties are discovered, collaborative steps are taken to protect them in place or recover their important information.

## **3.8. Travel and Transportation**

### **3.8.1. Affected Environment**

The existing transportation infrastructure located in the action area includes a network of local roadways. The proposed electric utility alignment would be located along the northern edge of New Mexico Highway (NM) 173 (Navajo Dam Road) between mile post 2.09 (2.09 miles east of the intersection with US Highway 550) and mile post 3.35 (0.94 mile west of the intersection with NM 575). NM 173 is a two-way, two-lane, paved roadway approximately 18 miles long. NM 173 is a primary roadway between Aztec, NM and Navajo Dam, NM and provides access to secondary local roads. Three access roads designed and located for entrance and egress to local natural gas wells and the Aztec Motocross race track are intersected by the proposed project alignment; the roads are unpaved, native surface. The transportation network surrounding the proposed project serves relatively low average daily traffic and would be described as un-congested. The New Mexico Department of Transportation estimates 1,604 annual average daily trips for NM 173 (NMDOT 2015).

### **3.8.2. Impacts from the Proposed Action**

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

The proposed utility corridor is proximate to and parallels NM 173 throughout the project alignment. Access to the proposed project would utilize the previously disturbed and durable surfaces of the public roadway corridor. A temporary increase in traffic related to personnel commuting and construction equipment traveling to the proposed project area would occur. This increase in traffic, primarily light truck traffic, would be minimal relative to the existing level of traffic on NM 173. The proposed action may result in minor, temporary disruption to the immediate transportation network. Traffic flow will be directed as necessary during construction activities according to the Manual of Uniform Traffic Devices and applicable traffic control plans developed for the project. Access roads which are crossed by the proposed alignment will not be blocked and access shall be available at all times.

#### **Cumulative Impacts**

Past, present, and reasonably foreseeable future actions within the analysis area, the USGS HUC 1408010410 watershed, that may also impact transportation and travel through interruptions to traffic include the following:

- Oil and gas development, including access road turnout construction and construction of pipeline crossings
- Road construction and maintenance including the construction of the Aztec East Arterial bypass highway

Approximately 345 miles of US, State, and County roads exist in HUC 1408010410. Past, present, and reasonably foreseeable future actions have or will result in traffic interruptions along these roadways. Relative to actions across the HUC, the proposed action would have a relatively minor, short term incremental increase to traffic interruptions within the analysis area. The proposed project does not have an associated road and will not be allowed to turn into a road. The applicant will be required to ensure the ROW does not turn into a road.

## 4. SUPPORTING INFORMATION

### 4.1. Tribes, Individuals, Organizations, or Agencies Consulted

**Error! Reference source not found.** contains a list of tribes, individuals, organizations, and agencies invited to attend the on-site for the project.

**Table 6. Tribes, Individuals, Organizations, and Agencies Invited to the On-Site**

Name	Tribe, Organization, or Agency	Attended On-Site
Mike Eisenfeld	San Juan Citizens Alliance	No
Bruce Baizeal	Earthworks	No
Don Schreiber	VivaRioArriba	No
Penny Anderson	Western Resource Advocates	No
Lori Goodman	Diné CARE	No
Melinda Ciocco	Navajo Nation Historic Preservation Department	No
Samuel Sage	Counselor Chapter Community Services Coordinator	No
Tweety Blancett		No
Harrilene Yazzie	Bureau of Indian Affairs	No
Jerry Degroat	Bureau of Indian Affairs	No
Rita Whitehorse-Larsen	Navajo Nation Environmental Protection Agency	No
Ron Maldonado		No
Sam Diswood	Navajo Nation Department of Fish and Wildlife	No
Dave Keck	San Juan County Public Works	No
Knickerbocker Ranch LLC.	Grazing Allottee, Knickerbocker Ranch Allotment	No

The BLM fulfills its responsibilities under the National Historic Preservation Act (NHPA) through a number of agreements. The National Programmatic Agreement (NPA; 2012) between the BLM, Advisory Council on Historic Preservation (ACHP), and the National Council of State Historic Preservation Officers (NCSHPO) allows the agency to fulfill its NHPA responsibilities according to the provisions of the NPA in lieu of 36 CFR 800.3 through 800.7 regulations. The NPA, which applies to all BLM activities below specified thresholds, provides among other things, regulatory relief in many instances from the requirement for case-by-case review by State Historic Preservation Officers (SHPOs) and the ACHP, in exchange for managers' maintenance of appropriate staff capability and observance of internal BLM standards as set out in the 8100 Manual series.

The New Mexico BLM has a two-party protocol with the New Mexico SHPO (2014) specifically encouraged by the NPA. This protocol details how the New Mexico BLM and SHPO will regulate their relationship and consult. Specifically, this document outlines among other things, how and when consultation will be conducted between the BLM, SHPO, Tribes, and the public. The protocol also outlines when case-by-case SHPO consultation is or is not required for specific undertakings and the procedures for evaluating the effects of common types of undertakings and resolving adverse effects to historic properties. These common types of undertakings regularly include the common actions undertaken in the BLM FFO.

## 4.2. List of Preparers

**Table 7. Summary of Document Preparers**

ID Team Member	Title	Organization
Monica Tilden	Realty Specialist	BLM
Jim Copeland	Archaeologist	BLM
John Kendall	T&E Species Biologist	BLM
Amanda Nisula	Planning & Environmental Specialist	BLM
Jeff Tafoya	Supervisor Multiple Resources	BLM
Heather Perry	Natural Resource Specialist	BLM
Sherrie Landon	Biological Scientist (Paleo)	BLM
Nathan Kirker	Biologist	SME
Stephni Balzly	Project Manager	Reliable Power Consultants

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## **APPENDIX A. SURVEY PLATS**

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## APPENDIX B. LAWS AND REGULATIONS THAT GOVERN FEDERAL ACTIONS

**Table B1. Laws and Regulations that Govern Federal Actions**

LAW/REGULATION	RESOURCE PROTECTED	AUTHORITY
Clean Air Act (CAA)	Air Quality, Air Emissions and Permits.	New Mexico Environment Department (NMED)
Clean Water Act (CWA) 1977, as amended. Section 404 Permits.	Surface waters of the U.S., crossing/diversion of ephemeral washes	U.S. Army Corps of Engineers
Federal Water Pollution Control Act and Section 404 of the CWA.	Discharges into surface waters from point sources	New Mexico Water Quality Control Commission (NMWQCC)
Storm Water Pollution Prevention Plan (SWPPP), Section 402 of the CWA	Construction projects disturbing greater than 5 acres. Minimize erosion	USEPA
Safe Drinking Water Act 1974, as amended.	Surface and ground water	U.S. Environmental Protection Agency (USEPA)
Colorado River Salinity Control Act 1974, amendment of 1984: Public Law 93-320	Mandated Control of Salinity Runoff into the Colorado River Basin	BLM
Federal Land Management and Policy Act (FLPMA) of 1976.	BLM unique areas, ACECs. Issuing of energy related ROWS. Wilderness Areas	BLM
Surface Mining Control and Reclamation Act (SMCRA) of 1977.	Prime and Unique Farm Lands.	Natural Resource Conservation Service (NRCS)
Executive Order 11988 as amended.	Floodplains	All Agencies
Executive Order 11990.	Wetlands/Riparian Zones	All Agencies
Wild and Scenic Rivers Act of 1968 as amended.	Wild and Scenic Rivers	All Agencies
National Historic Preservation Act of 1966 as amended. Antiquities Act of 1906.	Cultural resources	All Agencies
American Indian Religious Freedom Act 1978. Native American Graves Protection and Repatriation Act (NAGPRA) 1990.	Native American Religious Concerns	All Agencies
Endangered Species Act (ESA) 1973 as amended. (Section 7)	Threatened and Endangered plant and animal species	U. S. Fish and Wildlife Service (U.S. FWS)
Bald and Golden Eagle Protection Act	Protection of Eagles	
Migratory Bird Treaty Act	Protection to Migratory Birds, Nests and Eggs.	U.S. FWS
National and New Mexico BLM Instruction Memoranda	BLM and New Mexico State Sensitive Species and Habitat.	BLM
Resource Conservation and Recovery Act (RCRA) of 1976	Use of Hazardous Materials	USEPA
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 660 as amended.	Use and Disposal of listed Hazardous Materials.	USEPA

LAW/REGULATION	RESOURCE PROTECTED	AUTHORITY
Executive Order #22898, February 1994.	Environmental Justice for environmental and health conditions in minority and low-income communities.	All Agencies
Federal Noxious Weed Act 1974, as amended and Executive Order 13112.	Designated Certain Plants as Noxious Weeds.	All Agencies
New Mexico Noxious Weed List	Noxious weeds for the State of New Mexico.	New Mexico Department of Agriculture.

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Farmington District  
Farmington Field Office  
6251 N College Blvd., Ste. A  
Farmington, NM 87402

**DECISION RECORD  
for the**

**City of Aztec's  
Dam Road Electric Utility Line Project**

**NEPA No. DOI-BLM-NM-F010-2015-0169-EA**

**I. Decision**

I have decided to select the Proposed Action for implementation as described in the City of Aztec's Dam Road Electric Utility Line Project. Based on my review of the Environmental Assessment (EA) and project record, I have concluded that the Proposed Action was analyzed in sufficient detail to allow me to make an informed decision. I have selected the Proposed Action because the proposed project would allow the City of Aztec access to their proposed Electric Utility Line Project in order to construct and operate the proposed electric utility line and associated facilities.

**II. Conformance and Compliance**

The Proposed Action is in conformance with the 2003 BLM-FFO Resource Management Plan (RMP). Pursuant to 40 CFR 1508.28 and 1502.21, this site specific EA tiers into and incorporates by reference the information and analysis contained in the BLM-FFO Purposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS; BLM 2003a). The RMP was approved by the September 29, 2003 Record of Decision (ROD; BLM 2003b), and updated in December 2003.

Development of energy-related ROWs, including powerlines, is one of the primary activities of the BLM-FFO lands program. Such ROWs receive environmental review on a case-by-case basis (BLM 2003b, 2-11).

As required by NEPA, this EA addresses site-specific resources and effects of the proposed action that were not specifically covered within the PRMP/FEIS.

The City of Aztec would comply with applicable Federal, State, and local laws and regulations. Necessary permits and approvals for the proposed project would be obtained prior to project implementation.

### **III. Finding of No Significant Impact**

I have reviewed the direct, indirect and cumulative effects of the proposed activities documented in the EA for the City of Aztec's Dam Road Electric Utility Line Project. I have also reviewed the project record for this analysis. The effects of the proposed action and alternatives are disclosed in the Alternatives and Environmental Consequences sections of the EA. I have determined that the construction of an electric utility line to allow the City of Aztec reasonable access to their water pump location in order to provide sufficient electricity to power increased water pumping capacity at a City of Aztec water tank location as described in the EA will not significantly affect the quality of the human environment. Accordingly, I have determined that the preparation of an Environmental Impact Statement is not necessary.

### **IV. Other Alternatives Considered**

No reasonable alternatives to the proposed action have been developed that would result in significantly fewer impacts or any clear advantages over the proposed action. The proposed electric utility line follows the most economic and direct route based on the location of existing City of Aztec infrastructure, existing disturbance, surface resources, and terrain.

### **V. Rationale for the Decision**

Pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21, this site-specific environmental assessment (EA) tiers to and incorporates by reference the information and analysis contained in the Farmington Proposed Resource Management Plan/Final Environmental Impact Statement [(PRMP/FEIS) BLM 2003a]. This EA is in conformance with the management goals set forth in the Resource Management Plan (RMP) for the Farmington Field Office (FFO) of the BLM, which was approved by the Record of Decision (ROD) signed September 29, 2003 (BLM 2003b). Specifically, this action is in conformance with the following: It is the policy of the BLM to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs, consistent with national objectives of an adequate supply of minerals at reasonable market prices. At the same time, the BLM strives to ensure that mineral development is carried out in a manner that minimizes environmental damage and provides for the rehabilitation of affected lands (2003b, 2-2). The PRMP/FEIS, RMP, and ROD are available for review at the BLM Farmington Field Office, 6251 College Blvd., Farmington, NM, or electronically at:

[http://www.nm.blm.gov/ffo/ffo\\_home.html](http://www.nm.blm.gov/ffo/ffo_home.html)

I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). The proposed activities are not located in an ACEC containing relevant and important cultural values. Cultural resource surveys were completed. Known cultural resources will be avoided by project activities (DOI-BLM-NM-F010-2015-0169-EA, p. 23 – 26).

The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). The project area does not contain any known populations of threatened or endangered species nor does it include designated critical habitat (DOI-BLM-NM-F010-2015-0169-EA, p. 21 – 23).

## **VI. Public Involvement**

The Farmington Field Office (FFO) publishes a NEPA log for public inspection. This log contains a list of proposed and approved actions in the field office. The log is located on the BLM New Mexico website:

[http://www.blm.gov/nm/st/en/prog/planning/nepa\\_logs.html](http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html)

There were no public comments submitted.

## **VII. Administrative Review and Appeal**

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4. Any appeal must be filed within 30 days of this decision. Any notice of appeal must be filed Dave Mankiewicz, Acting Field Manager, Farmington Field Office, 6251 College Boulevard, Suite A, Farmington, NM 87402. The appellant shall serve a copy of the notice of appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision, not later than 15 days after filing such document (see 43 CFR 4.413(a)). Failure to serve within the time required will subject the appeal to summary dismissal (see 43 CFR 4.413(b)). If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, Office of Hearings and Appeals, U. S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with Dave Mankiewicz, Farmington Field Office Manager (Acting).

Notwithstanding the provisions of 43 CFR 4.21(a)(1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. This decision can be implemented immediately and remains in effect pending appeal according to 43 CFR 288.1.10(b). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal.

A petition for a stay is required to show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied;
- (2) The likelihood of the appellant's success on the merits;
- (3) The likelihood of immediate and irreparable harm if the stay is not granted; and

(4) Whether the public interest favors granting the stay.

In the event a request for stay or an appeal is filed, the person/party requesting the stay or filing the appeal must serve a copy of the appeal on the Office of the Field Solicitor:  
United States Dept. of the Interior, Office of the Solicitor, Southwest Regional Office,  
505 Marquette Avenue NW, Suite 1800, Albuquerque, NM 87102

      /s/ Maureen Joe for        
Dave Mankiewicz  
Field Manager (Acting)  
Farmington Field Office

      03/08/2016        
Date