

**United States Department of the Interior  
Bureau of Land Management  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, NM 88005**

**Environmental Assessment for  
Summit Mine Power Line Project  
Greenlee County, Arizona and Grant County, New Mexico**

DOI-BLM-NM-L000-2013-0048-EA &  
DOI-BLM-AZ-G010-2013-0013-EA



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Signature and Title of Project Lead

Date

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Signature and Title Lead of Reviewer

Date



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## LIST OF ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
ADEQ	Arizona Department of Environmental Quality
AFA	Annual Flow in Acre-Feet
APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
ASLD	Arizona State Land Department
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CWA	Clean Water Act
dB	Decibels
dBA	A-Weighted Decibels
DVEC	Duncan Valley Electric Cooperative
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
FFO	Farmington Field Office
FLPMA	Federal Land Policy and Management Act of 1976
FWS	U.S. Fish and Wildlife Service
GHGs	Greenhouse Gases
HFC	Hydrofluorocarbons
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MRMP	Final Mimbres Resource Management Plan
NAAQS	National Ambient Air Quality Standard
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NEC	National Electric Code
NEPA	National Environmental Policy Act
NMRPTC	New Mexico Rare Plant Technical Council
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
OHW	Ordinary High Water Mark
OSHA	Occupational Safety and Health Administration
PYFC	Potential Fossil Yield Classification
RMP	Regional Management Plan
ROW	Right-of-Way
SDA	BLM Specially Designated Area
SDMP/EIS	Final Safford District Management Plan and Environmental Impact Statement

SHPO	Arizona State Historic Preservation Office
SQRU	Scenic Quality Rating Unit
SWPPP	Stormwater Pollution Prevention Plan
TDS	Transmission & Distribution Services, LLC
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
VRI	Visual Resource Inventory
VRM	Visual Resource Management
WUS	Waters of the U.S.

## 1 INTRODUCTION

Duncan Valley Electric Cooperative (DVEC) proposes to construct, operate, maintain, and decommission an aerial electrical power distribution line that would provide power to the Lordsburg Mining Company's Summit Mine in Grant County, New Mexico. The mine has been in operation since early 2012 and electrical power for mine operations has been provided by a pair of diesel generators. The two generators have proven expensive to operate due to the high cost of routine maintenance and the rising costs of diesel fuel. The proposed action would eliminate the need for these generators. The economic benefits the mine has on the surrounding areas would remain unchanged due to the proposed action because the mine could continue to operate without the proposed distribution line, although the mine would be less operationally efficient with the continued use of the generators. DVEC customers would not incur any costs from project implementation because the project would be completely funded by the Lordsburg Mining Company and would not involve the use of any government funds for line construction, engineering, operation, or maintenance.

The Proposed Action crosses land managed by the Bureau of Land Management's (BLM's) Safford and Las Cruces offices, as well as Arizona State Trust and private land. Land use along the proposed distribution line route includes rural residences, the Iron Knot Ranch Tibetan Buddhist monastery, mining operations, and rangeland. During the early design phase of the project, rural residents in the vicinity of the proposed corridor were asked if they would like to receive electrical service from the new distribution line. None indicated any interest in tying into the line.

The Summit Mine is located in the Summit Mine Group of patented mining claims in western Grant County, New Mexico, and operates under New Mexico Mining Act permit GR011ME and air quality permit NSR 3807-M2. Access to the mine is gained via the County-maintained Carlisle Road from Duncan, Arizona. Carlisle Road leads to Summit Peak Road, which transects the Summit Mine property.

The mine is an underground operation consisting of two tunnels accessible by rubber-tired vehicles—the main access ramp on the southeast end of the mine and the Inspiration Mine ramp on the northwest end. The mine produces about 400 tons per day of gold and silver ore. The ore is stockpiled on the surface near the main access ramp portal, and from there it is trucked to a mill located south of Lordsburg, New Mexico. At the mill, the ore is crushed, and a portion is then shipped directly to copper smelters as silica flux. The remainder is processed at the flotation mill to produce silver and gold concentrates that are shipped to smelters overseas.

The ore is mined from a steeply dipping quartz vein hosted by Tertiary andesite. Total disturbance from the mine operation is about 0.8 ha (2 acres) at this time and is anticipated to be less than 1.6 ha (4 acres) total for the life of the mine.

The estimated remaining life of the mine is 7 years based on the initial resource estimate made in 2012 by the Lordsburg Mining Company. Discovery of ore in a previously unexplored zone may increase the life of the mine several years.

## **1.1 Purpose and Need**

The BLM purpose, as a multiple-use agency, is to make public land and its resources available for use and development to meet national, regional, and local needs that are consistent with national objectives while simultaneously applying the principles of sustained yield governing the many resources the agency manages. This particular proposed action is for an aerial electrical power distribution line which would efficiently deliver electricity to an area that currently has no commercial electrical power available.

The BLM's specific purpose is to issue a right of way (ROW) grant for the construction, operation, maintenance, and termination of an aerial electric power distribution line and ancillary facilities. The principles of sustained yield include safeguarding wildlife and their habitat, threatened species and their habitat, endangered species and their habitat, sensitive species and their habitat, water quality, soils, paleontological, archaeological, vegetation, and watershed functions. Goals and objectives for these resources were set forth in the Mimbres Resources Management Plan (December 1993).

The need is to respond to a Federal Land Policy and Management Act (FLPMA) ROW application (NMNM 128688 and AZA 36046) under Sec. 501(a)(4).

## **1.2 Decision to be Made**

The BLM would decide whether to grant authorization of linear ROW Serial Nos. NMNM 128688 and AZA 36046 for the purpose of authorizing the construction, operation, maintenance, and termination of an aerial electric power line and ancillary facilities on public land as described in the proposed action. The linear ROW requested is 9 m (30 feet) wide and is 1,682.02 m (5,534 feet) long within Arizona and 1,741.34 m (5,713 feet) long in New Mexico.

## **1.3 Plan Conformance**

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 in the *Final Safford District Management Plan and Environmental Impact Statement (SDMP/EIS)* (BLM 1991) and the *Final Mimbres Resource Management Plan (MRMP)* (BLM 1993a). This EA is also in compliance with the RMP/Record of Decision for the SDMP/EIS, which was approved partially in 1992 and fully approved in 1994, and with the MRMP, which was approved in December 1993 (BLM 1993b).

This Proposed Action has been reviewed to determine if it conforms to these land use plans terms and conditions required by 43 CFR 1610.5, BLM MS 1617.3, Title V of the FLPMA of 1976, and 43 CFR 2800. As stated in the SDMP/EIS on page 22, "ROWs, leases and permits would be considered on a case-by-case basis, in accordance with the decisions of this Resource Management Plan." Furthermore, as stated in the MRMP on page 2-14, "The Mimbres Resource Area grants rights-of-way (ROWs), leases and permits to qualified individuals, businesses, and governmental entities for the use of public land.", and, as stated on pages 2-14, "all ROW applications are analyzed site-specifically on a case-by-case basis". Therefore, the Proposed Action conforms to the land use terms and conditions of the RMP.

No portions of the Proposed Action are within a BLM Specially Designated Area (SDA) such as an Area of Critical Environmental Concern (ACEC).

The Proposed Action would not be in conflict with any local, County, or State plans.

## **1.4 Scoping and Issues**

Scoping is “the process by which the BLM solicits internal and external input on the issues, impacts, and potential alternatives that would be addressed in an EIS or EA, as well as the extent to which those issues and impacts would be analyzed in the National Environmental Policy Act (NEPA) document” (BLM 2008). No external scoping was conducted for the proposed action.

### **1.4.1 Internal Scoping**

Internal BLM scoping was conducted to identify potential issues and alternatives for the Proposed Action on January 28, 2013.

### **1.4.2 Resource Issues Identified**

Issues are identified during scoping. Issues are analyzed if necessary to make a reasoned choice between alternatives or if the issue is significant (BLM 2008). The following issues were identified during scoping as potential issues of concern for the Proposed Action. These issues would be addressed in this EA.

- How would construction activities and vehicle emissions associated with the Proposed Action impact air quality?
- Would the Proposed Action increase greenhouse gases (GHGs) significantly?
- Would the Proposed Action create noise that may be injurious to human beings or other living creatures?
- Would activities and surface disturbances associated with the Proposed Action impact cultural resources?
- Would construction activities and surface disturbance associated with the Proposed Action introduce or spread invasive, nonnative plant species?
- Would surface disturbances associated with the Proposed Action increase the potential for soil erosion?
- Would surface disturbances associated with the Proposed Action impact surface and groundwater resources?
- Would surface disturbance associated with the Proposed Action impact wetlands or riparian habitats?
- How would vegetation be impacted by the Proposed Action? Could this lead to indirect impacts to soils or special status animal species?
- Would the Proposed Action impact livestock grazing in the area through a reduction in animal unit months (AUMs) or presenting direct dangers to livestock and/or ranchers?
- Would the Proposed Action have any impact on lands or realty?
- Would the Proposed Action impact mining claim holders?
- How would special status plant and animal species be impacted by the activities and surface disturbance associated with the Proposed Action?
- How would activities and surface disturbance associated with the proposed project impact wildlife including migratory birds?

- How would construction activities and the long-term presence of the distribution line impact visual resources?
- How would activities and equipment associated with the proposed project impact public health and safety through use and disposal of hazardous and solid waste?
- Would the Proposed Action negatively impact minority or low-income populations?
- Would the Proposed Action have any impact on socioeconomics?

### 1.4.3 Issues Not Analyzed

The following issues were identified during scoping as issues of concern that would not be impacted by the Proposed Action or that have been covered by prior environmental review. These issues would not be discussed in this EA.

**Areas of Critical Environmental Concern (ACEC):** The Proposed Action would not be located within any BLM Safford Field Office or Las Cruces District–designated ACECs.

**Native American Religious Concerns:** The proposed project would not impact any known Traditional Cultural Properties (TCPs), prevent access to sacred sites, prevent the possession of sacred objects, or interfere with/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. There are currently no known remains that fall within the purview of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA, 25 USC 3001) or the Archaeological Resources Protection Act (ARPA, 16 USC 470) within the proposed project area (Jones and Fulton 2012; Jones 2012; Thomas Holcomb, personal communication, April 5, 2013).

**Paleontology:** In New Mexico, the proposed project area falls within a Potential Fossil Yield Classification (PFYC) of 1. In the project area, the geology is characterized by Lower Oligocene silicic (or felsic) flows, domes, and associated pyroclastic rocks and intrusions. Such igneous formations are unlikely to preserve fossil material. The nearest documented fossil resource is more than 14.5 km (9 miles) to the southeast of the project area.

Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources [I(B)(1)] indicate that “ if the results of the preliminary analysis determine that the proposed project would only affect geologic units not likely to contain significant fossils or that have a very low or low potential for significant fossils (PFYC Class 1 or 2), and no scientifically important localities are known to occur in the area, the project file should be documented, and no additional paleontology assessment is necessary.”

**Prime and Unique Farmlands:** There are no prime or unique farmlands in the Proposed Action Area.

**Recreation:** The objective of the BLM Outdoor Recreation Program is to ensure the continued availability of public lands for an array of resource-dependent recreation opportunities. Recreation use is managed to protect visitors, protect resources, resolve user conflicts, and stimulate the enjoyment of public lands. Dispersed recreational use on BLM lands may include casual exploration of public lands and hunting during designated hunting seasons. The proposed project area is not within or near a designated recreation area. Dispersed recreation, such as hunting, could potentially occur in the region surrounding the proposed project area. However, based on current land use in the area and the low amount of expected recreation, impacts to recreation as a result of the proposed project are expected to be negligible.

**Wilderness:** There are no designated wilderness areas in the Proposed Action Area.

**Wild and Scenic Rivers:** There are no wild or scenic rivers in the Proposed Action Area.

## **2 PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Proposed Action**

#### **2.1.1 Project Proponent**

DVEC proposes to construct an electrical distribution line that would provide power to the Lordsburg Mining Company's Summit Mine in Grant County, New Mexico.

#### **2.1.2 Description of Proposed Action**

The Proposed Action consists of constructing approximately 24.3 km (15.1 miles) of three-phase 14.4/24.9kV electric distribution line from an existing circuit owned and operated by DVEC. The source for the line is the Green Leaf substation, located approximately 3.2 km (2 miles) east of the intersection of U.S. Highway 191 (US 191) and Arizona State Road 78 (SR 78).

The Proposed Action would require the installation of 241 Douglas Fir wooden poles to support 1/0-6/1 aluminum conductor steel-reinforced (ACSR) cable from the point of origin to the mine site.

Approximately 71 percent of the poles would be 12.2 m (40 feet) in length and would require the excavation of a hole having an approximate diameter of 61 cm (24 inches). The depth of the hole would be 10 percent of the pole height plus 0.6 m (2 feet), for a total of 1.8 m (6 feet). The holes would be dug with an auger and would have nominal dimensions of 61 cm (24 inches). The residual soil that is extracted would be placed back in the same hole once the pole is set in the excavated hole. The soil would be re-deposited and tamped around the circumference of the installed pole. Approximately 26 percent of the poles are 13.7 m (45 feet) in length, and 3 percent are 15.2 m (50 feet) long. The standard embedment depth of the 13.7-m (45-foot) and 15.2-m (50-foot) poles remains at 10 percent of the length plus 0.6 m (2 feet).

Prior to setting the pole, the pole would be framed with a cross-arm and appropriate hardware. All of the structures on the line have been designed for raptor protection. The raptor protection provides 1.5 m (5 feet) of clearance from phase to phase and prevents phase-to-phase contact or phase-to-ground-wire contact by raptors (Figure 1).

Access to the Proposed Action would be largely from Bitter Creek and Summit Mine Roads. No new access roads would be constructed; however, equipment would need to travel within the ROW to reach the pole locations. No trees would need to be removed within the ROW.

Ground disturbance associated with the cable installation would occur at each new pole location (241 poles) within the 9-m-wide (30-foot-wide) requested easement. At each pole location there would be a 3-m (10-foot) radius (nominal) of ground disturbance. Total ground disturbance would be approximately 0.70 ha (1.74 acres).

### **2.1.3 Proposed Action Construction Activities**

Construction of the project would be managed by Transmission & Distribution Services, LLC (TDS). TDS would coordinate construction with the U.S. Army Corps of Engineers (ACOE) (if required), Arizona State Highway Department, Union Pacific Railroad, and Arizona Public Service to insure their requirements are satisfied. The contractor selected for construction would be fully qualified and licensed to perform work on high-voltage distribution circuits. The contractor would also develop a Stormwater Pollution Prevention Plan (SWPPP) and submit a Notice of Intent and Notice of Termination under the National Pollutant Discharge Elimination System (NPDES) permit for both the state of Arizona and New Mexico.

The equipment that would be utilized for the construction of the line would consist of:

- Boom-equipped digger (auger) truck ranging in length from 14.3–18.3 m (47–60 feet).
- Two Tri-Axle Lowboy Trailers for hauling poles to the installation site.
- 0.75-Ton and 1-ton four-wheel-drive trucks.
- Wire pullers.
- Insulated bucket trucks.
- Tensioner.

#### **Distribution Line Construction Sequence**

1. Pole locations staked.
2. Poles are delivered to the DVEC equipment yard.
3. Best Management Practices (BMPs) installed for stormwater control.
4. Poles are transported from the DVEC equipment yard to the Proposed Action Area. The poles would be delivered from the DVEC yard on Tri-Axle Lowboy Trailers in quantities of 30–35 poles. Multiple trucks would be used for the delivery. The ROW would be accessed from Bitter Creek Road and, where feasible, each pole would be delivered to the stake marking the installation location. Where the trailer cannot access the stake location, the pole would be dropped alongside the road and the digger truck would carry it in. Estimating two loads per day, it would take four to five days to deliver and set the poles at the stake locations.
5. After delivery of the poles, a “framing” crew would attach the crossarms and required hardware to the poles. The framing crew can frame approximately 7–10 poles per day. Therefore, it would take approximately 24–35 working days to frame the structures. The framing crew would be using a 1-ton truck to carry the materials necessary to frame the poles.
6. The “setting” crew would follow behind the framing crew and would dig (auger) the holes and set the poles and anchors. Approximately five structures would be dug and set per day. This activity would run concurrent with the framing crew. A maximum of 48 working days may be required to set all structures. The equipment would consist of a digger truck equipped with a boom to lift and set the poles.
7. Lastly is the wire stringing. This would also run concurrent with or shortly behind the framing and setting crews. Every 3,048 m (10,000 feet) of wire would take approximately two days to set-up and pull, and it would take another two days to attach the wire to the structures. It would take approximately 40 days to complete the wire pulling.

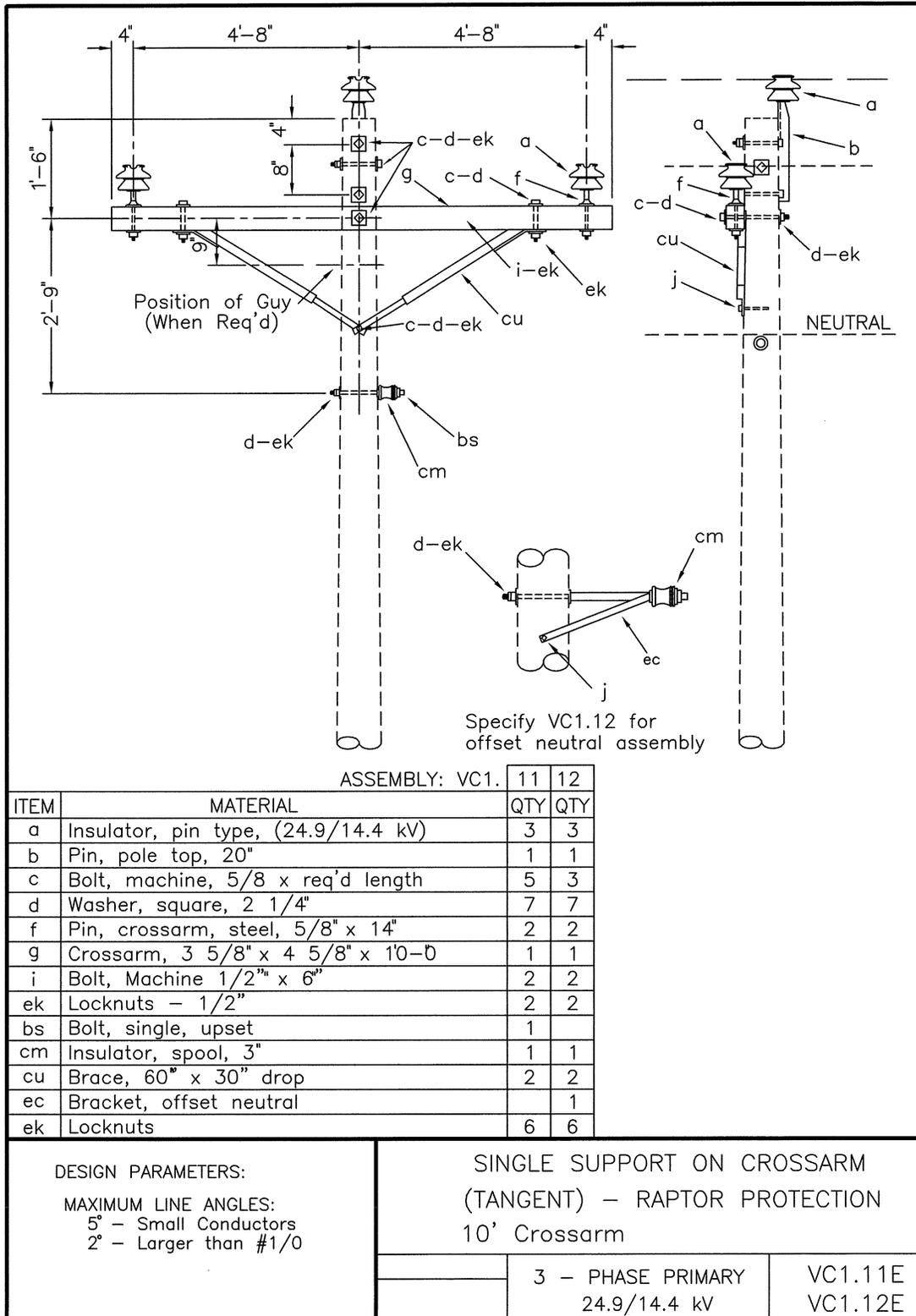


Figure 1 Typical pole configuration with raptor protection.

**Gila River Crossing**

There would be no need for any equipment to cross the river for pole setting or wire stringing activities. Access is available from both sides of the river. After the poles are installed, the contractor would throw a rope across the river, climb the pole, and place the rope in a traveler (see Item #22 on Figure 2<sup>1</sup>). The average height at which the traveler attaches is 9.5 m (31 feet) above the ground. The conductor would be connected to the rope on the west side of the river and would be pulled up to tension and across the river by a machine known as a tensioner (see Item #20 on Figure 2). The reels of wire would be on the west side of the river (Pull Site), and the tensioner would be set on the east side of the river. The tensioner could be set up to 1.6 km (1 mile) or more to the east of the river as necessary. The tensioner would keep the rope and wire taut while moving from one structure to the next. When the contractor pulls the conductor, the length of the pull may be from 1,829–2,438 m (6,000–8,000 feet) of wire per pull. During the first pull, the conductor would cross over the river, a State highway, and an existing three-phase distribution circuit before reaching the tensioner.

#### **2.1.4 Proposed Action Construction Schedule**

The Proposed Action would be initiated immediately upon receiving permission from the BLM and Arizona State Land Department (ASLD). This is estimated to be in the fourth quarter of 2013. Upon receiving permission, a construction contract would be issued and awarded within approximately 30 days. It would then take approximately another 30 days obtain the construction materials. Construction of the Proposed Action would then take 60–90 days. Upon completion of construction, the circuit would be commissioned and power to the Summit Mine would be established.

For example, if permission is granted by November 2013, then construction would be completed no later than the end of March 2014.

#### **2.1.5 Proposed Action Decommissioning**

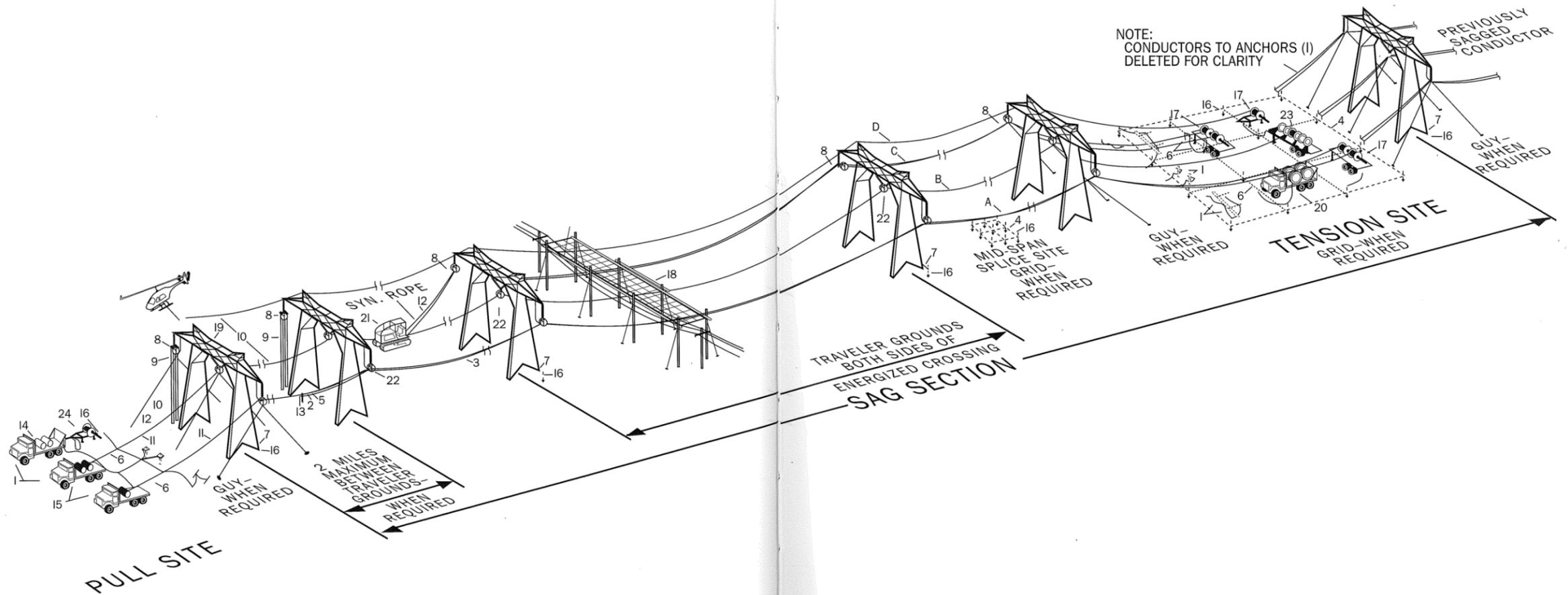
Since it is not reasonably foreseeable that local residents or other mine operations would tie in to the distribution line, it is assumed that the line would be decommissioned when operations cease at the Summit Mine. The line would be disconnected at its source, and it may or may not be removed; this would depend on whether or not mine operations were permanently or only temporarily halted. If mine production was temporarily halted, which is typically done in response to lower market values for the gold being produced at the mine, it would not be prudent to remove the line. If DVEC determines it prudent to remove the line because the mine operations are permanently stopped, they would remove the conductors and poles and take them to a designated storage yard. A line of this length could be decommissioned in approximately 30–45 days. Prior to any line decommissioning activities, DVEC would coordinate as necessary with BLM regarding development of a reclamation plan.

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<sup>1</sup> The figure depicts the tension stringing equipment set-up for a large transmission project. The Proposed Action would be much smaller in scale, however; the concept is the same.

FIGURE 2-10  
TENSION STRINGING EQUIPMENT SETUP

IEEE Guide to the Installation of Overhead Transmission Line Conductors, IEEE Std. 524-1992, Reference 7.



- |                          |                      |                         |
|--------------------------|----------------------|-------------------------|
| 1. Anchor                | 9. Finger line       | 17. Reel stand          |
| 2. Running board         | 10. Pilot line       | 18. Crossing structure  |
| 3. Bundled conductor     | 11. Pulling line     | 19. Snub structure      |
| 4. Ground grid           | 12. Connector link   | 20. Bullwheel tensioner |
| 5. Woven wire grip       | 13. Swivel link      | 21. Crawler tractor     |
| 6. Running ground        | 14. Bullwheel puller | 22. Traveler            |
| 7. Structure base ground | 15. Drum puller      | 23. Pilot line winder   |
| 8. Traveler ground       | 16. Ground rod       | 24. Reel winder         |

- A. Typical stringing arrangement
- B. Typical pulling line installation with pilot line winder
- C. Typical installation of pulling lines with tractor and finger lines
- D. Typical installation of pilot lines with helicopter

Figure 2 Example of tension stringing equipment setup.

## 2.1.6 Location of Proposed Action

The project corridor is located along Bitter Creek and Summit Mine Roads north and northeast of the Town of Duncan in Greenlee County, Arizona, and Grant County, New Mexico. The main project corridor extends from an existing electrical distribution line on the western side of the Gila River east across State Route (SR) 75 and the Arizona-New Mexico border to terminate at the Summit Mine, located in the Summit Mountains of New Mexico (Figure 3). The total project corridor length, location, and land management are summarized in Table 1, and a legal land description of the project locations can be found in Appendix A.

The project corridor is approximately 24.3 km (15.1 miles) long and is indicated on the Crookson Peak, New Mexico (1990); Goat Camp Spring, Arizona-New Mexico (1986); Tillie Hall Peak, Arizona-New Mexico (1986); Sheldon, Arizona (1986); and Steeple Rock, New Mexico (1986), 7.5-minute U.S. Geological Survey (USGS) 1:24,000 topographic quadrangle maps.

**Table 1 Project corridor length, location, and land management.**

<b>Land Management</b>	<b>TRS Location</b>	<b>Length</b>	<b>Area within 9-m-wide (30-foot-wide) ROW</b>
<i>BLM Safford</i>	Sections 28 and 29, Township 6 South, Range 32 East <sup>a</sup>	1,687.02 m (5,534 feet)	1.54 ha (3.81 acres)
<i>BLM Las Cruces</i>	Sections 19, 26, 35, and 36, Township 16 South, Range 21 West <sup>b</sup>	1,741.34 m (5,713 feet)	1.59 ha (3.93 acres)
<i>ASLD</i>	Sections 1, 2, and 9–11, Township 7 South, Range 31 East <sup>a</sup> ; Section 36, Township 6 South, Range 32 East <sup>a</sup> ; Sections 21, 22, 29–31, Township 6 South, Range 32 East <sup>a</sup>	12,404.77 m (40,699 feet)	11.36 ha (28.06 acres)
<i>Private</i>	Sections 8 and 9, Township 7 South, Range 31 East <sup>a</sup> ; Section 22, Township 6 South, Range 32 East <sup>a</sup> ; Sections 20–22, 26–27, 36, Township 16 South, Range 21 West <sup>b</sup>	8,470.28 m (27,789.7 feet)	5.5 ha (13.59 acres)
<i>Total</i>		24,303.41 m (79,735.7 feet)	19.48 ha (48.14 acres)

<sup>a</sup> Gila and Salt River Baseline and Meridian.

<sup>b</sup> New Mexico Principal Baseline and Meridian.

## 2.1.7 Proposed Action Design Features

The following design features would be adhered to during the development and construction of the Proposed Action. In addition, all BLM stipulations listed in Appendix B would also be followed.

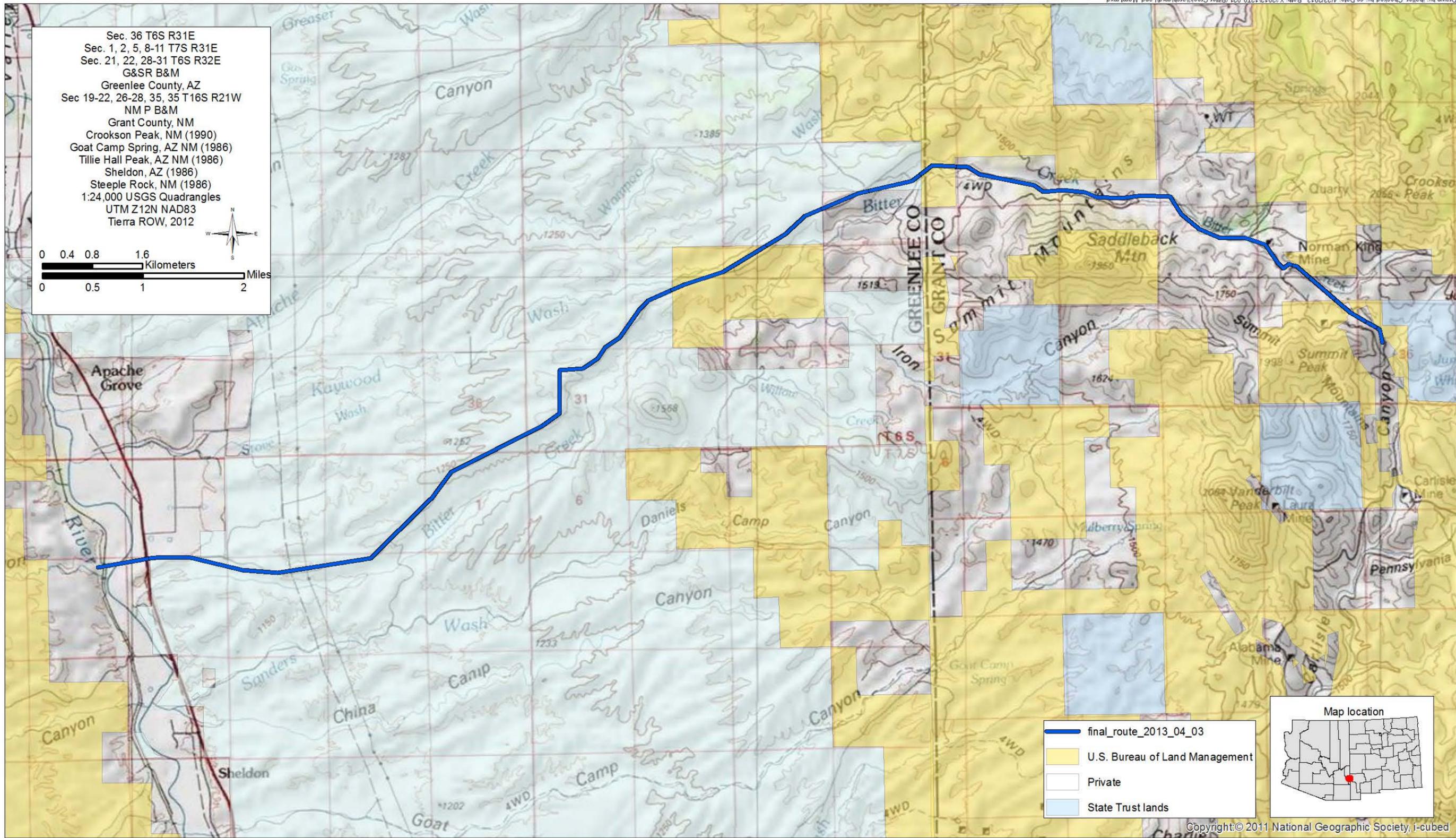


Figure 3 Project location map depicting land management in the area.

### *Air Resources*

- Equipment and vehicles used would meet all applicable State and Federal air quality standards through the use of the best available technology to control emissions.
- Speed limits in the Proposed Action Area would be adhered to in order to reduce dust emissions.

### *Noise*

- All applicable Occupational Safety and Health Administration (OSHA) regulations and requirements would be followed.
- On-site activities would be restricted to daylight hours.
- All equipment would have properly working mufflers and would be kept properly tuned to reduce backfires.

### *Cultural Resources*

- All previously recorded and newly found sites in Arizona would be avoided during construction of the overhead distribution line.
- In New Mexico, LA 173362 and LA 173366 would be avoided and spanned during construction, and a professional archaeologist would be present to monitor construction within and in the immediate vicinity of these two sites.
- All employees, contractors, and subcontractors of the project would be informed by the project proponent that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment; 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 (ARPA) (16 U.S.C. 470aa-mm).
- In the event of a cultural discovery during construction, the contractor would 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 of Historic Places [NRHP], NAGPRA, ARPA), it would be protected in place until mitigating measures can be developed and implemented according to guidelines set by the BLM.

### *Invasive, Nonnative Species*

- All BLM General Stipulations for noxious weed control shall be implemented (see Appendix A).
- All equipment would be cleaned and inspected prior to mobilization.
- Any mulch or straw utilized for erosion control would be certified weed-free.
- In the event of infestation, the mandatory BLM prescribed treatments would be followed.

### *Soils*

- To minimize erosion and stabilize the soil disturbed by construction activities, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and a National Pollutant Discharge Elimination System (NPDES) permit would be acquired. Appropriate best management practices (BMPs) developed in the SWPPP would be implemented during construction.
- Following project construction and site stabilization, all areas not permanently stabilized would be returned to preconstruction topographical and hydrological contours.

### ***Water Quality (Surface and Ground Water)***

- Appropriate BMPs developed in the SWPPP would be implemented during construction.
- Utility pole installations in the vicinity of the Gila River would occur only during times of minimal flow, this typically occurs in the months of May through July and October through November. Following each installation, the ground surface in the vicinity of the utility pole would be restored to its pre-installation contour.

### ***Vegetation***

- All trees would be avoided.
- BMPs would be utilized to control soil erosion that may indirectly impact vegetation. See Soils above.

### ***Livestock Grazing***

- In order to protect livestock that may be in the Proposed Action Area, potential hazards (holes, equipment in operation, etc.) would be fenced, barricaded, or monitored.

### ***Special Status Plants***

#### **Night-blooming Cereus (*Cereus* sp.)**

- Pre-construction surveys for Night-blooming Cereus would be conducted, and all Night-blooming Cereus would be flagged and avoided.

### ***Special Status Animals***

- Speed limits in the Proposed Action Area would be adhered to in order to reduce the likelihood of accidental vehicle strikes.
- No work would be conducted at night.
- No post holes would be left open overnight.

#### **Southwestern Willow Flycatcher (*Empidonax traillii extimus*):**

- All construction activities in the vicinity of the Gila River would occur outside the months of April through September. When construction does occur in the vicinity of the river, all riparian habitat would be avoided.
- If additional riparian species become established in the vicinity of the Gila River, and it is determined that maintenance trimming is needed for line safety, these activities would occur outside the months of April through September. Trimming would be kept to the minimum necessary and would be based on the species of vegetation present and the anticipated upcoming year's growth.

#### **Desert Sucker (*Pantosteus clarki*), Longfin Dace (*Agosia chrysogaster*), Razorback Sucker (*Xyrauchen texanus*), Sonora Sucker (*Catostomus insignis*):**

- No utility poles installations or other construction activities would occur within the flowing channel of the Gila River.

**Chestnut-collared Longspur (*Calcarius ornatus*), Pinyon Jay (*Gymnorhinus cyanocephalus*), Bendire's Thrasher (*Toxostoma bendirei*):**

- Pre-construction surveys for nests would be conducted around all proposed pole locations and along off-road travel routes. Any nests located would be flagged and avoided. If nests are located at pole locations, then the pole would be moved 30.5 m (100 feet). If nests are located along off-road travel routes, then the route would be re-directed to bypass the nest location by at least 30.5 m (100 feet).

**Golden Eagle (*Aquila chrysaetos*):**

- All structures on the distribution line would have raptor protection. The raptor protection provides 1.5 m (5 feet) of clearance from phase to phase and prevents phase-to-phase contact or phase-to-ground-wire contact by raptors (see Figure 1).

**Mexican Long-tongued Bat (*Choeronycteris mexicana*), Lesser Long-nosed Bat (*Leptonycteris yerbabuena*), Greater Long-nosed Bat (*Leptonycteris nivalis*):**

- Pre-construction surveys for agave would be conducted around all proposed pole locations and along all access paths within the requested right-of-way, as identified by the contractor prior to construction. All agave would be flagged and avoided.

***Wildlife***

- Speed limits in the Proposed Action Area would be adhered to in order to reduce the likelihood of accidental vehicle strikes.
- No work would be conducted at night.
- No post holes would be left open overnight.

***Migratory Birds***

- Pre-construction surveys for nests would be conducted around all proposed pole locations and along off-road travel routes. Any nests located would be flagged and avoided. If nests are located at pole locations, then the pole would be moved 30.5 m (100 feet). If nests are located along off-road travel routes, then the route would be re-directed to bypass the nest location by at least 30.5 m (100 feet).
- Speed limits in the Proposed Action Area would be adhered to in order to reduce the likelihood of accidental vehicle strikes.

***Wastes, Solid and Hazardous***

- During construction, trash receptacles and portable toilets would be present on-site for trash and sewage disposal. All wastes produced would be disposed of in a proper manner as required by Federal and State law.
- Wastes would be disposed of at an appropriate waste-disposal site. The Proposed Action Area would be maintained in a sanitary condition. Hazardous substances would be handled and disposed of according to Federal law.
- If suspected hazardous materials are encountered during construction or a spill occurs due to an unforeseen circumstance, such as an equipment malfunction, the operator would notify the BLM. In the event of a hazardous materials spill, DVEC and/or their contractors would take appropriate

measures to remove the contaminated soil and properly dispose of the contaminated soil at a certified hazardous materials disposal facility.

## **2.2 No-Action Alternative**

Under the No-Action Alternative, BLM would deny the application for a ROW and Lordsburg Mining Company would not construct a new electric distribution line on lands managed by the BLM. The two diesel generators at Summit Mine would continue to be used.

## **2.3 Alternatives Considered by Eliminated from Detailed Analysis**

During project design, the project engineer looked for ways to route the Proposed Action off of lands managed by the BLM. However, rerouting the project would still impact public lands—private land in the project area is completely landlocked by BLM, U.S. Forest Service (USFS), and State lands on all sides.

The project could have been sited on Private and Arizona State Trust lands, however this posed significant design issues given the terrain along this potential route and would have required considerable new ground disturbance for line construction and access.

## **3 AFFECTED ENVIRONMENT**

This section describes the issues of concern identified in Section 1 that would be affected by implementation of the alternatives described in Section 2. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Certain critical environmental components require analysis under BLM policy. The No-Action Alternative reflects the current situation within the proposed project area and would serve as the baseline for comparing the environmental impacts of the analyzed alternative.

### **3.1 Air Resources**

The Proposed Action is located in Graham County, Arizona, and Grant County, New Mexico. Additional general information on air quality in the area is contained in Chapter 3 of the SDRMP/EIS and Chapter 2 of the MRMP. In addition to the air quality information in the SDRMP/EIS, new information about GHGs and their effects on national and global climate conditions has emerged since the SDRMP/EIS was prepared. Ongoing 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 GHGs levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and the burning of fossil carbon sources have caused GHGs concentrations to increase measurably, and may contribute to overall climatic changes, typically referred to as global warming.

As of March 2008, the Environmental Protection Agency's (EPA's) published National Ambient Air Quality Standard (NAAQS) primary eight-hour standard is 0.075 ppm.

In addition, on October 17, 2006, the EPA issued a final ruling on the lowering of the NAAQS for particulate matter ranging from 2.5 microns or smaller in size. This ruling became effective on December 18, 2006, when the 24-hour standard for PM<sub>2.5</sub> was lowered to 35 µg/m<sup>3</sup> from the previous standard of 65 µg/m<sup>3</sup>. This revised PM<sub>2.5</sub> daily NAAQS was promulgated to better protect the public from short-term particle exposure.

Air quality and climate are the components of air resources, as are applications, activities, and their management. Therefore, the BLM must consider and analyze the potential effects of BLM and BLM-authorized activities on air resources as part of the planning and decision-making process.

The EPA has the primary responsibility of regulating air quality, including seven nationally regulated ambient air pollutants. Regulation of air quality is also delegated to some states, and New Mexico is one of these states. 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. GHGs and the potential effects of GHG emissions on climate are not regulated by the EPA; however, climate has the potential to influence renewable and nonrenewable resource management.

### **3.1.1 Air Quality**

The vicinity of the Proposed Action is considered to be a Class II air quality area by the New Mexico Environment Department's Air Quality Bureau. A Class II area allows for moderate amounts of air quality degradation. Air quality in the area of the Proposed Action is very good most of the year, and the air is considered clean. The Proposed Action is not located in an area designated by the EPA as a "nonattainment area" for criteria pollutants regulated by the Clean Air Act (CAA).

The primary sources of air pollution are fugitive dust from blowing wind on disturbed or exposed soil and exhaust emissions from vehicles and equipment. Excessive dust in the air can impair driving visibility and when breathed it can be potentially harmful, especially to high-risk people with respiratory conditions.

### **3.1.2 Climate**

Global climate change refers to a change in the average weather on the earth. GHGs are gases that trap heat in the atmosphere. They include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), fluorinated gases including chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs), halons, and ground-level O<sub>3</sub> (California Energy Commission 2007). The major GHG-producing sectors in society include transportation, utilities (e.g., coal and natural gas power plants), industry/manufacturing, agriculture, and residential. End-use sector sources of GHG emissions include transportation (41 percent), electricity generation (22 percent), industry (21 percent), agriculture and forestry (8 percent), and other (8 percent) (California Energy Commission 2007). The main sources of increased concentrations of GHGs due to human activity include the combustion of fossil fuels and deforestation (contributing CO<sub>2</sub>), livestock production, rice farming, land use and wetland depletions, landfill emissions (contributing CH<sub>4</sub>), refrigeration systems, fire-suppression system use and manufacturing (contributing CFCs), and the use of fertilizers (California Energy Commission 2007).

### **Final Mandatory GHGs Inventory Rule**

In response to the Consolidation Appropriations Act (House Resolution 2764; PL 110–161), the EPA has issued the Final Mandatory Reporting of GHGs Rule. The rule requires major sources that emit 25,000 metric tons or more per year of GHGs to report GHG emissions in the United States, collect accurate and timely emissions data to inform future policy decisions, and submit annual GHGs reports to the EPA. The final rule was signed by the EPA administrator on September 22, 2009; published on October 30, 2009; and made effective December 29, 2009.

### **Executive Order (EO) 13514**

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, signed on October 5, 2009, directs Federal agencies to reduce GHG emissions and address climate change in NEPA analysis. It expands upon the energy reduction and environmental performance requirements of EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. It identifies numerous energy goals in several areas, including GHGs management, management of sustainable buildings and communities, and fleet and transportation management.

The GHGs covered by EO 13514 are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, perfluorocarbons, and sulfur hexafluoride. These GHGs have varying heat-trapping abilities and atmospheric lifetimes. CO<sub>2</sub> equivalency (CO<sub>2</sub>e) is a measuring methodology used to compare the heat-trapping impact from various GHGs relative to CO<sub>2</sub>. Some gases have a greater global warming potential than others. NO<sub>x</sub>, for instance, have a global warming potential that is 310 times greater than an equivalent amount of CO<sub>2</sub>, and CH<sub>4</sub> is 21 times greater than an equivalent amount of CO<sub>2</sub>.

Current GHG emissions in the Proposed Action Area are primarily from the two generators currently being used for electrical power generation at the Summit Mine. The larger of the two generators is a Caterpillar 600-kW enclosed unit powered by a V-12 C 27 engine. The smaller of the two is a 375-kW portable enclosed unit powered by a diesel engine. Both of these generators are run 22 out of 24 hours each day, year-round. These two generators combined, produce an estimated 4,680 metric tons of CO<sub>2</sub> annually.

### **GHG Threshold of Significance**

The Council on Environmental Quality (CEQ) provided draft guidelines for determining meaningful GHG decision-making analysis. The draft guidance states that if the Proposed Action is reasonably anticipated to cause direct emissions of 27,557 tons or more of CO<sub>2</sub> emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. For long-term actions that have annual direct emissions of less than 25,000 metric tons of CO<sub>2</sub>, CEQ encourages Federal agencies to consider whether the action's long-term emissions should receive similar analysis. CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs (CEQ 2011).

### **Proposed Action Area Climate**

The Western Regional Climate Center (WRCC) records seasonal climatic data in Duncan, Arizona, located approximately 16 km (10 miles) south of the project corridor. Data summarized in the Period of Record Monthly Climate Summary from 1901–2012 include average maximum temperature, average minimum temperature, average total precipitation, and average snowfall. The average annual maximum temperature within the project area is 26° C (78.7° F). The hottest month of the year is July with an average maximum temperature of 36° C (96.4° F). The average minimum temperature within the project area is 5° C (41° F), with December having the coldest average temperature of –5° C (23.2° F). The project area receives an average annual precipitation of 26.9 cm (10.6 inches), with August having the highest average rainfall of 5.3 cm (2.1 inches). The project area has an average total snowfall of 1.8 cm (0.7 inches) per year (WRCC 2012).

### **3.1.3 Noise**

Section 2(a) of the Air (Prevention and Control of Pollution) Act, 1981, includes noise in the definition of ‘air pollutant’. Section 2(a) air pollution means any solid, liquid, or gaseous substance, including noise, present in the atmosphere at such a concentration to be injurious to human beings or other living creatures, plants, property, or the environment.

Sound (noise) occurs when an ear senses pressure variations or vibrations in the air. Noise is unwanted sound. A person’s brain associates a subjective element to a sound, and an individual reaction is formed. Studies indicate that the most pervasive sources of noise in our environment today are those associated with transportation. The source of most outdoor noise is mainly caused by machines and transportation systems, motor vehicles, aircrafts, and trains.

The magnitude of noise is described by its sound pressure. Since the range of sound pressure varies greatly, a logarithmic scale is used to relate sound pressures to a common reference level, the decibel (dB). Because sound perception depends on the context in which the sound was generated and the characteristics of the sound, such as frequency duration, noise measurement refinements have been developed. These include the A-weighted decibel scale (dBA), which is weighted towards the portions of the sound frequency spectrum to which the human ear is most sensitive. Most equipment noise levels are expressed using the dBA scale.

The threshold of human hearing is assigned a decibel level of 0. A normal conversation at a distance of 1–1.5 m (3–5 feet) produces about 60 decibels. The conversation is not 60 times louder than the hearing threshold; it is a million times louder because the decibel scale is logarithmic ( $60 \text{ dB}, 10^6 = 1,000,000$ ). A table of common sound levels measured in dB and adapted from a chart by Quiet Solutions (2003), follows (Table 2).

The Proposed Action is located in an area that has relatively low levels of ambient noise, estimated to be approximately 30 dB. Noise at the extreme western end of the Proposed Action Area ranges from about 50–90 dB, mainly from vehicle traffic along State Highway 75, local County roads, and the railroad.

Primary noise sources on the east end of the project area come from vehicle traffic along local roads; the existing generators at the Summit Mine, which run continuously; and from activities at the Iron Knot

Ranch Tibetan Buddhist monastery such as outdoor singing, drumming, and chanting. The estimated noise levels produced by these sources are summarized below (Table 3).

**Table 2 Common sound levels measured in dB.**

<b>Decibel Level</b>	<b>Examples</b>
0	Threshold of hearing
10	Breathing
20	Rustling leaves
30	Quiet rural area
40	Very quiet residence
45	Typical neighborhood
50	Quiet suburb, private office
60	Normal conversation at 0.9–1.5 m (3–5 feet), typewriter, sewing machine
70	Freeway traffic at 15 m (50 feet), vacuum cleaner
75	Typical car interior on highway
80	Garbage disposal, average factory, telephone dial tone, noisy office
85	City traffic (inside car)
90	Power drill, busy urban street, diesel truck, food blender
95	Subway train at 61 m (200 feet)
100	Jet takeoff at 305 m (1,000 feet), outboard motor, garbage truck
105	Power mower
110	Chainsaw, pneumatic drill, car horn (0.9 m [3 feet])
120	Loud thunderclap, typical rock concert
130	Jet takeoff at 91 m (300 feet), stock car race
140	Jet engine at 30.5 m (100 feet), propeller aircraft takeoff, gun muzzle blast
150	Jet takeoff at 23 m (75 feet)
160	Jet takeoff at 9 m (30 feet)
180	Jet engine at 0.3 m (1 foot)

**Table 3 Estimated existing noise levels in the proposed action area.**

<b>Noise Source</b>	<b>Decibel Level (A @ 15.2 m)</b>	<b>Duration</b>
Vehicle traffic	75 dB (pickup), 84 dB (medium-duty truck)	Intermittent
Caterpillar C 27 600-kW generator	66 dB	Continuous
Caterpillar 375-kW generator	67 dB	Continuous
Monastery	90 dB	Intermittent

Observations made during the biological survey and a review of aerial imagery indicates that there are approximately six rural residences in the vicinity of the proposed action area in New Mexico that are noise receptors. Two of these residences are currently subjected to noise produced by the generators at Summit Mine, estimated to be perceived at 25 and 26 dB. These dB levels are consistent to those experienced in rural areas. The remaining four residences are more than 3 km (1.8 miles) away from the

generators and would experience sound levels estimated to be less than 20 dB. Traffic noise levels perceived at all six residences vary from an estimated 36 dB for a pickup passing by a residence located approximately 1.4 km (0.9 miles) from the road to an estimated 69 dB for a medium-duty truck passing a residence located only 85 m (279 feet) away from the road. It is important to note that all of the noise level estimations in this section of the EA were made based on calculations that assumed that sound would travel in the analysis area unimpeded by topography, atmospheric conditions, vegetation, and many other factors that would, in actuality, serve to attenuate sound. Therefore, these estimations reflect what could be considered a worst-case scenario for noise conditions in the Proposed Action Area.

### **3.2 Cultural Resources**

A Class III cultural resource survey of the Proposed Action Area was conducted from June 19–22, 2012. In Arizona, two previously recorded sites were revisited. AZ CC:4:25(ASM), the Arizona and New Mexico Railroad, has been determined eligible for listing on the National Register of Historic Places (NRHP) by the Arizona State Historic Preservation Office (SHPO). The portion of AZ CC:4:25(ASM) within the project's area of potential effect (APE) is not a contributing element to the eligibility of the railroad. AZ CC:4:28(ASM), State Route 75, has never been evaluated by the SHPO. The portion of the site within the APE is recommended not eligible for inclusion on the NRHP. Three previously unrecorded archaeological properties were found, including one historic road, one historic artifact concentration, and one protohistoric or Historic period campsite. These properties were recommended not eligible for inclusion on the NRHP. Twenty isolated occurrences were also documented. These sites and isolated occurrences represent occupations in the region dating from late in prehistory through recent historic times.

In New Mexico, the cultural resources inventory located 6 archaeological sites, 4 historic buildings, and 23 isolated occurrences; no previously recorded sites were found to intrude into the APE. The sites all date from the late 1800s into the 1900s and were associated with mining activities in the area during the Historic period. Two of these sites, LA 173365 and LA 173367, have no further information potential beyond that recorded in the field and were recommended Not Eligible for the State Register of Cultural Properties (SRCP) or the National Register of Historic Properties (NRHP). The remaining four sites (LA 173362, LA 173363, LA 173364, and LA 173366) were recommended eligible for listing on the SRCP and the NRHP. LA 173363 and LA 173364 were recommended register eligible for their archival research potential only, and no further fieldwork was required. Avoidance and archaeological monitoring during construction activities was recommended for LA 173362 and LA 173366.

From July 31–August 2, 2012, J. Fulton and B. Russell of Human Systems Research (HSR) recorded two historic buildings that were located within 30.5 m (100 feet) of the project area. These buildings lack architectural integrity and are recommended not eligible for the NRHP. No further investigation or treatment of these resources is recommended.

### **3.3 Invasive Nonnative Species**

Management of invasive and nonnative species is mandated under several pieces of legislation, including the Lacey Act, as amended (16 USC 3371-3378); the Federal Noxious Weed Act of 1974, as amended (7 USC 2801 et seq.); the New Mexico Noxious Weed Management Act of 1998; and EO 13112 regarding

Invasive Species. Under EO 13112, Federal agencies are ordered not to authorize or carry out actions that would cause or promote the introduction of invasive species.

The objectives of the BLM weed management program are to detect invasive plant species populations, prevent the spread of new invasive populations, manage existing populations using the tools of integrated weed management, and eradicate invasive populations using the safest environmental methods available. For all actions on public lands that involve surface disturbance or rehabilitation, reasonable steps are required to prevent the introduction or spread of noxious weeds, including requirements for using weed-seed-free hay, mulch, and straw. The invasive, nonnative plant species listed in Table 3 have been identified in Greenlee County, Arizona (BLM 2013), and Grant County, New Mexico (BLM 2012).

**Table 4 Invasive non-native species occurring in Greenlee County, Arizona and Grant County, New Mexico.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Class</b>	<b>County in Proposed Action Area</b>
Poison Hemlock	<i>Acroptilon rapens</i>	B	Grant
Russian Knapweed	<i>Acroptilon repens</i>	B	Greenlee
Jointed Goatgrass	<i>Aegilops cylindrica</i>	C	Grant
Tree of Heaven	<i>Ailanthus altissima</i>	B	Grant
Onionweed	<i>Asphodelus fistulosus</i>	A	Greenlee
Saharan Mustard	<i>Brassica tournefortii</i>	WLS	Greenlee
Cheatgrass	<i>Bromus tectorum</i>	C	Grant
Whitetop	<i>Cardaria pubescens</i>	A	Greenlee
Hoary Cress	<i>Cardaria spp.</i>	A	Grant
Spotted Knapweed	<i>Centaurea biebersteinii</i>	A	Grant
Malta Starthistle	<i>Centaurea melitensis</i>	B	Greenlee, Grant
Yellow Starthistle	<i>Centaurea solstitialis</i>	A	Greenlee, Grant
Bull Thistle	<i>Cirsium vulgare</i>	C	Greenlee, Grant
Russian Olive	<i>Elaeagnus angustifolia</i>	C	Grant
Quackgrass	<i>Elytrgia repens</i>	WLS	Grant
Dalmation Toadflax	<i>Linaria dalmatica</i>	A	Grant
Purple Loosestrife	<i>Lythrum salicaria</i>	A	Grant
Parrotfeather	<i>Myriophyllum aquaticum</i>	A	Grant
African Rue	<i>Peganum harmala</i>	B	Grant
Saltcedar	<i>Tamarix spp.</i>	C	Grant
Siberian Elm	<i>Ulmus pumila</i>	C	Grant
Spiny Cocklebur	<i>Xanthium spinosum</i>	WLS	Grant

Key: A = Species currently are not present, or have limited distribution in the state, and preventing new infestations and eradicating current infestations is a high priority; B = Species are limited to portions of the state. In areas that are not infested, weeds should be treated as Class A, and in infested areas, containment and prevention of spread are the priority; C = Species are widespread throughout the state. Management decisions should be made at a local level based on the feasibility of control and level of infestation; WLS = Watch List Species.

Common locations for invasive, nonnative species include roadsides and disturbed areas. None of the plants listed in Table 4 were observed in the project corridor at the time of the field survey.

### 3.4 Soil

Gravelly loam, rocky loam, and fine sandy loam soil was observed in the project corridor during field surveys. These soil observations appear to be consistent with the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service’s (NRCS) soil survey map unit descriptions of the soils in the project vicinity (NRCS 2012a, b). Soil map units present in the Proposed Action Area are summarized in Table 5.

**Table 5 Soils in the project area.**

Map Unit Name	Symbol	Soil Survey Area
Anthony-Gila complex, 0–5% slopes	2	AZ 663
Continental gravelly clay loam, 2–15% slopes	8	
Eba-Pinaleno complex, 2–40% slopes	10	
Haplargids-Torriorthents complex, 5–40% slopes	22	
Pima silty clay loam, 0–2% slopes	27	
Signal very cobbly clay loam, 10–40% slopes	38	
Torrifluvents-Riverwash complex, 1–5% slopes	42	
Tres Hermanos–Continental–Nickel complex, 2–45% slopes	43	
Wampoo gravelly loam, 2–10% slopes	44	
Rock Outcrop–Luzena association, 25–60% slopes	53	NM 662

### 3.5 Surface Water and Ground Water

#### 3.5.1 Surface Water

In Arizona, the Proposed Action is within the Upper Gila River Hydrologic Unit (150400). The principal surface water in the Proposed Action Area is the Gila River, which is intermittent at its crossing with the Proposed Action. An average of about 160,000 annual flow in acre-feet (AFA) of Gila River water flows into Arizona from New Mexico, and over 40 percent of this flow typically occurs in the winter. Tributary inflows from the San Francisco River are significant, typically over 150,000 AFA (ADWR 2013).

The U.S. Geological Survey collects stream flow data for the Gila River at Duncan, Arizona, located approximately 18 river km (11 river miles) upstream of the Proposed Action’s crossing of the river, and near Clifton, located approximately 24 river km (15 river miles) downstream. Mean monthly discharge rates recorded over a nine-year period from October 2003 through September 2012 at both of these stations closely match, and therefore can be considered representative of what typical flows would be at the Proposed Action crossing of the Gila River (Table 6). Minimal flows, less than approximately 100 cubic feet per second (cfs), typically occur in the months of May through July and October through November.

**Table 6 Monthly mean discharge in CFS, 10/1/2003 through 9/30/2012.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Duncan	247	571	337	237	80	16	64	327	192	98	76	108
Clifton	238	499	300	235	81	32	104	302	204	101	80	140

Source: USGS National Water Information System: Web Interface, data from stations USGS 0944200 Gila River near Clifton, AZ; and USGS 09439000 Gila River at Duncan, AZ.

The only named tributary to the Gila River in the Proposed Action Area is Bitter Creek.

Water quality in Bitter Creek and the Gila River are generally good, although water quality standards were exceeded in one 24.1-km (15-mile) reach of the Gila River upstream of the Proposed Action Area. The parameter exceeded in this reach was selenium. This reach is part of the Arizona Department of Environmental Quality (ADEQ) water quality improvement effort called the Total Maximum Daily Load (TMDL) program. The draft TMDL report is underway (ADWR 2013).

A review of the FEMA FIRM panel maps 35017C0575E and 04011C0825D indicated that portions of the Proposed Action Area are located in a Zone A area. Zone A areas are subject to inundation by a 1-percent-annual-chance flood event.

### **3.5.2 Groundwater**

In Arizona, the Proposed Action Area is within the Duncan Valley watershed, which is about 1,424.5 square km (550 square miles) in size. The major aquifers in the basin are recent stream alluvium, consisting of gravel and sand underlain by clay, and Gila Formation sedimentary rock, consisting of poorly consolidated sand, silt, and gravel. The principal source of groundwater is the recent stream alluvium. Flow direction is generally from the south to the northwest. Natural recharge estimates range from 6,000 acre-feet per year to 14,200 acre-feet per year. Storage estimates for this basin range from 9 million–19 million acre feet to a depth of 366 m (1,200 feet). Depth to water varies in this basin, with the deepest recorded water level measured during 2003–2004 at 153.3 m (503 feet) at the northwestern basin boundary and the shallowest at 5.8 m (19 feet) in the vicinity of Duncan. All recorded wells in this basin have declined from 0.9–4.6 m (1–15 feet) between 1990–1991 and 2003–2004 (ADWR 2013).

The nearest recorded water wells to the Proposed Action Area (near SR 75 and Bitter Creek Road) have all exceeded drinking water standards for arsenic levels. However, it should be noted that these wells are in relationship to agricultural fields (ADWR 2013). Groundwater quality data for Grant County could not be located.

### **3.6 Wetlands/Riparian Habitat**

The banks of the Gila River within the Proposed Action Area have been identified by the United States Fish and Wildlife Service National Wetland Inventory as potentially containing Freshwater Emergent Wetlands. In addition, a narrow band of riparian habitat is located on the west bank of the Gila River.

### **3.7 Vegetation**

As described and mapped by Brown (1994), the western portion of the project corridor in Arizona is located within the Chihuahuan Desertscrub biotic community, and the corridor intersects an

approximately 3.8-km-wide (2.4-mile-wide) strip of Semi-desert Grassland just west of the Arizona/New Mexico border. The eastern portion of the project corridor in New Mexico is within the Madrean Evergreen Woodland biotic community.

Vegetation observed in the project corridor was found to be characteristic of the three biotic communities discussed above. Tree species observed include Honey Mesquite (*Prosopis glandulosa*), One-seed Juniper (*Juniperus monosperma*), Pinyon Pine (*Pinus edulis*), Scrub Oak (*Quercus turbinella*), Fremont Cottonwood (*Populus fremontii*), Nettleleaf Hackberry (*Celtis reticulata*), and Arizona Sycamore (*Platanus wrightii*). Shrub species observed include Creosote, Whitethorn Acacia, Catclaw Acacia (*A.greggii*), Fourwing Saltbush (*Atriplex canescens*), Burrobrush (*Hymenoclea monogyra*), Allthorn (*Koeberlinia spinosa*), Mountain Mahogany (*Cercocarpus montanus*), and Skunkbush (*Rhus trilobata*). Grass and forbs observed include Blue Grama (*Bouteloua gracilis*), Big Bluestem (*Andropogon girardii*), Broom Snakeweed (*Gutierrezia sarothrae*), Russian Thistle (*Salsola kali*), Rattlesnake Weed (*Chamaesyce albomarginatus*), and Jimson Weed (*Datura meteloides*). Cacti and succulents observed include Fishhook Barrel Cactus (*Ferocactus wislizenii*), Desert Christmas Cactus (*Cylindropuntia leptocaulis*), Cane Cholla (*Cylindropuntia spinosior*), Sotol (*Dasyliirion wheeleri*), Parry’s Agave (*Agave parryi*), and Soaptree Yucca (*Yucca elata*).

### 3.8 Livestock Grazing

The Proposed Action Area is located within five grazing allotments, Crookson and Bitter Creek are located in New Mexico and the remaining three are located in Arizona (Table 7).

**Table 7 Grazing leases in the proposed action area.**

Allotment Number	Allotment Name	Public Acres	State Acres	Private Acres	Acres in Proposed Action	Animal Unit Months
01090	Crookson <sup>2</sup>	4,245.58	858.17	1,986.33	12.57	214
01091	Bitter Creek	1,565.11	8.13	1,744.21	8.59	508
05044	Saddleback	6,898.88	5,135.11	19,633.00	39.22	790
05035	Sheldon Mountain	14,638.00	311.58	1,250.60	0.24	1,642
05037	Willow Mountain	1,127.67	8,092.00	162.71	36.79	96
<b>Total Acres</b>		<b>28,475.24</b>	<b>14,404.99</b>	<b>24,776.85</b>	<b>97.41</b>	

### 3.9 Lands and Realty

The BLM has primary authority for issuing ROWs across Federal lands for a variety of public purposes, such as roads, pipelines, power lines, and communication infrastructure. BLM may also apply restrictions on the issuance of new ROWs in designated areas in order to protect resources. In ROW avoidance areas, the BLM would only grant future ROWs if no feasible alternative route or designated ROW corridor is

<sup>2</sup> Crookson Allotment seems to be in a transfer phase so Allotment Summary form numbers may not be accurate.

available. BLM also identifies lands for disposal for public purposes through various legislative initiatives.

The Proposed Action Area is not within a ROW avoidance area or within an area scheduled for disposal. However, it does cross an existing county road ROW (NMNM 052981) numerous times. This ROW was issued to Grant County on February 7, 1984, under the authority of the FLPMA of 1976. The proposed action would also utilize this road to access the new distribution line ROW.

### 3.10 Minerals

Review of BLM records identified four mining companies within the Proposed Action Area that hold 88 active mining claims (Table 8). There are no leasable minerals or saleable materials in the Proposed Action Area (Joseph Navarro, BLM Environmental Protection Specialist, personal communication, April 9, 2013).

**Table 8 Active Mining Claims in the proposed action area.**

<b>Name</b>	<b>New Mexico Mining Commission Claim Number</b>	<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>Location Date</b>
<b>Hanson</b>	159001	16 South	21 West	26	2/28/1992
	159001	16 South	21 West	35	2/28/1992
	168958	16 South	21 West	35	3/15/2000
<b>Kelly</b>	190113	16 South	21 West	19	1/23/2011
<b>Lordsburg Mining Company</b>	170439; 170449; 170450; 170458; 170462; 170463	16 South	21 West	26	1/27/2004
<b>Lordsburg Mining Company</b>	181994; 181996; 181995; 181998; 182000; 182002; 182004; 182006; 182008; 182010; 182111; 182112	16 South	21 West	26	12/6/2007
	181997; 181999; 182001; 182003; 182005; 182007; 182009; 182011; 182012; 182013; 182014; 182015; 182016	16 South	21 West	26	12/7/2007
	170443; 170448; 170449; 170450; 170452; 170454; 170456; 170457; 170458; 170459; 170460; 170461	16 South	21 West	35	1/27/2004
	182010; 182016; 182017; 182018; 182019; 182020; 182021; 182023; 182024; 182025	16 South	21 West	35	12/7/2007
	170441; 170442; 170443; 170444; 170445; 170446; 170447; 170452; 170453; 170454; 170455; 170456	16 South	21 West	36	1/27/2004
<b>Lordsburg Mining Company</b>	182016; 182022; 182023; 182024; 182025	16 South	21 West	36	12/7/2007

Name	New Mexico Mining Commission Claim Number	Township	Range	Section	Location Date
Silver Standard	191423; 191424	16 South	21 West	19	10/16/2010
	190270; 190271; 190272; 190273; 190274; 190275	16 South	21 West	19	12/1/2010
	190219; 190220; 190221; 190222; 190223; 190224	16 South	21 West	19	12/2/2010

Silver Standard currently has an active exploratory mining notice administered by the Las Cruces District Office-Bureau of Land Management NMNM-128294 in the vicinity of this transmission line. This notice encompasses the active claims as indicated above and is referred to as “Saddleback Mountain”. This notice was authorized on November 16, 2012, and is due to expire on August 30, 2014.

A total of 10 drill holes are authorized on public land in Grant County New Mexico and all are in reclamation. A majority of these sites are located and offset from Bitter Creek County Road.

### 3.11 Special Status Species

Special status species are those Federally listed as Endangered, Threatened, Proposed, Candidate, Critical Habitat Designated, or Species of Concern; New Mexico– or Arizona State–listed Endangered or Threatened; and BLM-listed Sensitive.

#### 3.11.1 Special Status Plants

Special status plant species and their habitats potentially occurring in Greenlee County, Arizona, and Grant County, New Mexico, were derived from a review of data managed by the following agencies:

- BLM Safford Field Office list of Sensitive species dated September 22, 2003
- BLM Las Cruces District Office list of Sensitive species dated 2011
- New Mexico Rare Plant Technical Council (NMRPTC)

Based on an evaluation of the above information, 27 special status plant species were identified as potentially occurring in Greenlee and Grant Counties. Of the 27 species listed, only two species potentially occur or have habitat present in the Proposed Action Area (Table 9).

**Table 9 Special Status Plant Species potentially occurring or having habitat in the proposed action area.**

Species	Scientific Name	Status
Goosefoot Moonpod	<i>Ammocodon chenopodioides</i>	Arizona BLM Sensitive
Night-blooming Cereus	<i>Peniocereus greggii</i> var. <i>greggii</i>	New Mexico BLM Sensitive

**Goosefoot Moonpod:** Goosefoot Moonpod is a grayish-appearing, erect, but short perennial with pink or purple flowers. It ranges from southeastern Arizona to Trans-Pecos Texas and south into northern Mexico. It is found in dry, sandy, and gravelly areas with rock and gypseous clay at 700–1,700 m (2,296–5,877 feet) above mean sea level (AMSL) (FNA 2012).

**Night-blooming Cereus:** Night-blooming Cereus stems from a large root. Its fleshy, round-at-the-top, tapering stems are up to 2 m (6.5 feet) long and from 1–2.5 cm (0.4–1 inches) in diameter. They are often supported in the canopy of creosote or mesquite, but it can occur in open spaces as well. Night-blooming Cereus is a widespread but rare species that occurs in sandy to silty, gravelly soils in gently broken to level terrain. They are found in the Sonoran and Chihuahuan deserts of southern Arizona, east to western Texas and south to northern Mexico. According to NMRPTC, vouchered and unvouchered specimens of this species have been found in Hidalgo County and extreme southern Grant, Luna, Dona Ana, and Sierra Counties. There are no records from Grant County in the vicinity of the Proposed Action Area (NMRPTC 2005).

### 3.11.2 Special Status Animals

Special status animal species and their habitats potentially occurring in Greenlee County, Arizona, and Grant County, New Mexico, were derived from a review of data managed by the following agencies:

- FWS lists of Threatened, Endangered, and Candidate species for Greenlee County, Arizona, and Grant County, New Mexico.
- BLM Safford Field Office list of Sensitive species dated September 22, 2003.
- BLM Las Cruces District Office list of Sensitive species dated 2011.
- Arizona Game and Fish Department (AZGFD) Heritage Data Management System (HDMS) online review tool for special status species occurrences within 4.8 km (3 miles) of project vicinity.
- Biota Information System of New Mexico (BISON-M) online species booklets.

Based on evaluation of the above information, 56 special status animal species were identified as potentially occurring in Greenlee and Grant Counties. Of the 56 species listed, 17 species potentially occur or had habitat present in the Proposed Action Area during the Biological Evaluation (Table 10). In addition, Jeffrey Conn with the BLM Safford Field Office added Greater Long-nosed Bat (*Leptonycteris nivalis*) to the analysis. Although it is not listed as occurring in Grant County, potential habitat is present. Full species descriptions can be found in the Proposed Action’s Biological Evaluation and Biological Assessment prepared by Tierra Right of Way Services (Jordan and Ericson 2012, 2013).

**Table 10 Special Status Species potentially occurring or having habitat in the proposed action area.**

Species	Scientific Name	Status
Longfin Dace	<i>Agosia chrysogaster</i>	Arizona BLM Sensitive
Baird’s Sparrow	<i>Ammodramus bairdii</i>	New Mexico BLM Sensitive
Golden Eagle	<i>Aquila chrysaetos</i>	Bald and Golden Eagle Protection Act
Sonora Sucker	<i>Catostomus insignis</i>	Arizona BLM Sensitive
Mexican Long-tongued Bat	<i>Choeronycteris mexicana</i>	BLM Sensitive
Townsend’s Big-eared Bat	<i>Corynorhinus townsendii</i>	New Mexico BLM Sensitive
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Endangered

Species	Scientific Name	Status
Allen's Lappet-browed Bat	<i>Idionycteris phyllotis</i>	BLM Sensitive
Lesser Long-nosed Bat	<i>Leptonycteris curasoae yerbabuenae</i>	Endangered
Greater Long-nosed Bat	<i>Leptonycteris nivalis</i>	Endangered
California Leaf-nosed Bat	<i>Macrotus californicus</i>	Arizona BLM Sensitive
Fringed Myotis	<i>Myotis thysanodes</i>	Arizona BLM Sensitive
Cave Myotis	<i>Myotis velifer</i>	Arizona BLM Sensitive
Pocketed Free-tailed Bat	<i>Nyctinomops femorosacus</i>	Arizona BLM Sensitive
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	Arizona BLM Sensitive
Desert Sucker	<i>Pantosteus clarki</i>	Arizona BLM Sensitive
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	Arizona BLM Sensitive
Razorback Sucker	<i>Xyrauchen texanus</i>	Endangered

**Longfin Dace:** Adult individuals of this small fish rarely exceed 6.5 cm (2.6 inches) in length. The back and upper sides are silvery gray to olive, sides sometimes have golden flecks, and the lower sides and abdomen are whitish. Longfin Dace is native to the Gila and Bill Williams drainages in Arizona, as well as the Magdalena and Sonoita drainages in Mexico. The current range in Arizona is primarily in the Gila and Bill Williams drainages and the Virgin River basin (AZGFD 2006).

The habitat of Longfin Dace is wide ranging, from intermittent hot low-desert streams to clear and cool brooks at higher elevations. They tend to occupy relatively small or medium size streams with sandy or gravelly bottoms, eddies, and pools near overhanging banks or other cover. Longfin Dace is usually found in water less than 20 cm (8 inches) deep with moderate velocities of around 0.3 m/s (1.1 feet/s). They are rarely abundant in large streams or above 1,524 m (5,000 feet) AMSL. They are generally found in water less than 75° F (24° C), but are tolerant of high temperatures and low dissolved oxygen. During low water, they may take refuge in moist detritus and algal mats (AZGFD 2006).

**Baird's Sparrow:** This sparrow is a small bird, 13–14 cm (5.0–5.5 inches) long with a 7–8-cm (2.8–3.1-inch) wing length and a 5–6-cm (2.0–2.4-inch) tail. Adults are dark brown above with buff or whitish streaks and edgings, variably flecked with rust (AZGFD 2001a). Baird's Sparrow nests are an open cup with an outer layer of coarse grass and an inner layer of finer grass and other fiber and placed in a depression on the ground or in a tuft of grass. Baird's Sparrow breeds from Canada south to Montana, northwestern and central South Dakota, southeastern South Dakota, and central Minnesota. It winters from southeastern Arizona, southern New Mexico, and Texas south to northern Sonora, Durango, and Coahuila, Mexico. In New Mexico, this species migrates in the eastern and extreme southern areas of the state and is considered rare to uncommon (Green et al. 2002; Howell and Webb 1995).

**Golden Eagle:** This eagle is described as a large raptor, 70–84 cm (27–33 inches) long with a 2-m (78-inch) wingspan that can weigh between 3.2–6.4 kg (7–14 pounds). Adult plumage is a distinctive golden brown in color with a slightly lighter gold-colored head and nape feathers (NYDEC 2007). Golden eagles nest from central Alaska and northern Alberta and Saskatchewan east to the Atlantic Coast and south throughout Canada, the United States, and the central highlands of Mexico. Most common nesting areas are steep-walled mountain canyons. Although cliffs are the most common nesting substrate, trees or man-

made structures are also sometimes used. Many nests have a wide view of surrounding areas or are on prominent escarpments. Proximity to hunting grounds is an important factor in nest site selection (Kochert and Steenhof 2002).

**Sonora Sucker:** This fish is medium-sized. Adults can grow to 80 cm (31.5 inches) in length and weigh greater than 2.0 kg (4.4 pounds). The body is sharply bi-colored and is brownish dorsally and yellow beneath. The total range of this species consists of the Gila and Bill Williams systems of Arizona, New Mexico, and it is also found in northern Sonora. The Sonora Sucker is native to the Gila and San Francisco drainages (except for the extreme headwaters) in New Mexico.

The Sonora Sucker is found in a variety of habitats from warm water rivers to trout streams. It has an affinity for gravelly or rocky pools, or at least for relatively deep, quiet waters. Adults tend to remain near cover in daylight, but move to runs and deeper riffles at night. Young live in and utilize runs and quiet eddies (AZGFD 2002).

**Mexican Long-tongued Bat:** This bat is a relatively large bat with a long, slender nose and large eyes. It has a small triangular nose leaf, broad at its base and pointed at the tip, that is used for echolocation. The wingspan is 33–38 cm (13–15 inches), the tail is approximately 10 mm long (0.4 inches), and weights range from 10–25 g (0.4–0.9 ounces). The overall range of Mexican long-tongued bat extends from southern California and Arizona across southwestern New Mexico to the southern tip of Texas and south to include most of northern and central Mexico. In Arizona, Mexican Long-tongued Bat is found primarily in the southeastern portion of the state, from the Chiricahua Mountains west to the Baboquivari Mountains and as far north as the Santa Catalina Mountains near Tucson. In New Mexico, altitudes of capture range from approximately 1,402–1,890 m (4,600–6,200 feet) AMSL. This species is known to occur in the United States most commonly during the warmer months of the year, when blooming plants provide pollen and nectar for its consumption (NMDGF 2012e).

Suitable general habitat for this species can be found in riparian areas within mixed oak-conifer forest and semidesert grassland. Daytime roosts consist of caves, rock shelters, or abandoned mines. Foraging habitat includes desert areas with paniculate agaves and columnar cacti (AZGFD 2006).

**Townsend's Big-eared Bat:** This bat is a medium-sized bat with a wingspan of 30–34 cm (12–13 inches) and a forearm length of 4–5 cm (1.6–1.9 inches). Weights range from 8–14 g (0.3–0.5 ounces). This species is found from the central highlands of northern Mexico and southern California to west-central Texas. Isolated populations occur in the Black Hills of South Dakota and the Gypsum Hills of south-central Kansas, western Oklahoma, and northwestern Texas (AZGFD 2003).

In Arizona, summer day roosts are found in caves and mines from desert scrub up to woodlands and coniferous forests. Night roosts may often be in abandoned buildings. In winter, this species hibernates in cold caves, lava tubes, and mines mostly in uplands and mountains from the vicinity of the Grand Canyon to the southeastern part of the state (AZGFD 2003). In New Mexico, these bats have been found in shelters that range from low, arid desert situations, as in the Sierra Rica and Tres Hermanas along the Mexican border, to Canadian Zone conditions, as in Embudo Cave in the fir zone of the Sandia Mountains.

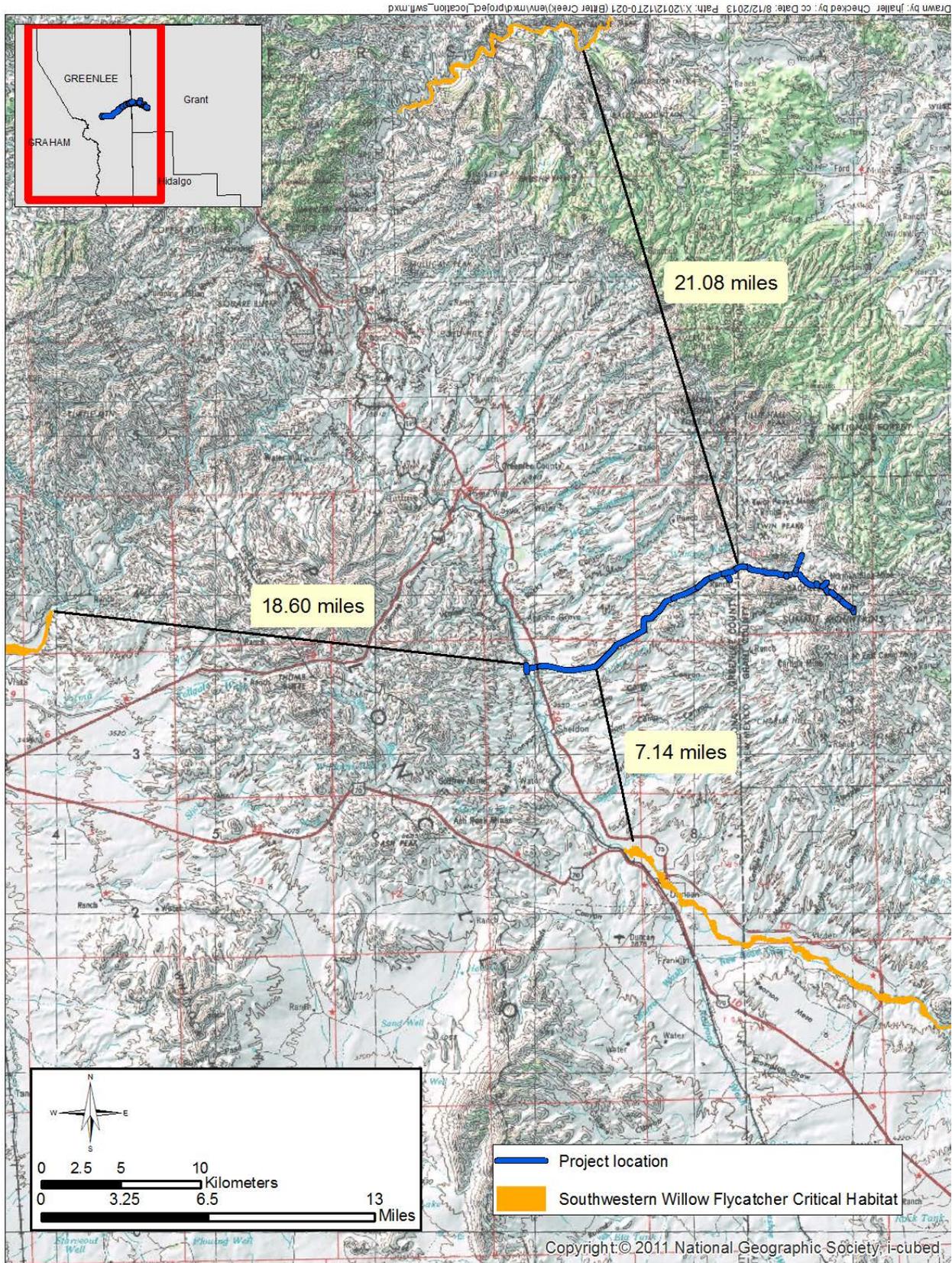
**Southwestern Willow Flycatcher:** Southwestern Willow Flycatcher (SWFL) are described as small birds, approximately 15 cm (6 inches) long and weighing 11–12 g (0.4 ounces). The upperparts of SWFL plumage are brownish olive, and they have a white throat that contrasts with a pale olive breast. The belly is pale yellow. Two white wing bars are visible, and the eye ring is faint or absent. The upper mandible is dark, and the lower mandible is light. When perched, the SWFL often flicks its slightly forked tail upward. SWFL are extremely difficult to distinguish by appearance alone from other flycatchers; consequently, vocalizations are critical in their identification (NPS 1997).

SWFL breed in dense riparian habitats near surface water or saturated soils in all or part of seven states, from sea level in California to over 2,600 m (8,500 feet) AMSL in Arizona and southwestern Colorado. SWFL habitat has been broken up by the National Park Service (NPS) into four general habitat types based on the dominant plant species, the size and shape of the habitat, canopy structure, and vegetation structure. Regardless of the composition or height of plant species, occupied sites always have dense vegetation in the patch interior with small openings and shorter vegetation below the main canopy. In addition to vegetation, water plays an important role in SWFL habitat requirements. SWFL territories and nests are typically near open water, cienegas, marshy seeps, or saturated soils (NPS 1997).

There is no designated critical habitat for this species in the immediate vicinity of the Proposed Action Area. The closest critical habitat is located at Duncan, Arizona, 11.49 km (7.14 miles) southeast of the project corridor. Critical habitat is also located downstream of the Gila Box to the San Carlos Indian Reservation 29.93 km (18.6 miles) to the west, and along the San Francisco River 33.92 km (21.08 miles) to the north (Figure 4).

**Allen's Lappet-browed Bat:** This bat is tawny above with hairs that are dark brown at the base and underparts that are slightly lighter. It does not have fur on the wings or membranes. The ears are 4 cm (1.6 inches) long with two flaps (lappets) projecting forward from the base of the ears. These bats feed on moths, soldier beetles, dung beetles, leaf beetles, roaches, and flying ants, either catching them in flight or gleaning them from foliage.

This species' spotty range extends from southern Utah and Nevada south through Arizona and New Mexico into south-central Mexico. They have been recorded in Catron, Grant, Socorro, and Sierra Counties in New Mexico. Allen's Lappet-browed Bat is largely a dweller in forested zones, from yellow pine zones down to riparian woodlands of sycamores, cottonwoods, and walnuts. In New Mexico, it is found in Ponderosa Pine forest, oak-pinyon-juniper-pine transition zones, and riparian cottonwood-sycamore forests. Roosts have been found in pine snags, but they are usually associated with mines and caves (NMDGF 2012d).



**Figure 4 Southwestern Willow Flycatcher critical habitat near the proposed action area.**

**Lesser Long-nosed Bat:** Lesser Long-nosed Bat is described as a nectar-, pollen-, and fruit-eating bat that migrates seasonally from Mexico to southern Arizona and southwestern New Mexico. This bat pollinates flowers of species of columnar cacti and paniculate agaves and disperses seeds of columnar cacti throughout its range. Habitat requirements of the Lesser Long-nosed Bat are twofold. Both suitable day roosts and suitable concentrations of food plants are critical to the survival of the Lesser Long-nosed Bat. Day roosts can be found in both caves and mines, although the criteria for suitable caves and mines have yet to be identified. In addition to roosting requirements, this species needs adequate numbers of flowers or fruit within foraging range of day roosts and along migration routes to support large numbers. In Arizona, this bat feeds on Saguaro (*Carnegiea gigantea*) and Organ Pipe Cactus (*Cereus thurberi*) in early summer and on agaves from later in the summer into early fall. Locations of good feeding sites therefore play an important role in determining the availability of potential roosting sites, and roost and food requirements must be considered jointly when discussing the habitat requirements of this bat (FWS 1995).

**Greater Long-nosed Bat:** This bat is relatively large compared with most U.S. bat species. It measures about 7.0–9.5 cm (2.75–3.75 inches) in total length, can be dark gray to “sooty” brown in color, and has a long muzzle with a prominent nose leaf at the tip. Its long tongue, an adaptation for feeding on flower nectar, can be extended up to 7.5 cm (3 inches) and has hair-like papillae on its tip. It has a minute tail that may appear to be lacking. The Greater Long-nosed Bat has been found in southwestern New Mexico; the Big Bend area of Texas; the Chinati Mountains of Presidio County, Texas; and southward to central Mexico. These bats are nectar feeders, emerging at night to feed on the showy flowers of agave. The Greater Long-nosed Bat prefers higher and cooler places in parts of New Mexico, Texas, and Mexico, whereas, the Lesser Long-nosed Bat generally inhabits lower elevations in New Mexico, Arizona, Mexico, and parts of Central and South America. In some areas, the two species are found together. In Texas and northern Mexico, at the northern part of their range, these bats are found in desert scrub vegetation dotted with century plants (agaves), mesquite, creosotebush, and a variety of cacti. For day-roosting sites, Greater Long-nosed Bats depend on cool caves, crevices, abandoned mines, tunnels, and old buildings (TPW 2013).

**California Leaf-nosed Bat:** California Leaf-nosed Bat may be identified by its distinctive large ears and nose leaf. No other large-eared bat has a nose leaf and no other bat with a nose leaf has such large ears. California Leaf-nosed Bats range from southern California, southern Nevada, and across the southwestern half of Arizona southward to the tip of Baja California, northern Sinaloa, and southwestern Chihuahua, Mexico. In Arizona, they are located primarily south of the Mogollon Rim. They are year-round occupants of some roosts, and the winter and summer ranges are essentially the same (AZGFD 2001). They are not known to occur in New Mexico (NMDGF 2012a). They roost in the daytime exclusively in caves, deserted mine tunnels, and deep grottos. They are usually within 9–24 m (30–80 feet) of the entrance of the tunnel and seem not to require dark retreats. This bat is a “gleaning” insectivore that captures prey such as crickets, grasshoppers, beetles, and sphinx moths straight from the ground or foliage rather than in flight.

**Fringed Myotis:** Fringed Myotis is a member of the Long-eared Myotis group and has an ear length of 16–19 mm (0.6–0.8 inches). This species is found in western North America from British Columbia south to Veracruz and Chiapas in southern Mexico. In Arizona, it occurs throughout much of the state, though it

is not known in the northeast or southwest corners. Their winter range in Arizona shifts to the southernmost counties and Mohave County. In New Mexico, Fringed Myotis is found throughout most of the state, with the exception of Guadalupe, Harding, Quay, De Baca, Curry, Roosevelt, and Lea Counties (NMDGF 2008a).

Fringed Myotis occurs primarily at middle elevations in deserts, grasslands, and woodlands. This species occupies the lowest elevational range of all the Long-eared Myotis species and is found in oak/pinyon woodlands and other open, coniferous, middle-elevation forests. These bats roost in caves, mine tunnels, rock crevices, and old buildings in colonies that may number several hundred. They glean mostly small beetles close to the vegetation canopy.

**Cave Myotis:** The Cave Myotis is a large bat with a total length of 8.7–10.0 cm (3.5–4 inches). It has large hind feet measuring 0.9–1.2 cm (0.36–0.48 inches), a long forearm less than 4.0 cm (1.6 inches) in length, robust teeth, and a well-developed sagittal crest on the skull.

Cave Myotis range from the southwestern half of Arizona and immediate adjacent parts of California, Nevada, New Mexico, and the northern third of Sonora, Mexico. These bats hibernate in wet mine tunnels above 1,830 m (6,000 feet) AMSL in elevation, usually entering hibernacula in late September or early October. They probably return to the same locality every year. They are colonial and roost in clusters, usually near the entrance of a cave or mine, although they may also be found under bridges and in buildings. They glean a wide variety of insects.

**Pocketed Free-tailed Bat:** Pocketed Free-tailed Bat is a small- or medium-sized bat with deep vertical grooves along its upper lip. It is smaller in size than Big Free-tailed Bat (*Nyctinomops macrotis*), another free-tailed bat occurring in Arizona. Pocketed Free-tailed Bat ranges from Southern California to the Big Bend area of Texas south through Baja California and central-western Mexico to central Mexico. Pocketed Free-tailed Bat reaches the northern limits of its distribution in desertscrub and arid lowland habitats in southern Arizona and southern California, roosting in crevices high on cliff faces in rugged canyons. It roosts in rock crevices and caves during the day, and may roost in buildings or under roof tiles. They glean a wide variety of insects.

**Big Free-tailed Bat:** Big Free-tailed Bat is a rather large bat, the largest of the genus. Big Free-tailed Bat ranges from southwestern British Columbia and Iowa to southwestern Mexico, Columbia, Venezuela, Guyana, Surinam, Peru, northern Argentina and Uruguay, Cuba, Jamaica, and Hispaniola. They are local to North America, but common as a breeding bat in New Mexico, Arizona, Texas, southern California, southeastern Nevada, and Utah. This bat seems to range primarily below 1,800 m (5,900 feet) AMSL in the southwestern United States. It primarily inhabits rugged, rocky country, roosting in rock crevices (vertical or horizontal) in cliffs, caves, buildings, and occasionally tree holes. They glean almost entirely on large moths.

**Desert Sucker:** This fish is medium-sized, with adults attaining a length of 10–28 cm (3.9–11.0 inches). Body coloration is silvery tan to dark greenish above and silvery to yellowish below. The Desert Sucker is found in the lower Colorado River downstream from the Grand Canyon, generally including the Bill Williams, Salt, Gila, and San Francisco River drainages. It is also found in the tributary streams of the

Gila River drainage upstream of Gila, Arizona, and the Virgin River basin of Utah, Arizona, and Nevada, including the pluvial White River and Meadow Valley Wash.

The Desert Sucker is found in rapids and flowing pools of streams and rivers primarily over bottoms of gravel-rubble with sandy silt in the interstices. Adults live in pools, moving at night to swift riffles and runs to feed. Young inhabit riffles throughout the day, feeding on midge larvae (AZGFD 2002).

**Texas Horned Lizard:** Texas Horned Lizard is a broad, squat lizard with horns at the back of its head and a very short tail (NMDGF 2008b). The Texas Horned Lizard ranges from Kansas south to the Gulf coast of Texas and to Durango, San Luis Potosi, and Tamaulipas, Mexico, and from the Mississippi River west to the southeast corner of Arizona (AZGFD 2002b). This species inhabits open, arid, and semiarid areas with sparse vegetation that can include grass, cactus, scattered brush, or scrubby trees. Soils may vary in texture from sandy to rocky. This lizard burrows into the soil, enters rodent burrows, or hides under rocks when inactive. Texas Horned Lizard feeds almost exclusively on ants and is known to climb tree trunks when soils are wet following heavy rains (NMDGF 2008b).

**Razorback Sucker:** The Razorback Sucker is a large, river-dwelling fish that can attain lengths of 1.0 m (3.3 feet) and weights of 6.0 kg (13.2 pounds). The head and body are elongated and olivaceous to brownish black in color above and lighter, often yellow, below. The sides have brown or pinkish to reddish brown stripes. The dorsal fin is dark, the anal fin is yellow; and the caudal fin is light yellow-brown. The dorsum and upper sides of breeding males are black or dark brown, orange laterally, and the belly is bright yellow. Breeding males also have coarse sharp tubercles on the anal, caudal and/or pelvic fins. The total range of the Desert Sucker includes large rivers of the Colorado River Basin from Wyoming to Mexico. It is believed to be extirpated from New Mexico. The present overall distribution of natural populations is limited to Lake Mohave, Green River Basin, and the Upper Colorado River Basin, although historically this species was found in the Colorado, Gila, Salt, Verde, and San Pedro Rivers. In Arizona, natural adult populations exist only in Lake Mohave, Lake Mead, and Lake Havasu.

This species uses a variety of habitat types, from mainstream channels to slow backwaters of medium and large streams and rivers, sometimes around cover. In impoundments, they prefer depths of 1.0 m (3.3 feet) or more over sand, mud, or gravel substrates. Adult razorbacks tolerate a wide range of temperatures from near freezing temperatures to 89.6° F (32.0° C), with optimum temperatures around 71.6–77.0° F (22–25° C) (AZGFD 2002).

The vicinity of the Gila River including its 100-year floodplain is designated as critical habitat for the Razorback Sucker from the Arizona/New Mexico border west to Coolidge Dam in Gila County. This reach of the Gila River intersects the far western end of the Proposed Action.

### **3.12 Wildlife**

Wildlife observed in the project area at the time of the biological survey included Turkey Vulture (*Cathartes aura*), Western Kingbird (*Tyrannus verticalis*), Red-tailed Hawk (*Buteo jamaicensis*), Pinyon Jay (*Gymnorhinus cyanocephalus*), Scott's Oriole (*Icterus passerina*), Common Raven (*Corvus corax*), and whiptail (*Cnemidophorus* sp.). Wildlife sign observed was limited to small rodent burrows.

### **3.13 Migratory Birds**

The Migratory Bird Treaty Act (MBTA) of 1918 (United States Code, Title 16, Chapter 7, Subchapter II) prohibits the “pursuit, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof.” The ensuing EO 13186, signed January 10, 2001, by President Clinton, “directs executive departments and agencies to take certain actions to further implement the (MBTA).” Such actions include the responsibility that Federal agencies “taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations ... develop and implement, within 2 years, a Memorandum of Understanding (MOU) with the Fish and Wildlife Service, that shall promote the conservation of migratory bird populations.”

The BLM has entered into a cooperative agreement with other agencies to promote conservation of migratory birds and minimize potential adverse effects of take under the MBTA. At least 256 species of migratory birds are known to occur at least part of the year in Greenlee County, Arizona, and/or Grant County, New Mexico. The desertscrub and semidesert grassland in the Proposed Action Area likely provides habitat for wintering birds.

### **3.14 Visual Resources**

The BLM classifies visual resources through a Visual Resource Inventory (VRI). The VRI has three components: scenic quality, sensitivity, and distance zone. Scenic quality is a measure of the visual appeal of a tract of land. In the VRI process, BLM-managed lands are given an A, B, or C rating based on the apparent scenic quality. Scenic quality is determined by using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modification. Areas with the most visual appeal are rated A, while areas with the least visual appeal are rated C. The project area is within an area rated B for scenic quality. The project area falls within the Tanner Lake Scenic Quality Rating Unit (SQRU). This area contains flat, rolling hills vegetated with sparse, low shrubs and grasses and some scattered juniper. There are only subtle changes in landform and vegetation, with a few scattered rims and outcrops. Colors are mostly browns, greens, and grays.

Sensitivity is a measure of the public concern for scenic quality. During the sensitivity rating, public lands are assigned high, medium, or low sensitivity by analyzing six indicators of public concern: type of user, amount of use, public interest, adjacent land uses, special areas, and other factors. The project area is within an area rated medium for sensitivity.

The distance zone analysis is conducted to determine the relative visibility from travel points or observation points. The distance zone for this area is foreground/middleground, meaning the area can be seen from travel routes or observation points within a distance of 4.8–8 km (3–5 miles). This indicates that activities and development may be able to be viewed in detail.

Visual resources are managed by assigning a Visual Resource Management (VRM) Class. The objective for each VRM Class describes how that area should be managed. The Proposed Action is within an area classified as VRM Class IV. The objective of VRM Class IV is to provide for activities that require major

modification of the landscape. The level of change to the landscape can be high, and management activities may dominate the view and be the major focus of attention.

VRM Class I and Class II areas are located about 0.8 km (0.5 miles) north-northeast of the Proposed Action Area.

### **3.15 Wastes, Hazardous and Solid**

Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, such as cleaning fluids or pesticides, or the byproducts of manufacturing processes. Solid waste is defined as trash or garbage.

A review of the EPA's Envirofacts website indicates that there are no brownfields (EPA 2013), Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), or other hazardous material type sites in the Proposed Action Area.

### **3.16 Environmental Justice**

Title VI of the Civil Rights Act of 1964 and related statutes (including the State-level Environmental Evaluation Group's "Guidance on Title VI and Environmental Justice") ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving Federal financial assistance on the basis of race, color, national origin, age, sex, or disability. EO 12898 on environmental justice, dated February 11, 1994, directs that programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations.

A demographic profile for the Proposed Action Area was generated using the Economic Profile System-Human Dimensions Toolkit (EPS-HDT). The analysis area selected was the Greenlee County, Arizona, and Grant County, New Mexico, which were benchmarked to the United States, non-metro areas. A copy of the full Profile of Demographics can be found in Appendix C. Notably:

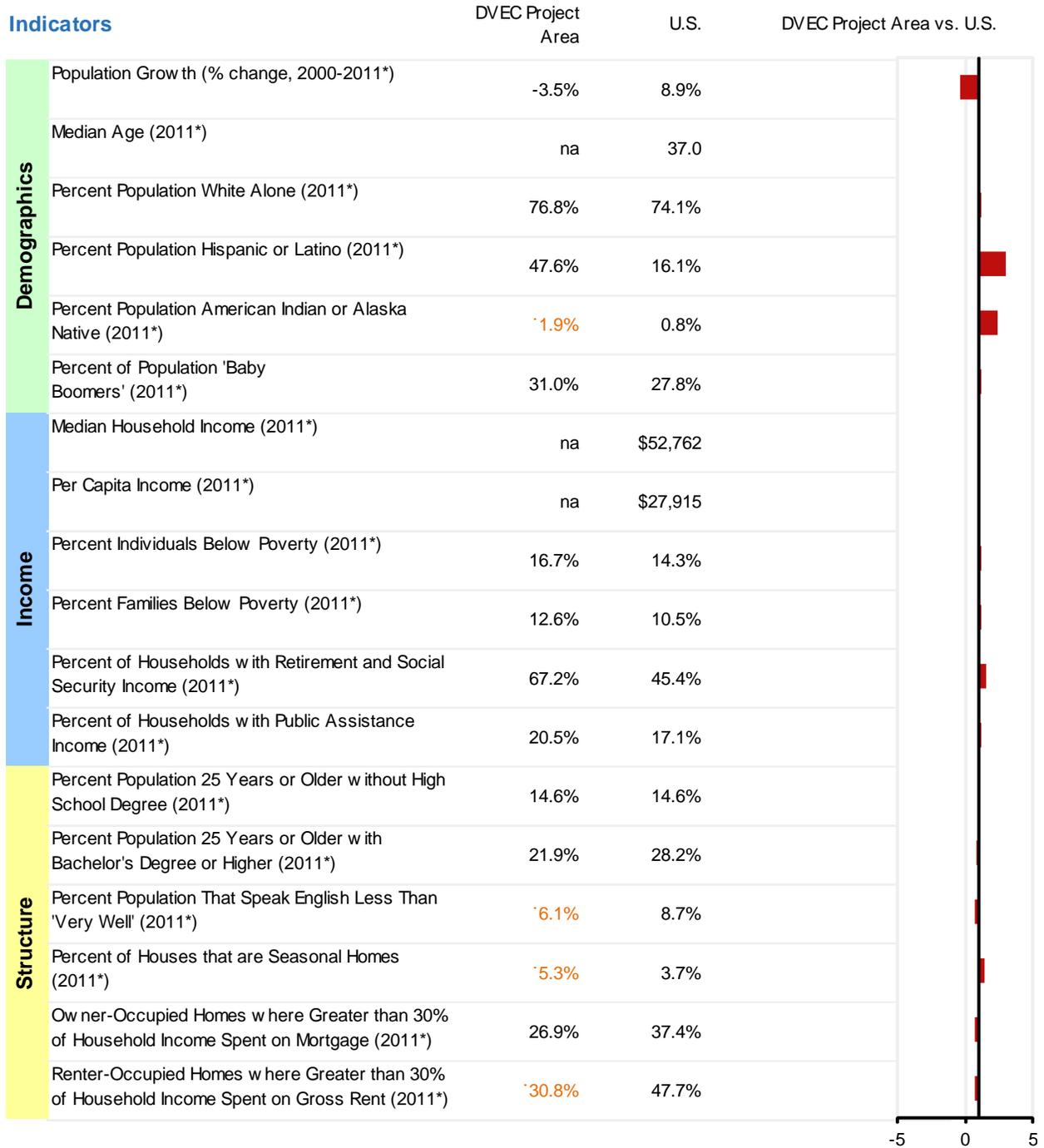
- From 2000 to the 2007–2011 period, the Proposed Action Area had an estimated absolute change in population of –1,393.
- From 2000 to the 2007–2011 period, the median age estimate increased from 38.8 to 45.6 (a 17.5 percent increase) in Grant County, New Mexico, and increased from 33.6 to 35.0 in Greenlee County, Arizona (a 4.2 percent increase).
- In the 2007–2011 period, the age category with the highest estimate for number of women was 45–64 (5,560), and the age category with the highest estimate for number of men was 45–64 (5,400).
- From 2000 to the 2007–2011 period, the age category with the largest estimated increase was 65 and over (1,280), and the age category with the largest estimated decrease was Under 18 (–2,001).
- In the 2007–2011 period, the racial category with the highest estimated percentage of the population in the Proposed Action Area was White Alone (76.8 percent), and the racial category

with the lowest estimated percent of the population was Native Hawaiian and Other Pacific Islander Alone (0.0%).

- In the 2007–2011 period, Grant County, New Mexico, had 48 percent of the population self-identify as Hispanic or Latino of any race, and Greenlee County had 46.4 percent.
- In the 2007–2011 period, Grant County, New Mexico, had 2 percent of the population self-identify as American Indian and Alaska Native, and Greenlee County had 1.8 percent.
- In the 2007–2011 period, the income category in the DVEC Project Area with the most households was \$50,000 –\$74,999 (18.8 percent of households). The income category with the fewest households was \$200,000 or more (0.6 percent of households).
- In the 2007–2011 period, the bottom 40 percent of households in the DVEC Project Area accumulated approximately 13.8 percent of total income, and the top 20 percent of households accumulated approximately 51.0 percent of total income.
- In the 2007–2011 period, Greenlee County, Arizona, had 17.2 percent of individuals living below poverty, and Grant County had 16.6 percent.
- In the 2007–2011 period, Greenlee County, Arizona, had 12.9 percent of families living below poverty, and Grant County had 12.5 percent.
- In the 2007–2011 period, Grant County, New Mexico, had 14.8 percent of people over the age of 25 with no high school degree, and Greenlee County, Arizona, had 13.6 percent.
- In the 2007–2011 period, Greenlee County, Arizona, had a vacant housing rate of 23.2 percent, and Grant County had a rate of 15.6 percent. Figure 5 below shows the demographic differences between the Proposed Action Area and all United States non-metro areas. The Proposed Action Area is most different from the U.S. in Percentage of Hispanic or Latino Population (2011),
- Population Growth (measured by rate of change, 2000–2011), and Percentage of American Indian or Alaska Native Population (2011)<sup>3</sup>.

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<sup>3</sup> The data in this table are calculated by American Community Survey (ACS) using annual surveys conducted during 2007–2011 and are representative of average characteristics during this period.



**Figure 5 Demographic comparisons between the proposed action area and the United States.**

### 3.17 Socioeconomics

A socioeconomic profile for the Proposed Action Area was generated using EPS-HDT. The analysis area selected was Greenlee County, Arizona, and Grant County, New Mexico, which were benchmarked to all United States non-metro areas. A copy of the full Profile of Socioeconomic Measures can be found in Appendix C. Notably:

- From 2000–2011, the population shrank by 1,448 people, a 4 percent decrease.
- From 2000–2011, natural change contributed to the rate of population decline.
- From 2000–2011, migration contributed to 100 percent of population decline.
- From 2001–2011, jobs in services related industries shrank from 8,836 to 7,952, a 10 percent decrease.
- From 2001–2011, jobs in non-service-related industries shrank from 3,456 to 3,165, an 8 percent decrease.
- From 2001–2011, jobs in government jobs grew from 4,119 to 4,338, a 5 percent increase. In 2011, the three industry sectors with the largest number of jobs were government (4,370 jobs), retail trade (1,885 jobs), and mining (including fossil fuels) (1,565 jobs).
- From 2001–2011, the three industry sectors that added the most new jobs were mining (including fossil fuels) (289 new jobs), government (219 new jobs), and health care and social assistance (151 new jobs).
- From 2001–2011, personal income from service-related industries grew from \$268 million to \$282 million (in real terms), a 5 percent increase.
- From 2001–2011, personal income from non-service-related industries shrank from \$203 million to \$196 million (in real terms), a 3 percent decrease.
- From 2001–2011, personal income from government jobs grew from \$179 million to \$217 million (in real terms), a 21 percent increase.
- In 2011, the three industry sectors with the largest personal income were government (\$211.5 million), mining (including fossil fuels) (\$126.5 million), and construction (\$69.5 million).
- From 2001–2011, the three industry sectors that added the most new personal income (in real terms) were government (\$38.6 million), health care and social assistance (\$16.6 million), and mining (including fossil fuels) (\$10.9 million).
- In 2011, non-service-related jobs paid the highest wages (\$58,741), and service-related jobs paid the lowest (\$26,012).
- The lowest seasonal unemployment rate was April of 2012. The highest seasonal unemployment rate was July of 2009.

Figure 6 below shows the socioeconomic differences between the Proposed Action Area and the United States Non-Metro area. The Proposed Action Area is most different from the benchmark in per capita income (percentage change, 2000–2011), employment (percentage change, 2000–2011), and percentage of government jobs.

The Summit Mine employs 45 personnel as a standalone operation. However, the Lordsburg Mining Company milling operation is wholly dependent upon the mine, and an additional 15 people are

employed there. There are also a number of contracted personnel that provide haulage service for the mine on a daily basis as well.

<b>Relative Performance, 2011</b>		DVEC Project Area	United States Non-Metro	Ratio of DVEC Project Area to United States Non-Metro
<b>Trends</b>	Population (percent change, 2000-2011)	-3.7%	7.9%	
	Employment (percent change, 2000-2011)	-10.0%	4.7%	
	Personal Income (percent change, 2000-2011)	20.1%	20.1%	
	Average Earnings per Job (percent change, 2000-2011)	11.9%	8.5%	
	Per Capita Income (percent change, 2000-2011)	24.7%	11.3%	
<b>Prosperity</b>	Average Earnings per Job	\$45,769	\$40,933	
	Per Capita Income	\$33,192	\$35,369	
	Average Annual Wages - Services Related	\$27,232	\$32,011	
	Average Annual Wages - Non-Services Related	\$56,862	\$46,321	
	Average Annual Wages - Government Related	\$36,416	\$39,173	
<b>Stress</b>	Unemployment Rate (change 2000-2012)	1.2%	3.6%	
	Unemployment Rate	6.7%	7.9%	
<b>Structure</b>	Percent of Employment in Proprietors	22.0%	27.5%	
	Percent of Personal Income in Non-Labor	48.1%	39.5%	
	Percent of Services Related Jobs	44.4%	57.5%	
	Percent of Non-Services Related Jobs	17.7%	22.7%	
	Percent of Government Jobs	24.2%	15.9%	
	Commuting (net residential adjustment share of personal income)	-9.6%	0.0%	

Commuting statistics are displayed only when comparing a county to a benchmark county.

**Figure 6 Comparison of performance between the proposed action area and the benchmark.**

## 4 ENVIRONMENTAL EFFECTS

### 4.1 Impacts of the No-Action Alternative

The No-Action Alternative would result in no impacts to any resources except air quality and the continuation of current land and resource uses in the project area; therefore, these are the only resources discussed below for the No-Action Alternative. Under the No-Action Alternative, DVEC would not construct a new distribution line on lands managed by the BLM, and Lordsburg Mining Company would

continue using diesel generators for power, which would have a negative impact on air quality, climate, and noise. The No-Action Alternative provides the baseline conditions to which alternatives are compared.

## **4.2 Impacts of the Proposed Action**

### **4.2.1 Air Quality**

#### **4.2.1.1 Impacts of Proposed Action on Air Quality**

Short-term adverse impacts to air quality are expected as a result of the Proposed Action. These impacts would be from vehicle and equipment exhaust and from dust produced by construction activities. Fugitive dust would be limited by dust-control measures, such as watering of disturbed areas by a water truck, as specified by local and County ordinances and/or management agency requirements. Construction activities would also involve a temporary increase in exhaust emissions from internal combustion engines associated with vehicles and equipment in the Proposed Action Area. Approval of the Proposed Action would have a long-term beneficial impact on air quality because the diesel generators now in use at Summit Mine would no longer be utilized. Therefore, adverse impacts to air quality due to the Proposed Action should be minor and short-term, not exceeding 3 months and the long-term impacts would be beneficial. The Proposed Action would not result in any adverse change to the attainment status of the Action Area.

#### **4.2.1.2 Impacts of the No-Action Alternative on Air Quality**

Under the No-Action alternative, the Summit Mine would continue to use diesel generators for their electrical power needs. These generators would continue to have a minor and adverse impact on the air quality of the Proposed Action Area.

#### **4.2.1.3 Impacts of the Proposed Action on Climate**

The Proposed Action would result in temporary and minor increases in the use of fossil fuel and the associated emission of GHGs. Under the Proposed Action, the estimated total GHG emissions would be approximately 61 metric tons of CO<sub>2</sub> for construction of the electrical distribution line. However, use of the generators at Summit Mine would cease, thereby reducing GHG emissions by 4,680 metric tons annually. The total GHG emissions from the Proposed Action are substantially less than the established GHG significance threshold of 25,000 metric tons per year. There would be a negligible impact on climate change from GHG emissions associated with the construction of the new distribution line. The benefit of the proposed action to GHG would be positive because the use of generators at Summit Mine would cease.

#### **4.2.1.4 Impacts of the No-Action Alternative on Climate**

Under the No-Action alternative, the two generators at the Summit Mine would continue to produce approximately 4,680 metric tons of GHGs annually. This GHG production would continue to have a negligible impact on climate.

#### **4.2.1.5 Impacts of the Proposed Action on Noise**

Noise levels produced by the equipment used to install the proposed electrical distribution line vary from approximately 85 dB for the auger truck that would be used to dig the pole holes to approximately 75 dB for the pickup trucks that would be used to transport work crews and material. Additional equipment, such as bucket trucks and the semi-tractor that would be used to transport the utility pole trailers, would produce approximately 84 dB, which is equivalent to that produced by a medium-duty truck. With the exception of the auger truck, noise produced by construction of the Proposed Action would be consistent with the current noise levels in the Proposed Action Area. A summary of how equipment noise would be perceived at the residential noise receptors in the vicinity of the project corridor can be found in Table 11. The distance between individual pole sites and residences was used in the noise analysis calculations because these sites would be the only place additional noise impacts would be perceived from.

During the installation and maintenance of the distribution line, short-term moderate noise impacts are anticipated. All applicable OSHA regulations and requirements would be followed. On-site activities would be restricted to daylight hours to the greatest extent practicable. All equipment would have properly working mufflers.

The benefit of the proposed action to GHG would be positive because the use of generators at Summit Mine would cease.

**Table 11 Equipment Noise.**

<b>Receptor</b>	<b>Distance to Closest Pole Site</b>	<b>Digger Truck<sup>a, c</sup></b>	<b>Pickup<sup>c</sup></b>	<b>Medium-duty Truck<sup>b, c</sup></b>
Residence 1	1,401 m (4,596 feet)	46	36	45
Residence 2	1,118 m (3,668 feet)	48	38	47
Residence 3	85 m (279 feet)	70	60	69
Residence 4	109 m (358 feet)	68	58	67
Residence 5	114 m (374 feet)	68	58	67
Residence 6	346 m (1,135 feet)	58	48	57

<sup>a</sup> Noise levels are for the digger truck's auger engine.

<sup>b</sup> Includes bucket truck, the digger truck in transport, and semi-tractor.

<sup>c</sup> All units in decibels (dB).

#### **4.2.1.6 Impacts of the No-Action Alternative on Noise**

Under the No-Action alternative, the two generators at the Summit Mine would continue producing noise that would be perceptible at two residences in the Proposed Action Area. This noise impact would continue to be minor and adverse.

### **4.3 Cultural Resources**

#### **4.3.1 Impacts of Proposed Action on Cultural Resources**

Direct effects to cultural resources normally include alterations to the physical integrity of a cultural resource. If a cultural resource is significant for reasons other than its scientific information, direct effects

may include the introduction of audible, atmospheric, or visual elements that are out of character for the cultural site. A potential indirect effect associated with the Proposed Action is the increase in human activity or access in the area, bringing with it the increased possibility of unauthorized removal or other alteration to cultural resources in the area.

All previously recorded and newly found sites in Arizona would be avoided during construction of the overhead distribution line. In New Mexico, LA 173362 and LA 173366 would be avoided and spanned during construction, and a professional archaeologist would be present to monitor construction within and in the immediate vicinity of these two sites. The other two sites recommended as eligible, LA 173363 and LA 173364, would not be adversely affected by the project.

A cultural resource determination of No Effect for the Proposed Action was issued by the Arizona and New Mexico BLM archaeologists and the Arizona and New Mexico SHPO's concurred (see Appendix D).

#### **4.4 Invasive, Nonnative Species**

##### **4.4.1 Impacts of the Proposed Action on Invasive, Nonnative Species**

Invasive, nonnative plant species can be introduced into an area in many ways, including wind, vehicles, heavy equipment, livestock, and wildlife. The potential for invasive plant species to invade or spread within an area is increased when soil is disturbed and native vegetation is removed. Establishment of weeds typically occurs in disturbed areas, such as roadsides, new utility corridors, and oil and gas well pads.

No invasive species were observed in the Proposed Action Area during Tierra's survey. DVEC and their contractor would follow BLM weed management policy to control and minimize the potential introduction of invasive nonnative species into the Proposed Action Area. Therefore potential impacts would be minor and short-term, only lasting until revegetation has occurred.

#### **4.5 Soils**

##### **4.5.1 Impacts of the Proposed Action on Soils**

The Proposed Action would involve the temporary disturbance of approximately 0.70 ha (1.74 acres). BMPs, such as silt fencing and straw wattles, would be used to minimize sediment transport and retain soils in the Proposed Action Area. Revegetation of disturbed areas is expected to occur naturally from the seed bank contained in areas adjacent to the disturbed areas within a few years, and this growth would further serve to retain soils. Therefore, the Proposed Action would have a long-term low impact on soils in the Proposed Action Area.

#### **4.6 Surface Water and Ground Water**

##### **4.6.1 Impacts of the Proposed Action on Surface Water**

Two of the distribution line poles associated with the Proposed Action would be placed within the ordinary high water mark (OHWM) of the Gila River. Because these pole placements would involve the

discharge of dredged and/or fill material into a Water of the U.S. (WUS), a Clean Water Act (CWA) Section 404 permit is required prior to construction of the Proposed Action.

TDS requested a 404 permit for the Gila River crossing on December 15, 2012, from the U.S. Army Corps of Engineers (USACE). USACE issued an Approved Jurisdictional Determination (AJD), an AJD Form, and a Department of the Army Nationwide Permit (NWP) Verification letter on August 9, 2013 (Appendix E). This USACE documentation authorizes construction of the Gila River crossing under NWP 12—Utility Line Activities. All construction activities at the Gila River crossing must be in compliance with the terms and conditions found in NWP 12 as well as Special Conditions identified in the USACE NWP Verification Letter. Therefore, the Proposed Action would have no impact on WUS.

As a result of soil erosion, temporary and indirect effects to surface waters could be possible. In the short term, the proposed project would result in 0.70 ha (1.74 acres) of new ground disturbance. Following construction, all areas not permanently stabilized would take about 2 years to become revegetated. Until this had occurred, there is an increased exposure of erodible soils that could make it to surface waters. Erosion would most likely occur during and after precipitation events. Erosion could subsequently result in increased sedimentation of washes in the Proposed Action Area. Because design features would be incorporated to reduce these potential impacts, erosion is expected to be minor and have a short-term effect on surface waters as a result of the Proposed Action.

#### **4.6.2 Impacts of the Proposed Action on Floodplains**

Impacts to floodplains typically occur when the topography of the floodplain is substantially modified by placement or removal of materials within the floodplain. None of the construction activities associated with the Proposed Action would substantially modify the ground surface of floodplains because design features would be incorporated which specify that surface contours be restored in all disturbed areas. Therefore, the Proposed Action would have no impacts on floodplains

#### **4.6.3 Impacts of the Proposed Action on Ground Water**

No impacts to groundwater are anticipated because the minimum depth to groundwater in the Proposed Action Area is 5.8 m (19 feet) (ADWR 2013) and the greatest depth a pole hole will be dug is 2.1 m (7 feet).

### **4.7 Wetlands/Riparian Habitat**

#### **4.7.1 Impacts of the Proposed Action on Wetlands/Riparian Habitat**

The banks of the Gila River within the Proposed Action Area have been identified by the FWS National Wetland Inventory as potentially containing Freshwater Emergent Wetlands. However, the USACE AJD form for the Gila River crossing indicates that there are no jurisdictional wetlands at this location (Appendix E). A single pole would be placed within this non-jurisdictional wetland. Because no mechanized clearing in the ROW would be necessary for the pole's placement, the amount of disturbance would be negligible, and all pre-construction contours at the pole site would be restored. Impacts to wetlands would be short-term and minor, only lasting as long as it takes to install the pole.

In addition, a narrow band of riparian habitat is located on the west bank of the Gila River. Design features have been incorporated into the Proposed Action specifying that riparian habitat must be avoided during construction; any maintenance trimming required of riparian vegetation that becomes established would be kept to the minimum necessary and based on the species of vegetation present and the anticipated upcoming year's growth. Review of access points to poles located in the vicinity of the Gila River (see Figure 7) determined that this can be accomplished. Vegetation beneath the entire line, including at the Gila River crossing, would typically be maintained to a height not to exceed 7.3 m (24 feet). Therefore, the Proposed Action would have no impacts on riparian habitat during construction, and future maintenance activities associated with the Proposed Action would have minor and long-term impacts on riparian vegetation.

## **4.8 Vegetation**

### **4.8.1 Impacts of the Proposed Action on Vegetation**

Approximately 0.70 ha (1.74 acres) of vegetation would be disturbed as a result of the Proposed Action. As the Proposed Action Area would be allowed to reseed naturally in the areas of pole disturbance, the Proposed Action would have a long-term, yet minor impact on vegetation in the Proposed Action Area.

## **4.9 Livestock Grazing**

### **4.9.1 Impacts of the Proposed Action on Livestock Grazing**

There would be a temporary loss of not more than 0.68 ha (1.69 acres) of potential grazing habitat within the 97.41 acres of leased grazing lands that overlap the Proposed action lease area. This would constitute a negligible loss of forage and would not result in the reduction of any permitted AUMs. In order to protect livestock that may be in the Proposed Action Area, potential hazards (holes, equipment in operation, etc.) would be fenced, barricaded, or monitored during construction.

## **4.10 Lands and Realty**

### **4.10.1 Impacts of the Proposed Action on Lands and Realty**

The Proposed Action is not within a ROW disposal or avoidance area, and no portions of the Proposed Action are within a BLM SDA. However, the Proposed Action would cross Bitter Creek Road (BLM ROW Grant #NMNM052981) at 22 locations, and 9 poles are to be placed within 9 m (30 feet) of the road's centerline. The nominal width of Bitter Creek Road is 6 m (20 feet). A table indicating the vertical clearance at all crossings and figures indicating the proximity of poles located within 9 m (30 feet) of Bitter Creek Road can be found in Appendix F.

All road crossings associated with the Proposed Action would be installed at a sufficient height to allow the safe passage of motorized vehicles; the applicable standard minimum clearance between conductors carrying more than 750 volts and a road surface is specified to be 5.6 m (18.5 feet) in the National Electric Code (NEC) 232-1. The minimum vertical clearance between the surface of Bitter Creek Road and the line's conductors would be 7.5 m (24.5 feet). The distribution line would also cross SR 75 and the Arizona Eastern Railroad near the eastern end of the project corridor. The vertical clearance at these crossings would be 6.8 m (22.2 feet) and 8.6 m (28.3 feet), respectively. Because all road crossings and

the single railway crossing associated with the Proposed Action would not impede traffic, and the crossings would be in compliance with NEC 232-1, the Proposed Action would have no impacts on these ROWs.

The nine poles located within 9 m (30 feet) of Bitter Creek Road would be placed at distances ranging from 6.0–8.5 m (20–28 feet) from the road centerline. With the nominal width of the road mentioned above, the distance between the road edge and the poles would range from approximately 3.0–4.3 (10–14 feet). This spacing would still allow a vehicle to pull safely off of the road at each pole location. Therefore, the poles to be located within 9 m (30 feet) of Bitter Creek Road would have no impact on ROW #NMNM052981.

## **4.11 Minerals**

### **4.11.1 Impacts of the Proposed Action on Minerals**

Mining claimants in the area would be notified of this proposal. No mine facilities, adits, or stockpiles would be impacted by this Proposed Action. Therefore, this Proposed Action would not impact any active mining claims or the current notice for exploratory drilling.

## **4.12 Special Status Species**

### **4.12.1 Impacts of the Proposed Action on Special Status Plants**

Construction and maintenance of the Proposed Action would result in surface disturbing activities that may adversely affect special status plants either by damaging or killing individual specimens or by degrading their habitat. Potential indirect impacts to plants from dust and potential noxious weed infestation have been lessened through the development of design features for air quality and invasive species (See Section 2.1.6).

**Goosefoot Moonpod:** This plant was not observed at the time of the Biological Evaluation survey. However, soils in the Proposed Action Area may support Goosefoot Moonpod, and it could be present in the seed bank. Construction is anticipated to have minimal impact on vegetation, not exceeding 0.68 ha (1.69 acres) of ground disturbance from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. These impacts would be short-term and temporary. Therefore, the proposed project may impact Goosefoot Moonpod and its habitat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Night-blooming Cereus:** No Night-blooming Cereus specimens were identified during the Biological Evaluation survey. However, this species is somewhat cryptic and difficult to see as it usually grows from beneath shrub species. While the survey did not locate any individuals, they may be present in the Proposed Action Area.

Pre-construction surveys for Night-blooming Cereus would be conducted and all Night-blooming Cereus would be flagged for avoidance during construction. Therefore, the proposed project may impact Night-blooming Cereus, but it is not likely to result in a trend toward Federal listing or loss of viability.

### **4.12.2 Impacts of the Proposed Action on Special Status Animals**

Construction and maintenance of the electrical distribution line would result in surface disturbance that may adversely affect special status animals by degrading and fragmenting habitat. In addition, these activities may disrupt feeding or mating activities. Construction would temporarily reduce the total acres of potential special status animal habitat. Incidental mortality due to collisions with vehicles, equipment, and entrapment in open holes could also result in the loss of individual animals.

**Longfin Dace:** The western end of the project corridor crosses the intermittently flowing Gila River, which could provide suitable habitat for Longfin Dace. Design features have been incorporated into the Proposed Action that specifies that the flowing channel of the Gila River be avoided during construction. Since pole locations near the Gila River can be accessed without crossing the flowing channel, this can be accomplished (Figure 7). Therefore, direct impacts to individuals of this species would be avoided. Utility pole installations in the vicinity of the river would involve ground disturbance that could negligibly increase sediment transport into the river channel, which may increase turbidity of the river and indirectly impact this species. However, BMPs associated with water quality (see Section 2.1.8 Design Features) would prevent sediment transport; therefore, the Proposed Action is not likely to result in a trend toward Federal listing or loss of viability for this species.

**Baird's Sparrow:** Areas adjacent to and within the Proposed Action Area contain grassland that may provide suitable habitat for Baird's Sparrow during wintering in the months of September/October through early May. However, this grassland habitat is of marginal quality. Impacts to Baird's Sparrow from implementation of the Proposed Action may occur through vegetation removal in marginal habitat and incidental mortality due to vehicle/equipment strikes. These impacts are anticipated to be short-term and minor. Ground disturbance associated with construction would not exceed 0.68 ha (1.69 acres) from pole placement, and minimal off-road travel is anticipated.

**Golden Eagle:** A review of the AZGFD HDMS Online Environmental Review Tool indicates that at least one Golden Eagle has been recorded within 4.8 km (3 miles) of the Proposed Action Area in Arizona. Suitable nesting and foraging habitat for Golden Eagles is present in the entire Proposed Action Area, although no individual Golden Eagles or nests were observed during the Biological Evaluation survey. However, the Proposed Action may impact individual Golden Eagles temporarily and short-term through construction noise. The Proposed Action is not likely to result in a trend toward Federal listing or loss of viability for this species.

**Sonora Sucker:** The western end of the project corridor crosses the intermittently flowing Gila River, which could provide suitable habitat for Sonora Sucker. Design features have been incorporated into the Proposed Action that specifies that the flowing channel of the Gila River be avoided during construction. Since pole locations near the Gila River can be accessed without crossing the flowing channel, this can be accomplished (see Figure 7). Therefore, direct impacts to individuals of this species would be avoided. Utility pole installations in the vicinity of the river would involve ground disturbance, which could negligibly increase sediment transport into the river channel which may increase turbidity of the river and indirectly impact this species. However, BMPs associated with water quality (see Section 2.1.8 Design Features) would prevent sediment transport; therefore the Proposed Action is not likely to result in a trend toward Federal listing or loss of viability for this species.

**Mexican Long-tongued Bat:** The Proposed Action Area contains suitable forage and roost habitat that may be utilized by Mexican Long-tongued Bat, and although individuals would not be present in the Proposed Action Area during construction as they migrate south in winter, agaves are present within and adjacent to the Proposed Action Area that could be used by this species as forage.

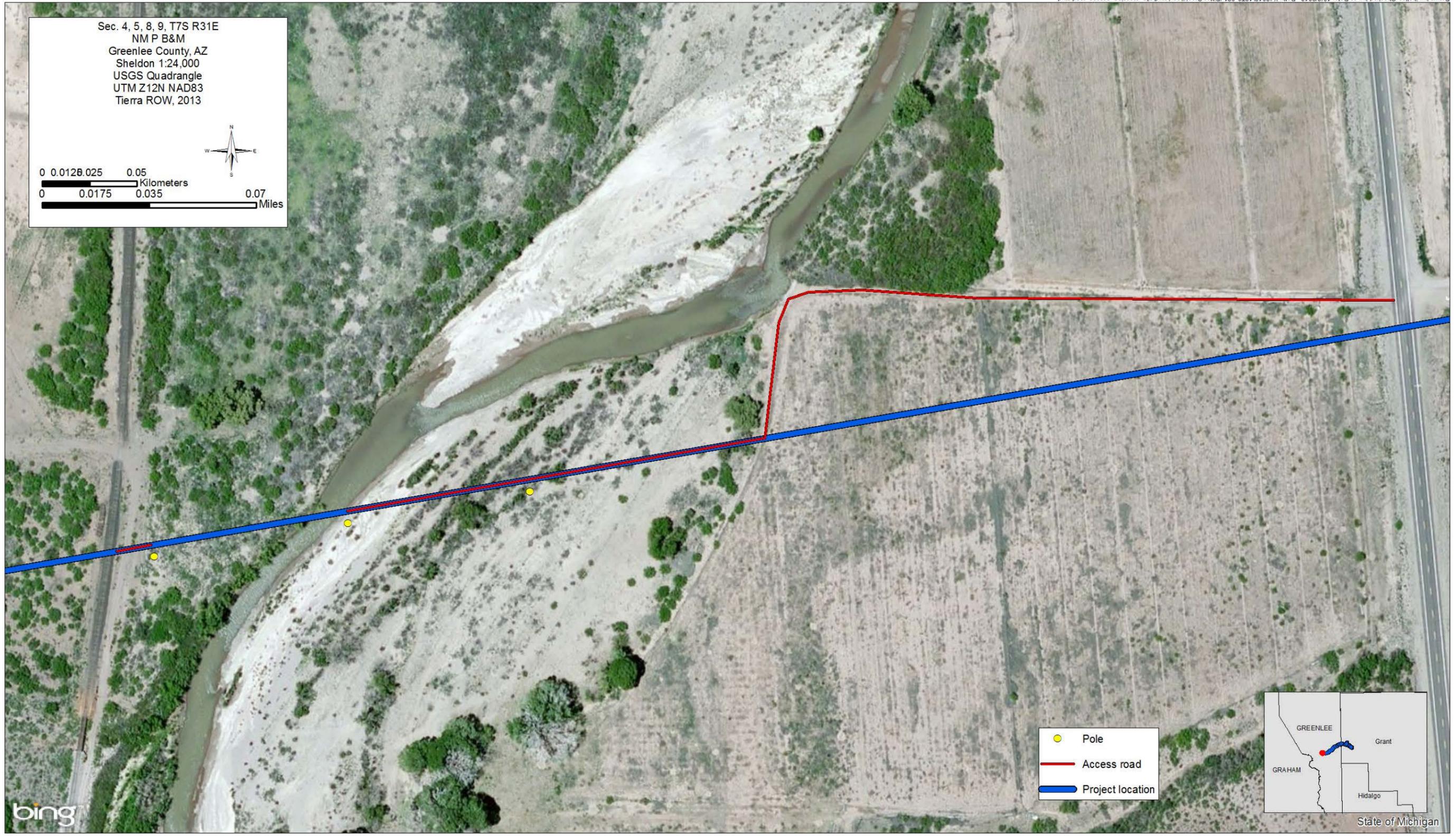


Figure 7 Aerial map showing proposed pole locations in the vicinity of the Gila River within the proposed action area.

Construction is anticipated to have minimal impact on vegetation, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m wide (30-foot-wide) easement. Pre-construction surveys for agave would be conducted and all agave would be flagged for avoidance during construction. Therefore, the proposed project would not impact Mexican long-tongued bat.

**Townsend's Big-eared Bat:** The Proposed Action Area contains suitable forage and roost habitat that may be utilized by Townsend's Big-eared Bat, and individuals could be present in the Proposed Action Area at the time of construction, although they would be hibernating. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and 2 hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Townsend's Big-eared Bat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Southwestern Willow Flycatcher:** The western end of the Proposed Action Area contains marginal riparian habitat consisting of relatively sparse and low-density vegetation that may be used by this species during migration to higher-quality riparian areas and designated critical habitat, located south and west of the Proposed Action Area along the Gila River and north of the Proposed Action Area along the San Francisco River (see Figure 4). While this riparian habitat is currently marginal, the dynamic nature of the Gila River may allow more suitable riparian species to develop at some point in the future and during the life of the project. Design features have been incorporated into the Proposed Action specifying that riparian habitat must be avoided during construction; any maintenance trimming required of riparian vegetation that becomes established would be kept to the minimum necessary and based on the species of vegetation present and the anticipated upcoming year's growth, and no construction or maintenance activities may take place in the vicinity of the Gila River in the months of April through September. Review of access points to poles located in the vicinity of the Gila River (see Figure 7) determined that this can be accomplished. Vegetation beneath the entire line, including at the Gila River crossing, would

typically be maintained to a height not to exceed 7.3 m (24 feet). Given the installed pole heights at the river, the nominal clearance would be approximately 3.4 m (11 feet). Therefore, the Proposed Action may affect, but is not likely to adversely affect the Southwestern Willow Flycatcher. The Proposed Action would have no effect on Southwestern Willow Flycatcher critical habitat.

**Allen's Lappet-browed Bat:** The project area contains suitable forage and roost habitat for Allen's Lappet-browed Bat and they could be present in the Proposed Action Area at the time of construction as they do not migrate or hibernate. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Allen's Lappet-browed Bat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Lesser Long-nosed Bat:** The Proposed Action Area is located beyond the northern extent of the known range of Lesser Long-nosed Bats, and individuals would not be present in the Proposed Action Area during construction as they migrate south in winter. However, agaves that could be used by this species as forage are present within and adjacent to the Proposed Action Area. Pre-construction surveys for agave would be conducted, and all agave would be flagged and avoided. Therefore, the proposed project would have no effect on Lesser Long-nosed Bat.

**Greater Long-nosed Bat:** The Proposed Action Area is located beyond the extent of the known range of Greater Long-nosed Bats, and individuals would not be present in the Proposed Action Area during construction as they migrate south in winter. However, agaves that could be used by this species as forage are present within and adjacent to the Proposed Action Area. Pre-construction surveys for agave would be conducted, and all agave would be flagged and avoided. Therefore, the proposed project would have no effect on Greater Long-nosed Bat.

**California Leaf-nosed Bat:** The project area contains suitable forage and roost habitat for California Leaf-nosed Bat, and they could be present in the Proposed Action Area at the time of construction as they do not migrate or hibernate. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact California Leaf-nosed Bat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Fringed Myotis:** The project area contains forage and roosting that may be used by Fringed Myotis, and they could be present in the Proposed Action Area at the time of construction as they do not migrate or hibernate. The New Mexico side of the project contains higher quality habitat than the Arizona side, and mine shafts are only present in New Mexico. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Fringed Myotis, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Cave Myotis:** The project area contains forage and roosting habitat that may be used by Cave Myotis, and they could be present in the Proposed Action Area at the time of construction, although they would be hibernating. The New Mexico side of the project contains higher quality habitat than the Arizona side, and mine shafts are only present in New Mexico. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Cave Myotis, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Pocketed Free-tailed Bat:** The project area contains forage and roosting that may be used by Pocketed Free-tailed Bat, and they could be present in the Proposed Action Area at the time of construction as they do not migrate or hibernate. The New Mexico side of the project contains higher quality habitat than the Arizona side, and mine shafts are only present in New Mexico. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions,

it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Pocketed Free-tailed Bat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Big Free-tailed Bat:** The project area contains forage and roosting that may be used by Big free-tailed bat, and they could be present in the Proposed Action Area at the time of construction as they winter in the area. The New Mexico side of the project contains higher quality habitat than the Arizona side, and mine shafts are only present in New Mexico. Roosting habitat for this species in the vicinity of the project corridor consists of mine adits, the closest of which is approximately 14 m (46 feet) away from a proposed pole site. The auger truck that would be used to dig the pole hole at this site produces a sound intensity of approximately 85 dBA at a reference distance of 15.2 m (50 feet). The perceived sound level at the nearby adit would be approximately 86 dBA. While this sound level is similar to that produced by a passing medium-duty truck (85 dBA), it would be greater than that produced by a passing pickup (76 dBA). Both of these types of vehicles routinely use Bitter Creek Road, and, if present, any bats in the adit would likely be accustomed to such noise levels. All other mine adits are located farther away from the project corridor, and the perceived noise levels during construction at these adits would be less. The actual noise impacts produced by the auger truck would be different than that produced by passing trucks because the duration of noise would be longer. Depending on soil conditions, it would take between 30 minutes and two hours to bore each utility pole hole; the latter duration would apply if rock is encountered. The substrate-borne vibrations from the auger truck could disturb hibernating bats because vibrations may awaken the bats from hibernation, thus decreasing their fitness by causing them to deplete their limited fat reserves prematurely. As a result, construction noise may have a greater impact than noise associated with vehicle travel along Bitter Creek Road.

Construction is anticipated to have minimal impacts on vegetation that supports insect gleaning, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement. Therefore, the proposed project may impact Big Free-tailed Bat, but it is not likely to result in a trend toward Federal listing or loss of viability.

**Desert Sucker:** The western end of the project corridor crosses the intermittently flowing Gila River, which could provide suitable habitat for Desert Sucker. Design features have been incorporated into the Proposed Action that specifies that the flowing channel of the Gila River be avoided during construction. Since pole locations near the Gila River can be accessed without crossing the flowing channel, this can be accomplished (see Figure 7). Therefore, direct impacts to individuals of this species would be avoided. Utility pole installations in the vicinity of the river would involve ground disturbance which could negligibly increase sediment transport into the river channel which may increase turbidity of the river and indirectly impact this species. However, BMPs associated with water quality (see Section 2.1.8 Design

Features) would prevent sediment transport; therefore the Proposed Action is not likely to result in a trend toward Federal listing or loss of viability for this species.

**Texas Horned Lizard:** The project area exhibits habitat suitable for Texas Horned Lizard, including ant colonies that could provide forage. However, because of this species' cryptic nature, no Texas Horned Lizards were observed during the Biological Evaluation. Assuming their presence based on habitat type and known recorded incidents in the vicinity, the proposed project may impact this species. However, since construction is anticipated to have minimal impact on vegetation, and ground disturbance would not exceed 0.68 ha (1.69 acres) from pole placement and minimal off-road travel within the 9.1-m-wide (30-foot-wide) easement, the proposed project may impact Texas Horned Lizard, but it is not likely to result in a trend towards Federal listing or loss of viability.

**Razorback Sucker and Critical Habitat:** The western end of the project corridor crosses the intermittently flowing Gila River, which could provide suitable habitat for Razorback Sucker. Design features have been incorporated into the Proposed Action that specifies that the flowing channel of the Gila River be avoided during construction. Since pole locations near the Gila River can be accessed without crossing the flowing channel, this can be accomplished (see Figure 7). Therefore, direct impacts to individuals of this species would be avoided. Utility pole installations in the vicinity of the river would involve ground disturbance which could negligibly increase sediment transport into the river channel which may increase turbidity of the river and indirectly impact this species. However, BMPs associated with water quality (see Section 2.1.8 Design Features) would prevent sediment transport; therefore, the Proposed Action would have no effect on individuals of this species.

The Proposed Action would include placement of two utility poles within designated critical habitat for Razorback Sucker. Approximately 0.004 acres of critical habitat would be temporarily disturbed, and approximately 0.0001 acres would be disturbed permanently. Therefore, the Proposed Action may affect, but is not likely to adversely affect, Razorback Sucker critical habitat due to the negligible amount permanently disturbed.

## **4.13 Wildlife**

### **4.13.1 Impacts of the Proposed Action on Wildlife**

The Proposed Action would have a minor and long-term impact on approximately 0.70 ha (1.74 acres) of wildlife habitat. Avian, mammalian, and reptilian species could expect a short-term and minor reduction in available foraging and nesting habitat.

It is expected that mobile species would be able to relocate in response to the Proposed Action to some extent. However, the mortality of some individuals may be unavoidable as a result of the Proposed Action. Therefore, the Proposed Action would have a minor impact on general wildlife.

## **4.14 Migratory Birds**

### **4.14.1 Impacts of the Proposed Action on Migratory Birds**

Construction of the Proposed Action would remove habitat for migratory birds, and once complete, the proposed distribution line would present an electrocution risk. The level of electrocution risk would be

dependent on the size of the bird, the spacing between energized conductors and grounded conductors, and pole hardware. However, raptor protection would be provided to minimize risk to birds in the Proposed Action Area.

Because design features have been incorporated to avoid unnecessary impacts to migratory birds, and the Proposed Action is not likely to have a measurable effect on migratory bird populations, the Proposed Action is not likely to result in a trend toward Federal listing or loss of viability for any bird species.

## **4.15 Visual Resources**

### **4.15.1 Impacts of the Proposed Action on Visual Resources**

The Proposed Action would not impact visual resources because the Proposed Action is within a VRM Class IV area. Class IV areas provide for activities that require major modification of the landscape. The level of change to the landscape can be high, and management activities may dominate the view and be the major focus of attention. Therefore, the Proposed Action is allowable within this class. Furthermore, given the distance of the Proposed Action Area from Class I and II areas, the distribution line would not be visible from these areas.

## **4.16 Wastes, Hazardous and Solid**

### **4.16.1 Impacts of the Proposed Action on Wastes, Hazardous and Solid**

The Proposed Action would not impact wastes. The use of hazardous materials in the Proposed Action Area would be limited to gas, diesel, and hydraulic oils. None of these fluids would be filled within the Proposed Action Area. Vehicles would be refueled and maintained in Duncan, Arizona. In addition, spill prevention and response would be addressed in the SWPPP.

The Proposed Action is not expected to increase dumping or illicit disposal of solid wastes in the Proposed Action Area.

## **4.17 Environmental Justice**

### **4.17.1 Impacts of the Proposed Action on Environmental Justice**

The Proposed Action Area is proportionately equal between whites and minorities, and the poverty level is near the State averages for both Arizona and New Mexico. The Proposed Action would not disproportionately affect any one group more so than any other. Once the line is energized, residents can choose to tie in to the distribution line and benefit from the electric service, although they would have to fund the cost of construction of the distribution line to their homes and the cost of electricity service.

## **4.18 Socioeconomics**

### **4.18.1 Impacts of the Proposed Action on Socioeconomics**

Local stores, restaurants, gas stations, and other merchants benefit from the mine. Several of the mine's employees live in Duncan and the surrounding area, and others live in Lordsburg, New Mexico. The mine

pays local sales tax and New Mexico Gross Receipts taxes. While installation of the distribution line would make the mine more operationally efficient, it is not expected to cause an increase or decrease in employment.

The mine currently pays approximately \$1,000,000.00 per year for diesel fuel. Construction of the line would cost approximately \$1,000,000.00, with annual electric bills of approximately \$500,000.00. Therefore, the mine would realize an economic benefit of approximately \$500,000.00 annually within several years of installation of the distribution line.

#### 4.19 Cumulative Impacts

The Proposed Action would result in a minor and cumulative impact to the visual resources of the Proposed Action Area because the new electrical distribution line would be visible and located in an area where there are currently no such lines. The Proposed Action would also result in minor and cumulative impacts to soil and vegetation resources in the Proposed Action Area, which would add to the prior impacts that occurred when Bitter Creek Road was constructed. No other cumulative impacts from the Proposed Action are anticipated.

### 5 INDIVIDUALS, ORGANIZATIONS, TRIBES OR AGENCIES CONSULTED

The public had the opportunity to contact the LCDO and provide input on this project. The project was listed on the New Mexico BLM Website NEPA Log ([http://www.blm.gov/nm/st/en/prog/planning/nepa\\_logs.html](http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html)) and the Arizona BLM Website NEPA Log ([http://www.blm.gov/az/st/en/info/nepa\\_log.html](http://www.blm.gov/az/st/en/info/nepa_log.html)). In addition, the Tribes listed in Table 12 were also consulted regarding the project.

**Table 12 Tribal Consultation.**

<b>Name</b>	<b>Title</b>	<b>Agency</b>
Gregg Shutiva	Governor	Pueblo of Acoma
Theresa Pasqual	Acoma HPD	Pueblo of Acoma
Louis Manuel, Jr.	Council Chair	Ak Chin Indian Community
Caroline Antone	Cultural Resource Staff	Ak Chin Indian Community
Jeff Houser	Chairman	Fort Sill Apache Tribe
Michael Darrow	Historian	Fort Sill Apache Tribe
Lewis Barnaby	THPO	Gila River Indian Community
LeRoy Shingoitewa	Chair	Hopi Tribe
Leigh Kuwanwisima	Cultural Preservation Officer	Hopi Tribe
Holly Houghten	THPO	Mescalero Apache Tribe
Eddie Paul Torres	Sr. Governor	Pueblo of Isleta
Stephanie Zuni	Cultural Affairs	Pueblo of Isleta
Terry Rambler	Chairman	San Carlos Apache Tribe
Vernelda Grant	THPO	San Carlos Apache Tribe
Ned Norris, Jr.	Chairman	Tohono O'odham Nation
Peter Steere	THPO	Tohono O'odham Nation
Joe Joaquin	Cultural Preservation Specialist	Tohono O'odham Nation
Ivan Smith	Chairman	Tonto Apache Tribe

<b>Name</b>	<b>Title</b>	<b>Agency</b>
Ronnie Lupe	Chairman	White Mountain Apache Tribe
Mark Altaha	THPO	White Mountain Apache Tribe
Dr. Alan Downer	THPO	Navajo Nation
Ben Shelly	President	Navajo Nation
Arlen Quetawki	Sr. Governor	Pueblo of Zuni
Kurt Dongoske	Director	Zuni Cultural Resources Enterprise

## **6 LIST OF PREPARERS**

<b>Name</b>	<b>Title</b>
David Arthun	Invasive Species Specialist, BLM Safford
Harry Barnes	CEO, Transmission & Distribution Services
Jack Barnitz	Wildlife Biologist, BLM Las Cruces
Heidi Blasius	Fisheries, BLM Safford
Jeff Conn	Natural Resources Specialist, BLM Safford
Renee Darling	Director, Tierra Right of Way Services
Katherine Gallegos	GIS Tech, Transmission & Distribution Services
Tim Goodman	Environmental Protection Specialist, BLM Safford
Jonathan Haller	GIS Tech, Tierra Right of Way Services
Thomas Holcomb	Cultural Resource Specialist, BLM Las Cruces
Anthony Hom	Realty Specialist, BLM Las Cruces
Jeff Jones	Archaeologist, Tierra Right of Way Services
Tim Jordan	Senior Biologist, Tierra Right of Way Services
Roberta Lopez	Realty Specialist, BLM Safford
Daniel McGrew	Cultural Resource Specialist, BLM Safford
Dr. Barbara Montgomery	Principal Investigator, Tierra Right of Way Services
Deborah Morris	Environmental Protection Specialist, BLM Safford
Dr. Mohammad Nash	Air, Noise, Soils, BLM Las Cruces
Joseph Navarro	Environmental Protection Specialist, BLM Las Cruces
Ron Peru	Project Manager, BLM Safford
Christopher Teske	AML Specialist, BLM Las Cruces
John Vasquez	Rangeland Management Specialist, BLM Las Cruces
John White	General Manager, Lordsburg Mining Company

## 7 REFERENCES

### Arizona Department of Water Resources

- 2013 Groundwater Conditions in the Duncan Valley Basin. Available at:  
<http://www.azwater.gov/AzDWR/StatewidePlanning/WaterAtlas/SEArizona/Groundwater/DuncanValley.htm>. Accessed on April 15, 2013.

### Arizona Game and Fish Department

- 2001 *Macrotus californicus*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2002a *Catostomus insignis*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2002b *Pantosteus clarki*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2002c *Phrynosoma cornutum*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2002d *Xyrauchen texanus*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2003 *Corynorhinus townsendii pallescens*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2006a *Agosia chrysogaster*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix.
- 2006b *Choreonycteris mexicana*. Unpublished abstract compiled and edited by the Heritage Data Management System. Arizona Game and Fish Department, Phoenix.

### U.S. Bureau of Land Management (BLM)

- 1991 *Final Safford District Resource Management Plan and Environmental Impact Statement*. Bureau of Land Management, Safford Field Office, Safford, Arizona.
- 1992 *Partial Record of Decision for the Safford District Resource Management Plan I*. Bureau of Land Management, Safford Field Office, Safford, Arizona.
- 1993a Mimbres Resource Management Plan. Available at:  
[http://www.blm.gov/nm/st/en/fo/Las\\_Cruces\\_District\\_Office/mimbres\\_rmp.html](http://www.blm.gov/nm/st/en/fo/Las_Cruces_District_Office/mimbres_rmp.html). Accessed on April 23, 2013.
- 1993b *Mimbres Resource Management Plan Record of Decision*.
- 1994 *Partial Record of Decision for the Safford District Resource Management Plan II*.

- 2008 BLM NEPA Handbook. Available at:  
[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.84688.File.dat/h1790-1-2008.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.84688.File.dat/h1790-1-2008.pdf). Accessed on April 15, 2013.
- 2012 *Environmental Assessment for Las Cruces District-Wide Invasive Plant Management Plan Grant, Luna, Hidalgo, Otero, Dona Ana, and Sierra Counties*. DOI-NM-BLM-L000-2011-0169-EA. Bureau of Land Management, Las Cruces Field Office, Las Cruces, New Mexico.
- 2013 Non-Native, Invasive Plants of Arizona (Peer Reviewed # AZ1482). Available at: <http://cals.arizona.edu/pubs/natresources/az1482.pdf>. Accessed on April 15, 2013.
- Balda, R.P.  
 2002 Pinyon Jay (*Gymnorhinus cyanocephalus*). In *The Birds of North America*, No. 605, edited by A. Poole and F. Gill. The Academy of Natural Sciences and the American Ornithologists' Union, Philadelphia and Washington, D.C.
- BirdLife International  
 2012b Species Factsheet: *Toxostoma bendirei*. Available at: <http://www.birdlife.org>. Accessed on August 24, 2012.
- Brown, David E. (editor)  
 1994 *Biotic Communities: Southwestern United States and Northwestern Mexico*. University of Utah Press, Salt Lake City.
- Council on Environmental Quality  
 2011 Appropriate use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact. Available at:  
[http://ceq.hss.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](http://ceq.hss.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf). Accessed on April 23, 2013.
- EPA  
 2013 Envirofacts. Available at: <http://www.epa.gov/enviro/index.html>. Accessed on April 23, 2013.
- Flora of North America (FNA)  
 2012 *Acleisanthes chenopodioides*. Available at:  
[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=242415042](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242415042). Accessed on August 27, 2012.
- Green, M.T., P.E. Lowther, S.L. Jones, S.K. Davis, and B.C. Dale  
 2002 Baird's Sparrow (*Ammodramus bairdii*). In *The Birds of North America*, No. 638, edited by A. Poole and F. Gill. The Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, D.C.
- Howell, S.N.G., and S. Webb  
 1995 *A Guide to the Birds of Mexico and Northern Central America*. Oxford University Press.

- Jones, Jeffrey T.  
2012 *A Class III Archaeological Survey of 17.48 km (10.86 Miles) of a 9.1-m-wide (30-foot-wide) Power Line Easement and Adjacent 15.2-m-wide (50-foot-wide) Buffers Crossing Private, ASLD, and BLM Land North of Duncan in Greenlee County, Arizona.* Tierra Archaeological Report No. 2012-57. Tierra Right of Way Services, Ltd., Tucson, Arizona.
- Jones, Jeffrey T., and Jean Fulton  
2012 *An Intensive Cultural Resource Survey for a Proposed Power Line Easement within the Steeple Rock Mining District in Grant County, New Mexico.* Tierra Archaeological Report No. 2012-74. Tierra Right of Way Services, Ltd., Albuquerque, New Mexico.
- Jordan, Tim, and Renee Darling  
2012 *A Biological Evaluation for the Proposed Summit Mine Power Line Project, Greenlee County, Arizona, and Grant County, New Mexico.* Tierra Right of Way Services, Ltd., Tucson, Arizona.  
  
2013 *A Biological Assessment for the Proposed Summit Mine Power Line Project, Greenlee County, Arizona, and Grant County, New Mexico.* Tierra Right of Way Services, Ltd., Tucson, Arizona.
- Kochert, M.N., and K. Steenhof  
2002 Golden Eagles in the U.S. and Canada; Status, Trends Conservation Challenges. *Journal of Raptor Research* 36(Supplement):33–41.
- New Mexico Department of Game and Fish  
2008a Fringed Myotis. Available at: <http://www.bison-m.org>. Accessed on August 23, 2012.  
  
2008b Texas Horned Lizard. Available at: <http://www.bison-m.org>. Accessed on August 23, 2012.  
  
2012a Leaf-nosed Bat. Available at: <http://www.bison-m.org/booklet.aspx?id=050055>. Accessed on August 23, 2012.  
  
2012d Allen's Big-eared Bat. Available at: <http://www.bisonm.org/booklet.aspx?id=050020>. Accessed on August 23, 2012.  
  
2012e Mexican Long-tongued Bat. Available at: <http://www.bisonm.org/booklet.aspx?id=050070>. Accessed on August 23, 2012.
- New Mexico Partners in Flight  
2012 Pinyon Jay. Available at: <http://nmpartnersinflight.org/pinyonjay.html>. Accessed on August 23, 2012.
- New Mexico Rare Plant Technical Council [NMRPTC]  
2005 *Peniocereus greggii* var. *greggii*. Available at: <http://nmrareplants.unm.edu>. Accessed on August 23, 2012.

New York State Department of Environmental Conservation (NYDEC)

- 2007 Golden Eagle Fact Sheet. Available at: <http://www.dec.ny.gov/animals/7096.html>. Accessed on November 15, 2007.

National Park Service (NPS)

- 1997 *A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol*. National Park Service and the Colorado Plateau Research Station at Northern Arizona University, Flagstaff, Arizona.

Natural Resources Conservation Service [NRCS]

- 2012a NRCS Soil Survey Shapefile: Grant County, NM; Central and Southern Parts and Gila-Duncan Area, Graham and Greenlee Counties, AZ. Available at: <http://websoilsurvey.nrcs.usda.gov>. Accessed on August 22, 2012.
- 2012b Web Soil Survey Map Unit Descriptions. Available at: <http://websoilsurvey.nrcs.usda.gov>. Accessed on August 22, 2012.

Texas Parks and Wildlife (TPW)

- 2013 Mexican Long-nosed Bat (*Leptonycteris nivalis*). Available at: <http://www.tpwd.state.tx.us/huntwild/wild/species/mexlongnose/>. Accessed on April 15, 2013.

U.S. Fish and Wildlife Service (FWS)

- 1995 *Lesser Long-nosed Bat Recovery Plan*. U.S. Fish and Wildlife Service, Albuquerque.

Western Regional Climate Center (WRCC)

- 201 Duncan, Arizona. Available at: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?azdunc>. Accessed on April 15, 2013

## **APPENDIX A. BLM Legal Land Description**

**New Cadastral Monuments set and a supplemental plat is being created to generate a legal description of the public land. December 13, 2013**

## **APPENDIX B.**

BLM STIPULATIONS  
December 2013  
DOI-BLM-NM-L000-2013-0048-EA  
DOI-BLM-AZ-G010-2013-0013-EA

### 1. ROW Construction Administration

The Holder shall construct, operate and maintain the facility, improvements, and structures within this right-of-way (ROW) in strict conformity with the stipulations which were approved and made part of the grant on \_\_\_\_\_. Any relocation, additional construction, or use that is not in accord with the approved stipulations, shall not be initiated without the prior written approval of the Authorized Officer.

A copy of the complete ROW grant, including all stipulations, shall be made available on the ROW area during new construction, operation, and termination to the Authorized Officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

The holder shall not initiate any construction or other surface disturbing activities related to the proposed action of Environmental Assessment without the prior written authorization of the Authorized Officer. Such authorization shall be a written notice to proceed issued by the Authorized Officer. Any notice to proceed shall authorize construction or use only as therein expressly stated and only for the particular location or use therein described.

The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

The Holder shall designate a representative who shall have the authority to act upon and to implement instructions from the Authorized Officer. The Holder's representative shall be available for communication with the Authorized Officer within a reasonable time when construction or other surface disturbing activities are underway.

### 2. Work Limits

The Holder shall contact the Authorized Officer at least thirty days prior to the anticipated start of construction and/or any surface disturbing activities. The Authorized Officer may require and schedule a preconstruction conference with the Holder prior to the Holder's commencing construction and/or surface disturbing activities on the ROW. The Holder and/or his representative shall attend this conference. The Holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the ROW, shall also attend this conference to review the stipulations of the grant including the plan(s) of development.

The Holder shall submit a plan or plans of development that describe in detail the construction, operation, maintenance, and termination of the ROW and its associated improvements and/or facilities. The degree and scope of these plans will vary depending upon (1) the complexity of the ROW or its associated improvements and/or facilities, (2) the anticipated conflicts that require mitigation, and (3) additional technical information required by the Authorized Officer. The plans will be reviewed, and if appropriate, modified and approved by the Authorized Officer. An approved plan of development ("APD") shall be made a part of the ROW grant.

No surface disturbing activities shall take place on the subject ROW until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the APD, relevant to any ROW facilities.

The holder shall not initiate any construction or other surface disturbing activities related to the proposed action of Environmental Assessment number DOI-BLM-NM-L000-2013-0048-EA/DOI-BLM-AZ-G010-2013-0013-EA without the prior written authorization of the Authorized Officer.

The Holder shall conduct all activities associated with the construction, operation, and termination of the ROW within the authorized limits of the ROW.

All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

The Holder shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities. Topsoil shall be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation.

All waste material resulting from construction or use of the site by holder shall be removed from the site. All waste disposal sites on public land must be approved in writing by the Authorized Officer in advance of use.

Construction holes left open overnight shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

During conditions of extreme fire danger, operations shall be limited or suspended in specific areas by the Authorized Officer, or additional measures may be required by the Authorized Officer.

All applicable Occupational Safety and Health Administration (OSHA) regulations and requirements will be followed.

On-site activities will be restricted to daylight hours.

All equipment will have properly working mufflers and would be kept properly tuned to reduce backfires.

### 3. Access to and Along the ROW During New Construction

Construction-related traffic shall be restricted to routes approved by the Authorized Officer. New access roads or cross-country vehicle travel will not be permitted unless prior written approval is given by the Authorized Officer. Authorized roads used by the Holder shall be rehabilitated or maintained when construction activities are complete as approved by the Authorized Officer.

The Holder shall permit free and unrestricted public access to and upon the ROW for all lawful purposes except for those specific areas designated as restricted by the Authorized Officer to protect the public, wildlife, livestock, or facilities constructed within the ROW.

The Holder shall provide for the safety of the public entering the ROW. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without visible turnouts, and attached gates for blasting operations.

Specific sites as identified by the Authorized Officer (e.g. archeological sites, areas with threatened and endangered species, or fragile watersheds) where construction equipment and vehicles shall not be

allowed shall be clearly marked onsite by the Holder before construction or surface disturbing activities begin. The Holder shall be responsible for assuring that construction personnel are well-trained to recognize these markers and understand the equipment movement restrictions involved.

The Holder shall mark the exterior boundaries of the ROW with a stake and/or lath at industry standard intervals. The intervals may be varied at the time of staking at the discretion of the Authorized Officer. The tops of the stakes and/or laths will be painted and the laths flagged in a distinctive color as determined by the Holder. The survey station numbers will be marked on the boundary stakes and/or laths at the entrance to and the exit from public land. Holder shall maintain all boundary stakes and/or laths in place until final cleanup and restoration is completed and approved by the Authorized Officer. The stakes and/or laths will then be removed at the direction of the Authorized Officer.

The Holder shall survey and clearly mark the centerline and/or exterior limits of the ROW, as determined by the Authorized Officer.

#### 4. Power Lines

Unless otherwise agreed to by the authorized officer in writing, power lines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Power lines," Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the authorized officer. The BLM reserves the right to require modifications or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

The holder shall coordinate with the authorized officer on the design and color of the poles and transmission lines to achieve the minimum practicable visual impacts.

The holder shall use nonreflecting lines and conductors.

#### 5. Use of ROW

Except ROWs expressly authorizing a road after construction of the facility is completed, the Holder shall not use the ROW as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the Holder.

No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of three inches deep, the soil shall be deemed too wet to adequately support construction equipment.

Construction excavations, holes and trenches in roadways or in areas where pedestrians or vehicular traffic is present will be flagged, plated or appropriately marked as required.

Materials encountered on the project and needed for select borrow, surfacing, riprap, or other special needs shall be conserved.

#### 6. Maintenance of ROW

Holder shall maintain the ROW in a safe, usable condition, as directed by the Authorized Officer. A regular maintenance program shall include, but is not limited to, blading, ditching, culvert installation and surfacing.

If "cross country" access is necessary, clearing vegetation or grading a roadbed will be avoided whenever practicable. All construction and vehicular traffic shall be confined to the ROW or designated access

routes, roads, or trails unless otherwise authorized in writing by the Authorized Officer. All temporary roads used for construction shall be rehabilitated after construction is completed. Only one road or access route will be permitted to each site requiring access.

In case of an emergency that would require ground disturbing repair work within the ROW, the holder shall notify the Authorized Officer immediately.

Water bars will be installed if necessary to reduce soil erosion.

#### 7. Cultural

Any cultural and/or paleontological resource (historical or prehistoric site or object) discovered by the Holder, or any person working on his behalf, shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation of any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

#### 8. Paleontological

The Holder shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operation under this authorization. The Holder shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. The Holder may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the Holder. Within 10 days, the Holder will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

#### 9. Waste Disposal

The ROW site shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

#### 10. Air and Dust Control

The Holder shall meet applicable Federal, State, and local emission standards for air quality. The Holder shall furnish and apply water or other means satisfactory to the Authorized Officer dust control. Speed Limits in the Proposed Action Area would be adhered to in order to reduce dust emissions.

#### 11. Signs

Upon completion of construction, the Holder shall post as directed by the Authorized Officer, the Bureau serial number assigned to this ROW grant at ROW intersection points including but not limited to roads, utility lines, etc.

No signs or advertising devices shall be placed on the premises or on adjacent public land except those posted by or at the direction of the Authorized Officer. Holder may install pipeline location markers in

conformance with regulatory standards.

## 12. Industrial and Toxic Waste Disposal

The Holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under this ROW grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

The Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the ROW (unless the release or threatened release is wholly unrelated to the ROW holder's activity on the ROW). This agreement applies without regard to whether a release is caused by the Holder, its agent, or unrelated third parties.

## 13. Noxious Weed Control

The Holder shall be responsible for weed control on disturbed areas within the limits of the site. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods, which include following EPA and BLM requirements and policy. (See Special Stipulations)

## 14. Indemnification

The United States, its officers and employees shall be held harmless from and indemnified against any damage, injury, or liability resulting from the construction, operation, or maintenance arising from the occupancy or use of public lands under this authorization.

Six months prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limit to, removal of facilities, drainage structures, or surface material, re-contouring, top-soiling, or seeding. The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any termination activities.

## 15. Survey Monuments

The Holder shall protect all survey monuments found within the ROW. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the Holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management ROW monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition.

The Holder shall record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the Holder shall be responsible for the survey cost.

#### 16. Civil Rights / Corp of Engineers 404 Permits

The Holder of this ROW grant or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

The Holder shall comply with the construction practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Clean Water Act. If the proposed action exceeds the parameters of the nationwide permit, the holder shall obtain an individual permit from the appropriate office of the Army Corps of Engineers and provide the authorized officer with a copy of same. Failure to comply with this requirement shall be cause for suspension or termination of this ROW grant.

#### 17. Cattle Guards / Fences

The Holder shall minimize disturbance to existing fences and other improvements on public lands. The Holder is required to promptly repair impacted improvements to at least their former state. The Holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

Fences, gates, and brace panels shall be reconstructed to appropriate Bureau standards and/or specifications as determined by the authorized officer.

When construction activity in connection with the ROW breaks or destroys a natural barrier used for livestock control, the gap, thus opened, shall be fenced to prevent the drift of livestock. The subject natural barrier shall be identified by the Authorized Officer and fenced by the Holder as per instruction of the Authorized Officer.

#### 18. Proof of Construction

The Holder shall file a proof of construction within 90 days after completion of construction on the ROW covered by this grant. A period of five years from the date the ROW is granted is allowed for completion of construction.

Within 90 days of construction completion, the Holder shall provide the Authorized Officer with data in a format compatible with the Bureau's Arc-GIS Geographic Information System to accurately locate and identify the ROW/lease:

Acceptable data formats are:

- Corrected Global Positioning System files with sub-meter accuracy or better, in NAD 83 or WGS84 projection;
- An AUTOCAD dxf file;
- Or ARCInfo export files.

Data may be submitted in any of the following media:

- On a CD ROM, or DVD in compressed or uncompressed format. Compressed or ZIPed data must include a copy of the UNZIP.EXE file on the disk.

All data shall include metadata for each coverage, and conform to the Content Standards for Digital Geospatial Metadata Federal Geographic Data Committee standards. Contact BLM's GIS Coordinator at (575) 525-4300 for questions regarding data or media format questions.

## 19. Other

In the event that the public land underlying the ROW encompassed in this grant ROW, or a portion thereof, is conveyed out of Federal ownership and administration of the ROW or the land underlying the ROW is not being reserved to the United States in the patent/deed and/or the ROW is not within a ROW corridor being reserved to the United States in the patent/deed, the United States waives any right it has to administer the ROW, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations at 43 CFR Part [2800][2880], including any rights to have the holder apply to BLM for amendments, modifications, or assignments and for BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the United States in all matters relating to the ROW, or portion thereof, within the conveyed land and shall be subject to applicable State and local government laws, statutes, and ordinances. After conveyance, any disputes concerning compliance with the use and the terms and conditions of the ROW shall be considered a civil matter between the patentee/grantee and the ROW Holder.

## 20. Bonding

A bond, acceptable to the Authorized Officer, shall be furnished by the Holder prior to any construction, operation, or maintenance activities beginning, or at such earlier date as may be specified by the Authorized Officer. The amount of this bond shall be determined by the Authorized Officer. This bond must be maintained in effect until removal of improvements and restoration of the ROW have been accepted by the Authorized Officer.

The Holder agrees that all monies deposited with the Authorized Officer as security for Holder's performance of the terms and conditions of this grant may, upon failure on the Holder's part to fulfill any of the requirements herein set forth or made a part hereof, be retained by the United States to be applied as far as may be needed to the satisfaction of the Holder's obligations assumed hereunder, without prejudice whatever to any other rights and remedies of the United States.

Should the bond delivered under this grant become unsatisfactory to the Authorized Officer, the Holder, shall, within 30 days of demand, furnish a new bond.

## 21. Termination

Six months prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange for a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surface material, contouring, top soiling, or seeding. The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any termination activities.

## **SPECIAL STIPULATIONS**

22. The Holder will ensure accurate locations of existing buried facilities are identified on the ground prior to any excavation.
23. Pre-construction surveys for Night-blooming Cereus would be conducted, and all Night-blooming Cereus would be flagged and avoided.
24. Southwester Willow Flycatcher: All construction activities in the vicinity of the Gila River would occur outside the months of April through September. When construction does occur in the vicinity of the river, all riparian habitat would be avoided. If additional riparian species become established in the vicinity of the Gila River, and it is determined that maintenance

trimming is needed for line safety, these activities would occur outside the months of April through September. Trimming would be kept to the minimum necessary and would be based on the species of vegetation present and the anticipated upcoming year's growth.

25. Desert Sucker, Longfin Dace, Razorback Sucker, Sonora Sucker: No utility poles installations or other construction activities would occur within the flowing channel of the Gila River.
26. Chestnut-collard Longspur, Pinyon Jay, Bendire's Thrasher: Pre-construction surveys for nests would be conducted around all proposed pole locations and along off-road travel routes. Any nests located would be flagged and avoided. If nests are located at pole locations, then the pole would be moved 30.5 m (100 feet). If nests are located along off-road travel routes, then the route would be re-directed to bypass the nest location by at least 30.5 m (100 feet).
27. Golden Eagle: All structures on the distribution line would have raptor protection. The raptor protection provides 1.5 m (5 feet) of clearance from phase to phase and prevents phase-to-phase contact or phase-to-ground-wire contact by raptors (see Figure 1).
28. Mexican Long-tongued Bat: Pre-construction surveys for agave would be conducted around all proposed pole locations and along all access paths within the requested right-of-way, as identified by the contractor prior to construction. All agave would be flagged and avoided.
29. All previously recorded and newly found sites in Arizona would be avoided during construction of the overhead distribution line. In New Mexico, LA 173362 and LA 173366 would be avoided and spanned during construction, and a professional archaeologist would be present to monitor construction within and in the immediate vicinity of these two sites. Ground disturbing activities within the immediate location of these sites will not proceed prior to BLM's issuance of a Notice to Proceed for these specific areas.

In the event of a cultural discovery during construction, the contractor 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 will evaluate or cause the site to be evaluated. Should a discovery be evaluated as significant (e.g., National Register of Historic Places [NRHP], NAGPRA, ARPA), it will be protected in place until mitigating measures can be developed and implemented according to guidelines set by the BLM. All employees, contractors, and subcontractors 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; 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 (ARPA) (16 U.S.C. 470aa-mm)

30. Prior to any construction, the Holder will obtain any required Federal, state, or local government, and private land owner express written permission(s). This includes but is not limited to ROWs, permits, easements, and licenses. The Holder must provide copies of these permissions to BLM.

31. If Holder's construction operations occur during the migratory bird nesting season (March through August), the construction area will be inspected for nests by a qualified biologist.

The Holder shall properly report the occurrence of any spills associated with project construction, operation, maintenance or termination, and shall report and respond to spills of potential contaminants, such as gasoline, diesel, motor oils, solvents, chemicals, toxic and corrosive substances, etc., which may be a threat to public health or the environment.

32. During construction, trash receptacles and portable toilets would be present on-site for trash and sewage disposal. All wastes produced would be disposed of in a proper manner as required by Federal and State law.

33. Noxious Weed

Power or high-pressure clean all equipment of all mud, dirt, and plants immediately prior to moving into the project area. Any gravel or fill to be used must come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources. No soil spoil that could potentially contain noxious weed seeds shall be transported out of the area where it is created.

The project applicants shall be responsible for conducting a survey for and control of noxious weeds along the route proposed for construction. If during construction noxious weeds are identified that were not originally encountered during the survey, the project applicant shall avoid driving vehicles and equipment through or over the infested area. If avoidance measures cannot be taken within the area originally cleared, construction shall cease and the project inspector (PI) or the Authorized Officer contacted.

Any use of herbicides/pesticides shall comply with the applicable Federal and State laws. Herbicides/pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder shall obtain from the AO written approval of a plan showing the type and quantity of materials to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides shall be approved in writing by the AO prior to use.

34. Reclamation

The Holder will reclaim disturbed areas in accordance with the following, which establishes guidelines to be used during reclamation, when necessary throughout New Mexico on lands administered by the Las Cruces Field Office of the Bureau of Land Management (BLM).

Water Diversions

Water diversions would be constructed as needed to control surface water runoff and soil erosion. Water diversions typically would consist of waterbars constructed at the following spacing intervals:

<u>Percent slope</u>		<u>Spacing Interval</u>
Less than 1%	400'	
1-5%		300'
5-15%	200'	
15-25%		100'
More than 25%		50'

If diversion of water from the ROW would result in accelerated erosion in undisturbed areas, water bars shall not be constructed. Furthermore, if the ROW has a side slope approximately one-third or more of the slope along the length of the ROW, water bars may not be constructed. Exceptions to spacing intervals would be upon approval of the Authorized Officer.

#### Contouring

When sufficiently abundant, overburden and topsoil would be stockpiled during construction for use during reclamation. Prior to reseeding the topsoil would be re-deposited (shaped and contoured) to resemble surrounding topography. Ripping or plowing compacted soils may be necessary in some areas and would be addressed on a case by case basis.

#### Seeding

Seeding should be accomplished in June or July to coincide with the "rainy" season to achieve optimum results. Seed will be planted a quarter to half inch deep using a disc type or similar rangeland drill sufficient to accommodate variations in seed sizes, or if broadcast, the rates should be doubled.

At that time, soil in these areas to be reclaimed should be treated to reduce compaction. Even very minimal use of roads greatly increases compaction. Soil structure compaction reduces available soil, air and water; this reduction kills soil organisms, and decreases success rate of re-vegetation.

Seed-bed preparation should be performed to provide a hospitable environment for germinating seed by breaking up impermeable soil layers that have formed and increasing void spaces for air and water. Ground shall be roughed-up prior to planting, by raking, harrowing or other methods.

Seed shall be broadcast with a "cyclone" hand seeder or similar broadcast seeder to facilitate an even spread. After seed is broadcast, ground shall be raked or dragged, to help bury it and improve soil contact and provide texture. Next, mulch should be placed where necessary to prevent loss of moisture and seed to wind.

Mulching is **required** on seeding projects, as determined by the authorized officer. Mulch shall be free of weeds and weed seed. Mulching shall be accomplished using one of these following methods:

- a. weed free straw (2 tons/ac;kg/ha)
- b. wood residues (sawdust, wood chips, bark (2 tons/ac;kg/ha)
- c. hydro-mulching (1,500 lb/ac;kg/ha)
- d. composted manure (5 tons/ac;kg/ha)
- e. excelsior blanket
- f. straw jute

Straw mulch is not recommended if livestock potentially have access to the area. Livestock should be temporarily fenced-out of any seeded area, as they will otherwise greatly reduce possibility of successful re-vegetation. Probability of successful seeding will be considerably increased if fencing remains until reclamation is stable, and plants have grown well enough to withstand grazing.

Stabilization would occur after a minimum of two full summer growing seasons after planting. Mulch shall be applied on the surface within one day following seeding. Mulch must be free of noxious weeds and other diseased plant residues. Rotten or molded hay is not acceptable as mulch. A soil-stabilant tack shall be applied as an overspray after seed and mulch are in place. This tack should be at a sufficient rate so as to prevent mulch from moving due to wind. Here is the link to certified weed-free mulch providers:

<http://aces.nmsu.edu/ces/seedcert/certified-weed-free-fora.html>

The following recommended seed mixture and application rate of pounds pure-live-seed (PLS) per acre will be used. Species substitutions and deviations to application rates must be approved by the Authorized Officer.

**Application Rate**

**Species**

**Lbs./Acre PLS**

TO BE DETERMINED  
DETERMINED

TO BE

**Total**

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**APPENDIX C. PROFILE OF DEMOGRAPHICS**

## **APPENDIX D. SHPO CONCURRENCE LETTERS**

## **APPENDIX E. USACE DOCUMENTATION**

## APPENDIX F. ROAD CROSSING TABLES AND FIGURES INDICATING POLE LOCATIONS WITHIN 9 M (30 FEET) OF ROAD

**Appendix F, Table 1. Proposed Distribution Line Crossings on Bitter Creek Road**

Crossing	State	Pole A	Pole B	Section	Township	Range	Vertical Clearance (feet)
1	AZ	36	37	10	7S	31E	34.8
2		91	92	31	6S	32E	32.4
3		101	102	30	6S	32E	34.3
4		106	107	29	6S	32E	27.0
5		130	131	21	6S	32E	27.2
6		153	154	22	6S	32E	39.2
7	NM	164	165	20	16S	21S	28.3
8		175	176	20	16S	21W	36.7
9		176	177	20	16S	21W	26.5
10		179	180	21	16S	21W	29.7
11		180	181	21	16S	21W	31.8
12		181	182	21	16S	21W	24.5
13		182	183	21	16S	21W	31.4
14		184	185	21	16S	21W	29.2
15		185	186	21	16S	21W	40.3
16		186	187	21	16S	21W	29.8
17		194	195	22	16S	21W	31.3
18		195	196	22	16S	21W	25.1
19		196	197	22	16S	21W	28.6
20		213	214	26	16S	21W	32.7
21		215	216	26	16S	21W	41.7
22		218	219	26	16S	21W	27.2

**Appendix F, Table 2 Proposed Distribution Line Crossings of SR 75 and AZER**

Crossing	State	Pole A	Pole B	Section	Township	Range	Vertical Clearance (feet)
SR 75	AZ	8	9	9	7S	31E	22.2
AZER		1	2	8	7S	31E	28.3

**Appendix F, Table 3 Within 30 feet of Bitter Creek Road Centerline**

Pole	Distance (Feet)
101	27
103	21
111	22
112	25
163	21

164	28
178	21
179	20
180	20