

NOTICE OF AVAILABILITY
Environmental Assessment
Dixie Power Proposed Seegmiller Mountain Power Line Right-of-Way
Mohave County, Arizona

Agency: Bureau of Land Management, Arizona Strip Field Office

Project Proponent: Dixie Power

Public Review and Comments Requested: This serves as the Notice of Availability for the Environmental Assessment (EA) (DOI-BLM-AZ-A010-2013-0012-EA) prepared for the proposed Seegmiller Mountain Communications Site 12.5 kV power distribution line right-of-way. Information about this project and copies of the EA and preliminary Finding of No Significant Impact determination can be obtained online at: http://www.blm.gov/az/st/en/fo/arizona_strip_field.html or by contacting:

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The public review and comment period for this EA will extend for 30 days, beginning on May 5, 2015 and ending on June 3, 2015. Written comments on the EA must be received by BLM by close of business on June 3, 2015. Please address your comments to:

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Comments, including names and street addresses of respondents, will be available for public review at the above address during regular business hours 8:00 a.m. to 4:30 p.m. Monday through Friday, except holidays, and may be published as part of the EA and other related documents. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so. If you wish to have your name or address withheld from public disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Any determination by the BLM to release or withhold the names and/or addresses of those who comment will be made on a case-by-case basis. Such requests will be honored to the extent allowed by law. The BLM will make available for public review, in their entirety, all comments submitted by businesses or organizations, including comments by individuals in their capacity as an official or representative of a business or organization.

Project Summary: The proposed action analyzed in the EA is to authorize a right-of-way (AZA 036398) for the construction, operation, and maintenance of a 12.5 kV power distribution line across BLM administered public lands from near the Black Rock Gypsum Mine to the existing Seegmiller Mountain Communications Site in Mohave County, Arizona. The proposed Project would provide a reliable electrical power to enable the communication transmitters to operate consistently and serve the population with necessary public safety information. The proposed action is in conformance with the Arizona Strip Field Office Resource Management Plan (2008).

United States Department of the Interior Bureau of Land Management

Environmental Assessment
DOI-BLM-AZ-A010-2013-0012-EA

May 5, 2015

Seegmiller Mountain Power Line Right-of-Way

Location: Mohave County, AZ

Applicant/Address: Dixie Power
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LIST OF ACRONYMS USED IN THIS EA

| | |
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| ACEC | Area of Critical Environmental Concern |
| AOI | Area of Interest |
| APE | Area of Potential Effect |
| BLM | Bureau of Land Management |
| BMP | Best Management Practice |
| CIA | Cumulative Impacts Area |
| CFR | Code of Federal Regulations |
| CH ₄ | Methane |
| CO ₂ | Carbon Dioxide |
| CO _{2E} | Carbon Dioxide Equivalent |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| EPA | Environmental Protection Agency |
| EPM | Environmental Protection Measure |
| FLPMA | Federal Land Policy and Management Act |
| FONSI | Finding of No Significant Impact |
| GHG | Greenhouse Gas |
| I-15 | Interstate 15 |
| Kg/mo | Kilograms/month |
| KOP | Key Observation Point |
| kV | Kilovolt |
| kW | Kilowatt |
| NAAQS | National Ambient Air Quality Standards |
| NEPA | National Environmental Policy Act |
| NI | Present, but not affected to a degree that detailed analysis is required |
| NP | Not present in the area impacted by any of the alternatives |
| NRCS | Natural Resources Conservation Service |
| NHPA | National Historic Preservation Act |
| NRHP | National Register of Historic Places |
| N ₂ O | Nitrous oxide |
| OHV | Off-highway Vehicle |
| PI | Present with potential for impact – analyzed in detail in the EA |
| PSD | Prevention of Significant Deterioration |
| RMP | Resource Management Plan |
| ROW | Right-of-Way |
| US | United States |
| USC | United States Code |
| USFWS | US Fish and Wildlife Service |
| VRM | Visual Resource Management |
| WEC | West-wide Energy Corridor |

1.0 PURPOSE & NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of Dixie Power's (Dixie's) proposal to construct, operate, and maintain a 12.5 kilovolt (kV) power distribution line in Mohave County, AZ (BLM Case File AZA 036398). Dixie has applied for an 80-foot wide right-of-way (ROW) from the Black Rock Gypsum Mine to the existing Seegmiller Mountain Communications Site.

The Proposed Action would occur on public lands administered by the Bureau of Land Management (BLM), Arizona Strip Field Office (**Figure 1**). The power distribution line would begin at an existing line south of the Black Rock Road exit off Interstate 15 (I-15) and end at an existing communications site atop Seegmiller Mountain.

An EA is a site-specific analysis of potential impacts that could result with the implementation of a Proposed Action or alternatives to the Proposed Action. The EA assists the BLM in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 Code of Federal Regulations (CFR) 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that this Project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the Project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether it's the Proposed Action or another alternative. A Decision Record, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in *Arizona Strip Field Office Record of Decision and Resource Management Plan* (RMP; BLM 2008a).

1.2 Background

Dixie submitted an application for ROW to the BLM in June 2013 (Dixie 2013). Dixie proposes to construct a power distribution line from an existing power line near the Black Rock Gypsum Mine in Township 41 North, Range 12 West, Section 19, Gila and Salt River Meridian, Mohave County, Arizona, to existing communications facilities on Seegmiller Mountain in Township 40 North, Range 11 West, Section 29. The line would supply power to communications facilities on Seegmiller Mountain. Currently, facilities at the site are powered by diesel generators. The power line would become the main power source and the generators would only be needed as a backup source. The requested term of the ROW is 30 years and the power line would be in service year round.

The Project Area is defined as the proposed ROW, which would be 80 feet wide by approximately 15.3 miles (80,761 feet) in length, and consists of approximately 148.3 total acres. An area of 16 square feet around each tangent pole and 216 square feet around each angle-guyed pole would be required for the poles and maintenance activities, and thus permanently disturbed.

The Seegmiller Mountain Communications Site currently consists of four communication site ROWs for uses including FM radio broadcast, broadcast translator, commercial/private mobile radio service, and amateur radio. The largest ROW site is a radio and telecommunications tower and associated facilities within a fenced site, which provides public and private communications services to the St. George, Utah, and Arizona Strip areas, that was constructed about 20 years ago (Dixie 2014a). The current users of this communication facility include: Canyon Media Group, Simmons Media Group, Cherry Creek Media, and Nevada Public Radio. The current power needs to this site are being met by a 250 kilowatt (kW) diesel generator with an available backup generator capable of producing 175 kW. The current demand load is 140 kW. The generators consume large quantities of liquid diesel fuel trucked to the site weekly. In addition, it takes three to five trips per week to perform maintenance on the generator and backup generator. There are frequent power outages that occur due to complete or partial generator failure that require the communication transmitters to operate on significantly reduced power. Reliable electrical power is necessary to enable the communication transmitters to operate consistently so that public and private operators communicate with their licensed power authority and serve the entire population with necessary public safety information. The proposed power line would provide reliable electricity to the communications site.

1.3 Need for the Proposed Action

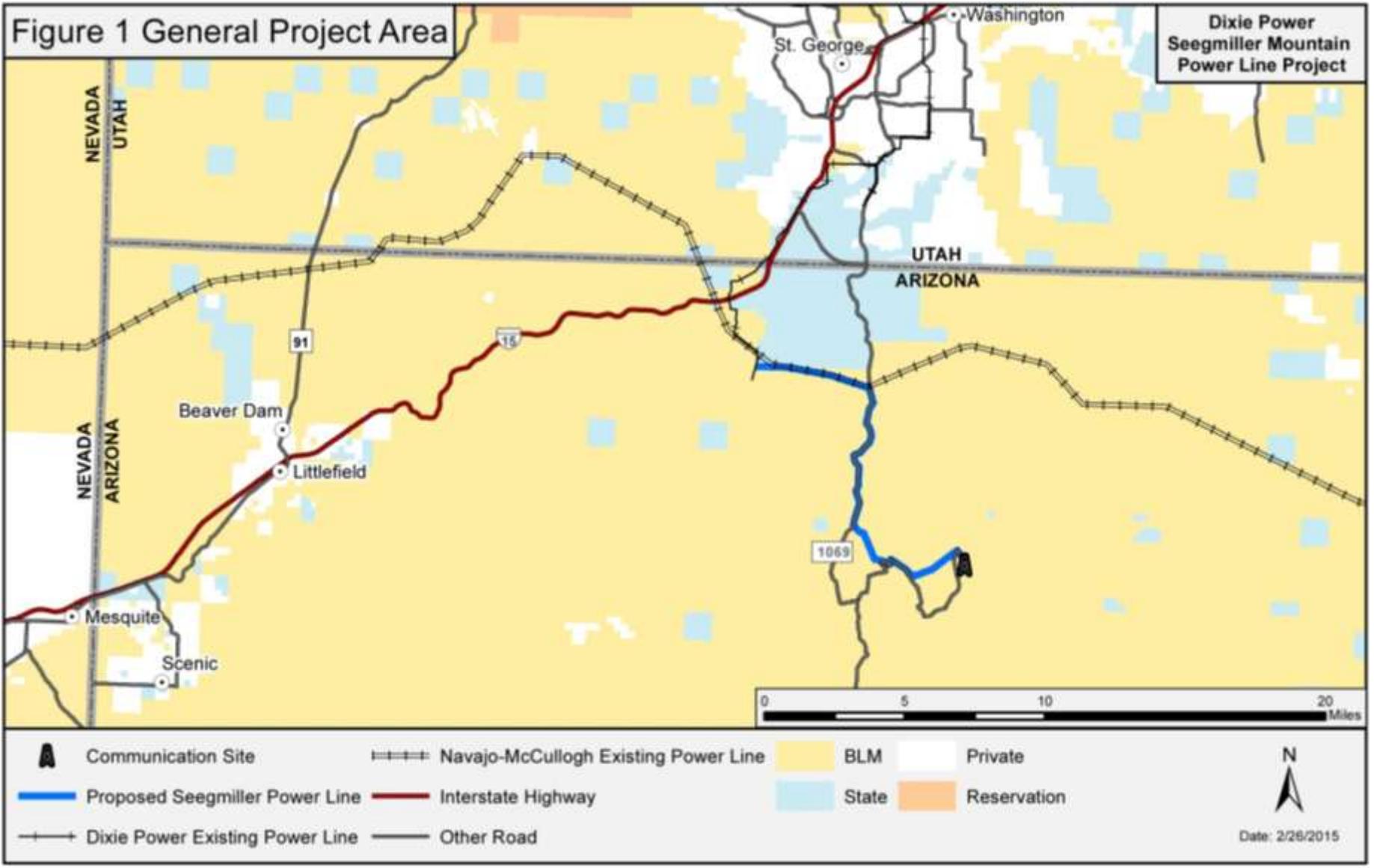
The need for the BLM action is established by the BLM's responsibility to respond to and consider all ROW applications in accordance with the Federal Land Policy and Management Act (FLPMA; 43 U.S. Code (USC) § 1761) and to implement the management decisions made in the RMP (BLM 2008a). The action taken by the BLM will be to respond to Dixie's application for a ROW and to consider approval of their request in a manner that avoids or reduces impacts on sensitive resource values and prevents unnecessary or undue degradation of the public lands. As stated in 43 CFR 2801.2:

It is BLM's objective to grant rights-of-way under the regulations in this part to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public lands in a manner that:

- (a) Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity;*
- (b) Prevents unnecessary or undue degradation to public lands;*
- (c) Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security, and land use plans; and*
- (d) Coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals, and appropriate quasi-public entities.*

1.4 Purpose of the Proposed Action

The purpose of the BLM action is to consider providing Dixie with a ROW across public lands to construct, operate, and maintain a 12.5 kV distribution line to power the communications facilities on Seegmiller Mountain, as described in **Section 1.2** above and **Section 2.0** below.



1.5 Conformance with BLM Land Use Plan

The alternatives described in Chapter 2 are in conformance with the Arizona Strip Field Office RMP, approved on January 29, 2008 (BLM 2008a). The alternatives are consistent with the following decisions contained within this plan.

The following decisions are from Table 2.10 in the RMP regarding the Lands and Realty program:

MA-LR-01 – Individual land use authorizations (ROWs, permits, leases, easements) will be evaluated on a case-by-case basis in accordance with other RMP provisions and NEPA compliance. New land use authorizations will be discouraged within avoidance areas (i.e., ACECs, lands supporting listed species, National Historic Trails, riparian areas, and areas managed to maintain wilderness characteristics) and allowed in such areas only when no reasonable alternative exists and impacts to these sensitive resources can be mitigated.

MA-LR-07 – The use of designated ROW corridors/sites and existing ROW use area will be encouraged to the extent possible but, depending on the site-specific needs, actual locations may vary. Such variances shall be considered consistent with other RMP provisions, provided such locations and uses are consistent with the selection criteria, and goals and objectives for the ROW corridors and ROW use areas.

The Project would be partially constructed within the designated 1 mile wide utility corridor identified on Map 2.8 of the RMP.

The following decision is from Table 2.7 in the RMP regarding management of Visual Resources:

MA-VR-03 – All new surface disturbing projects or activities, regardless of size or potential impact, will incorporate visual design considerations during project design as a reasonable attempt to meet the VRM class objectives for the area and minimize the visual impacts of the proposal. Visual design considerations will be incorporated by:

- Using the VRM contrast rating process (required for proposed projects in highly sensitive areas, high impact projects, or for other projects where it appears to be the most effective design or assessment tool), or by
- Providing a brief narrative visual assessment for all other projects that require an environmental assessment (EA) or environmental impact statement (EIS).

Measures to mitigate potential visual impacts include the use of natural materials, screening, painting, project design, location, or restoration (see Appendix I; BLM Handbook H-8431-1, Visual Resource Contrast Rating; or online at <http://www.blm.gov/nstc/VRM/8431.html>, for information about the contrast rating process).

It has also been determined that the alternatives would not conflict with other decisions throughout the plan.

1.6 Relationship to Statutes, Regulations, or Other Plans

This EA is being prepared in accordance with NEPA for projects involving federal lands. Title I of FLPMA declares that public lands will be managed in a manner “that will provide for outdoor recreation and human occupancy and use.” FLPMA gives authorization to the Secretary to grant ROWs under Title V(4) “systems for generation, transmission, and distribution of electric energy, except that the applicant shall also comply with all applicable requirements of the Federal

Energy Regulatory Commission under the Federal Power Act, including part I thereof (41 Stat. 1063, 16 U.S.C. 791a-825r) [Public Law 102-486, 1992].” The ROW application for this Proposed Action has been submitted to the BLM under Title V of FLPMA. Granting a ROW across BLM lands for the purposes of providing an electrical distribution line to power a communications tower would be in accordance with BLM legal authority.

The Project would comply with all other applicable federal and State of Arizona laws and regulations, including the following:

- National Environmental Policy Act of 1969 (Amended)
- Native American Graves Protection and Repatriation Act of 1990
- Noxious Weed Control and Eradication Act
- Endangered Species Act
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act
- National Historic Preservation Act (NHPA)
- Clean Water Act
- Clean Air Act

The Project Area would be located within Mohave County, Arizona, and is consistent with the Mohave County, Arizona General Plan (adopted in 1994 and revised 2005). Although this plan does not directly address power distribution lines, this action does not conflict with decisions contained within the General Plan.

1.7 Identification of Issues

Public scoping was formally initiated by the BLM on July 3, 2014 with the mailing of a scoping letter to the public, Tribes, and various agencies. The BLM Interdisciplinary Team conducted an internal scoping meeting to identify the issues and concerns expressed by agency resource specialists. Six comment letters were received from public scoping which included letters from U.S. Fish and Wildlife Service (USFWS), the Hopi Tribe, the Audubon Society, and individuals. These comment letters and BLM Interdisciplinary Team concerns were the foundation for the Identification of Issues to be carried forward for detailed analysis in this EA. A summary of the issues and the rationale for analysis are given below.

- Air Resources: Replacing the diesel generator that currently powers the communication site and eliminating fuel delivery trips to the site would reduce fugitive dust and greenhouse gas (GHG) emissions.
- Cultural Resources: The Project may impact historic properties and the characteristics that make them eligible for the National Register of Historic Places (NRHP).
- Lands/Realty: The proposed ROW would provide a reliable and economical source of power to the Seegmiller Mountain Communication Site, eliminating emissions producing diesel generators, diesel fuel truck traffic, and associated dust.
- Soils: There could be some soil loss due to water or wind erosion during construction activities.
- Threatened, Endangered, and Candidate Species: Implementation of the Project may impact Gierisch mallow, an endangered species, and its designated critical habitat through Project construction.

- **Vegetation:** Disturbance to vegetation could occur during construction, including the potential loss of shrubs, grasses, and forbs along the footprint of the power line and access routes. Maintenance could also result in minor trampling along the power line.
- **Visual Resources:** Construction and the resulting power line would be visible from adjacent roads and open land, and could therefore alter the appearance of the area (i.e., the visual setting).
- **Wildlife, Including Migratory Birds and Sensitive Species:** Disturbance to wildlife, including migratory birds and sensitive species, could occur during construction caused by the potential short-term loss of vegetation for food and cover, and short-term noise and soil compaction from construction.

1.8 Summary

This chapter has presented the Purpose and Need of the Project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the Proposed Action. The Proposed Action, No Action Alternative, and other alternatives are presented in Chapter 2. The existing, affected environment is described for those resources potentially impacted by the Proposed Action in Chapter 3, and the potential environmental impacts or consequences resulting from the implementation of each alternative are analyzed in Chapter 4 for each of the identified issues by resource and alternative.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Alternative A – Proposed Action

Under the Proposed Action, Dixie would construct, operate, and maintain a 12.5 kV power distribution line to Seegmiller Mountain. Dixie would construct the line from near the Black Rock Gypsum Mine approximately 3.25 miles south of exit 27 off I-15, and proceed southeast to Seegmiller Mountain (**Figure 2**, Alternative A). The total length of the proposed line is approximately 15.3 miles (80,761 feet). The line would proceed east from the tie-in point, paralleling the existing 500 kV Navajo McCullough transmission line for approximately 4.14 miles to BLM road #1069 (aka Quail Hill Road). From there, the line would roughly parallel the Quail Hill Road (but would cross the road several times to maintain as straight an alignment as possible) approximately 5.4 miles before extending up and over Seegmiller Mountain. From there, the remaining 5.8 miles of the line would parallel existing access roads through much of the route and end at the north fence of the existing communications facility.

The Proposed Action would occur entirely on public lands administered by the BLM, Arizona Strip Field Office. Dixie Power has applied to the BLM for an 80-foot wide ROW centered on the new line. The line would cross public land in the following described area:

Gila and Salt River Meridian, Mohave County, Arizona

T. 40 N, R. 11 W.,

secs. 19, 20, 29, and 30.

T. 40 N, R. 12 W.,

secs. 2, 3, 10, 11, 14, 15, 23, 24, and 25.

T. 41 N, R. 12 W.,

secs. 19, 20, 21, 22, 23, 24, 25, 26, 35, and 36.

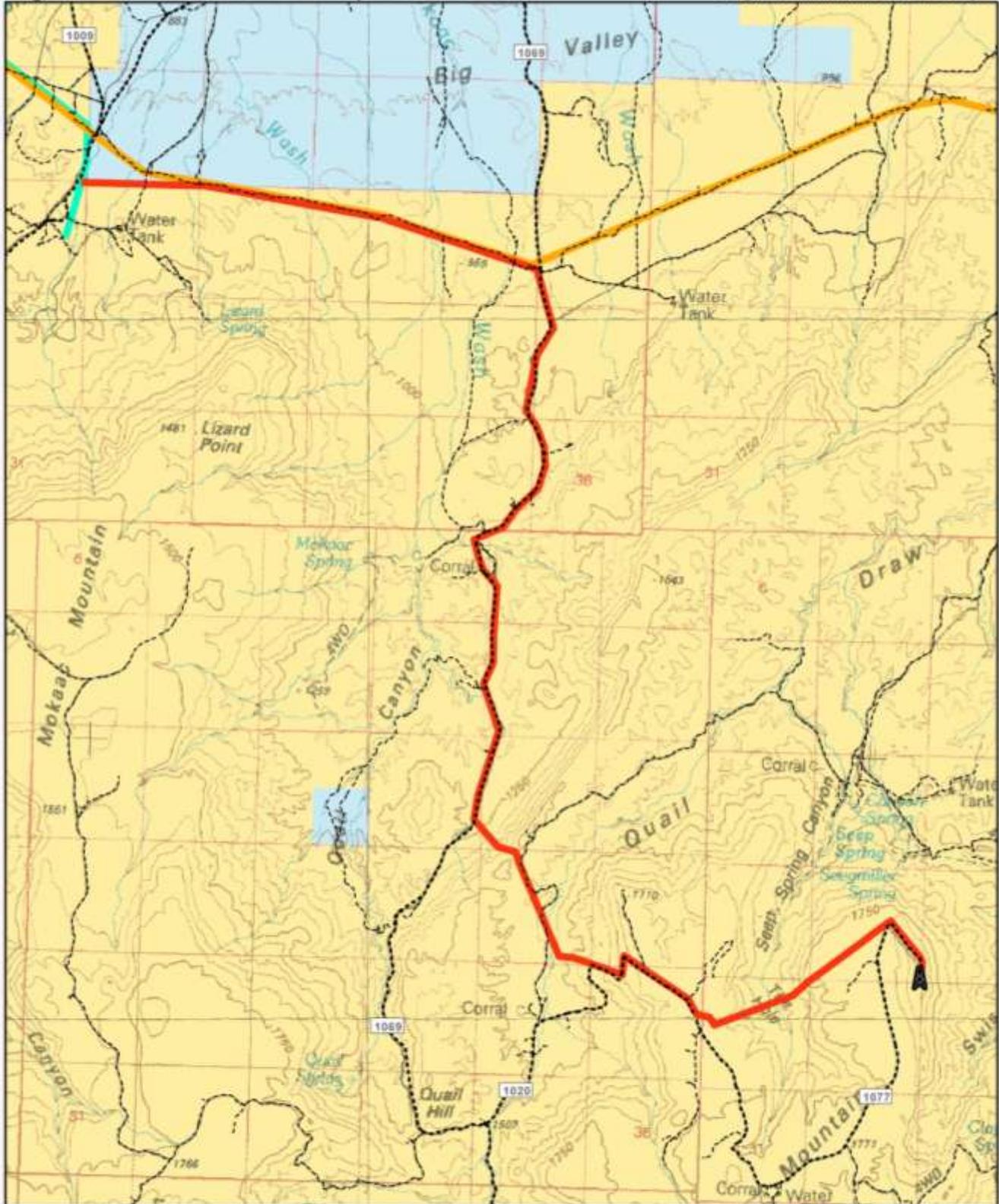
The proposed Project would require work areas around the poles and access routes to the proposed pole sites. The majority of these areas would be reclaimed and are referred to as temporary disturbance areas. The actual pole sites and one access road would remain and would be permanent disturbance.

2.1.1 Pole Structures

Raptor safe single wood pole structures with aluminum/steel conductors would be the standard design for the majority of the locations. The majority of poles would be tangent, meaning in line without angles. Some two and three pole guyed structures, poles at an angle along the line that require guy wires for support, would be installed where terrain issues require longer spans.

The design pole heights would be 30-40 feet above ground with a base diameter of approximately 16 inches. It is estimated that 233 structures would be needed for the Project with an average span of approximately 350 feet (Dixie 2014a). The actual number and exact location of poles may change slightly due to the location of sensitive resources, topographical features, or other uncontrollable reasons. The proposed new distribution line would be single circuit with a total of 4 conductors (i.e., electrical wires).

Figure 2 Alternative A - Proposed Action



| | | | | |
|---------------------------------|--------------------------------|------------------|-------|-----------------|
| Communication Site | Navajo-McCullogh Existing Line | Improved Road | State | Date: 2/26/2015 |
| Alternative A - Proposed Action | Dixie Power Existing Line | Un-Improved Road | BLM | |

0 2 4 Miles

While every effort has been made to ensure the accuracy of this information, Dixie Power makes no warranty, expressed or implied, as to the accuracy and expressly disclaims liability for the accuracy thereof. No warranty is made by the Dixie Power for the use of this map for purposes not intended by Dixie Power.

2.1.2 Access

The majority of the power line route would generally follow and be accessed off existing roads. Pole sites that are not immediately adjacent to or along existing roads would primarily be accessed via overland travel. Some prep work may be required to access pole sites via overland travel routes, such as moving boulders.

Wherever possible, existing roads or overland travel would be used in lieu of constructing roads in order to minimize ground disturbance, creating new travel routes, and changes to the visual landscape. Where needed, short access roads would be constructed using a bulldozer. Short access roads would be constructed from the existing Navajo McCullough transmission line access roads to the new pole locations or off existing roads and trails. For purposes of estimating disturbance, access roads would measure approximately 30 feet in width. Access routes and roads have been generally planned based on estimated pole locations. Once pole locations are fixed/engineered, Dixie would provide BLM with the location and lengths of all access routes and roads.

Preliminary estimates are that a total of 5.6 miles (29,787 feet) of new access would be required, of which most would be overland travel. The majority of this new access disturbance (20 acres) would be temporary and would be reclaimed once construction of the power line is complete. Where the power line route would divert from Quail Hill Road heading southeast upslope over the ridge, one permanent road would be constructed to access the pole structure at the top of the ridge. The road would be approximately 500 feet long (depending on location to be determined in consultation with the BLM) and would result in approximately 0.30-acre of permanent disturbance.

2.1.3 Temporary Disturbance - Pole Installation Areas

Structure holes would be dug using a rubber tired or track mounted backhoe or auger. Typical structure installation would involve temporary surface disturbance of approximately a 100 by 50 foot (0.12-acre) rectangular area around each structure (permanent disturbance area would be less and within the rectangular area, see below). Temporary disturbance would be restricted to the 80-foot ROW, resulting in a maximum temporary disturbance of 27.96 acres under the Proposed Action. Poles would be transported from Dixie's pole yard to the pole site, and crews would frame the poles within the ROW adjacent to the hole location so as to minimize potential impacts to the environment.

2.1.4 Permanent Disturbance – Pole Locations

Permanent disturbance associated with pole placement would consist of a small area around the actual location of the poles, including the pole itself. It is estimated that a net permanent disturbance of a 16 square feet around each tangent pole and 216 square feet around angle-guyed poles and would remain to allow for maintenance activities in the future. For the proposed line, the estimated number of structures would be 193 tangent poles and 40 angle-guyed structures. Therefore, total permanent disturbance associated with the pole locations would be approximately 0.27-acre.

Blasting would be required in areas where backhoes and augers are unable to dig through rock. Poles would be delivered to the site by truck or backhoe and erected by line trucks. Conventional construction techniques would be used during the power line construction.

When the structures are in place, the conductor line would be installed by first running a pull rope line through structure-mounted pulleys along the alignment. The rope line would be pulled from structure to structure using a vehicle, or all-terrain vehicle along approved roads within the approved ROW. The conductor would then be attached to the rope line and pulled through the pulleys using reel trucks. Approximately 12 pulling stations would be required for the Project. These pulling stations would be situated within the 80-foot ROW or on adjacent lands measuring approximately 80 by 80 feet, disturbing a total of 1.8 acres.

Construction is proposed to occur in fall/winter of 2015/2016. Construction crews would work during daylight hours and may work any day of the week. The work force on site would be approximately 4 to 8 people utilizing 4 pick-up trucks and 4 utility trucks.

2.1.5 Reclamation

All areas subject to temporary ground disturbance would be restored to the original contours and revegetated following construction. A certified weed-free seed mix approved by the BLM would be used during reclamation activities.

Vegetation removal would be kept to an absolute minimum. Any brush that may be removed would be distributed over reclaimed areas for horizontal mulch. Any reseeding of disturbed areas would be in accordance with BLM specifications.

Dixie would comply with all applicable federal and state laws, and local zoning and building ordinances during all phases of the Project. Best Management Practices (BMPs) approved by the BLM would be utilized to minimize the potential for soil erosion and the introduction of non-native invasive weeds on public lands. The Project would comply with BLM's Reclamation Stipulations (BLM 2008a: Appendix K). Dixie would be responsible for noxious weed control within the ROW (**Section 2.1.6.5**).

2.1.6 Applicant Committed Environmental Protection Measures/Design Features

Implementation of the Project would comply with all applicable federal and state laws during all phases of the Project. The following standard BMPs and the Environmental Protection Measures (EPMs)/Design Features would be implemented. EPMs would also apply to operation and maintenance of the completed facility. The BLM would inspect the Project both during and after Project completion to ensure compliance with EPMs and other requirements.

2.1.6.1 Health and Safety

- Equipment not stored offsite overnight would be parked in the ROW as far away from any roadways as possible and would be surrounded by reflective cones and orange construction fencing.
- At no time would vehicle or equipment fluids (including motor oil and lubricants) be dumped on public lands. All accidental spills would be reported to the BLM authorized officer and be cleaned up immediately, using best available practices and requirements of the law, and disposed of in an authorized disposal site. All spills of federally or state listed hazardous materials which exceed the reportable quantities would be promptly reported to the appropriate agency and the BLM authorized officer.
- During project activities, vehicle parking and material stockpiles would be located within and restricted to the 80-foot ROW and existing roads.
- All food-related trash items such as, food wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed daily from the construction site.
- Signs would be placed where needed to warn the public of any hazards.

- The construction site shall be maintained in a sanitary condition at all times. Waste materials at the job site 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, construction debris, and equipment.

2.1.6.2 Visual Resources

- The Project would use dark wood poles and non-reflective wire that would blend and reduce contrast with the natural surroundings.
- Ground disturbance from all activities including overland travel would be minimized to the extent possible.
- Revegetation of disturbance areas would help reduce the appearance of contrast with the surrounding sparsely vegetated natural environment.

2.1.6.3 Wildlife

- Project-related vehicles would be checked before moving for all potentially affected species of wildlife. Wildlife may seek shade and shelter under parked vehicles and construction equipment.
- All power poles, or similar structures, would be inspected throughout the construction day and before they are used or moved. If wildlife is present, they would be allowed to exit on their own or would be moved out of harm’s way.
- No pets would be permitted on project sites.
- To prevent entrapment of wildlife, such as rabbits and snakes, during construction, all open holes would be monitored throughout the construction day. Excavated pits more than two-feet deep would be covered at the close of each day. Alternatively, fencing may be erected around open pits or trenches. At the beginning of the construction day and before pits are filled, they would be inspected for trapped wildlife. If any wildlife are found, they would be moved out of harm’s way.
- No rodenticides would be used on project sites.
- To lessen potential impacts from the Project related to raptors, the distribution line would be designed and constructed according to Dixie’s raptor-safe design standards. The goal of these design standards is to provide 60 inches of separation between energized conductors or energized parts and grounded equipment. This measurement greatly reduces risk and allows for the large size and wingspan of raptors.
- Dixie would also follow the program described in their Avian Protection Plan adopted March 12, 2007 (Dixie 2007).
- In order to avoid or reduce impacts on nesting success of raptors, activities would not occur within recommended spatial and seasonal buffers for these species (Romin and Muck 2002). If existing topography limits actual line-of-sight of an active nest, the spatial and seasonal buffers may be reduced.
- To avoid or minimize effects to migratory birds, surface-disturbing activities would be either limited during the migratory nesting period (late April through mid-July) or a migratory bird nesting survey would be completed in areas proposed for disturbance during this time frame. If an active nest is discovered, the BLM biologist would be notified and an appropriate buffer area would be established to prevent nest abandonment until the nesting period is over or young have fledged.

2.1.6.4 Soils

- Temporarily disturbed areas would be reseeded where previously vegetated, using a BLM-approved seed mixture.

- Erosion control measures, including but not limited to silt fencing, diversion ditches, water bars, temporary mulching and seeding, and application of gravel or rip rap, would be installed, where necessary, immediately after completion of construction activities to avoid erosion and runoff.

2.1.6.5 Fire Prevention and Protection

No major brush/tree clearing is proposed as vegetation is sparse throughout the Project Area. Preventative maintenance of rights-of-way in this vegetation type has previously not been needed. Some preventative maintenance/cutting back of trees on top of Seegmiller Mountain may be needed and will be evaluated once pole locations have been identified.

- If future growth of trees encroach into the line, limbing and trimming would be coordinated with the BLM authorized officer.
- Old poles are more susceptible to forest fires after they dry out and they would be replaced as needed in the future.
- All construction personnel would have fire tools and extinguishers available at all times and would be trained in basic fire control procedures.
- Construction staff would adhere to all BLM-required fire prevention and suppression measures and a project-specific Fire Prevention and Suppression Plan.
- During the operations and maintenance phase of the project, vegetation would be managed to prevent encroachment within the minimum vegetation clearance distance as defined by Federal Energy Regulatory Commission Order FAC 003-3 (2014) – Transmission Vegetation Management, including annual inspection for vegetation maintenance. Minimum vegetation clearance distance is a calculated minimum distance that prevents voltage flash-over to the vegetation.
- All areas would be revegetated per **Section 2.1.5** Reclamation. The spread of weeds, which tend to increase fire hazard, would be controlled per the Noxious Weeds section below.

2.1.6.6 Additional Environmental Protection Measures

Noxious Weeds – All construction related equipment would be cleaned of soils, seeds, vegetative matter, or other debris or matter that could contain or hold noxious seeds. The cleaning of equipment would also be done any time thereafter if the equipment leaves the Project Area, is used on another project, and reenters the Project Area.

Cultural Resources – Although not anticipated, if previously undocumented cultural, historic, or prehistoric objects are discovered during construction, the BLM Authorized Officer would be notified and all work in the area of the discovery would halt until documentation and evaluation by a professionally trained archeologist were conducted.

Hazardous Waste – All toxic substances (e.g., oil, gas, anti-freeze) would be stored in closed containers at all times. Accidental spills would be cleaned up immediately.

Air Quality – When needed, water would be applied during the construction period to control fugitive dust levels on access routes, roads, and construction sites.

Livestock Grazing -- The integrity of livestock gates, fence, cattle guards, and water pipes would be maintained during construction.

2.1.7 Operation and Maintenance

Although it is not anticipated that the new power line would experience frequent failures, annual routine maintenance and service for occasional equipment failures would be required. Types of

maintenance activities that could occur over the life of the line include pole, conductor, insulator, and anchor support replacement. Access for routine maintenance and unexpected service failures would be limited to the approved ROW, existing access routes, and disturbed areas, or via overland travel.

Routine maintenance activities are ordinary maintenance tasks that have historically been performed and carried out on a routine basis to identify and repair any deficiencies. As a part of routine maintenance, the transmission line would have regularly scheduled visual inspections via off road vehicles or helicopter. Routine maintenance activities would not require new ground disturbances; however, previously disturbed areas may be redisturbed. Access would be via existing access routes where possible; former temporary access routes (to specific pole locations, for example) may be reused if necessary. Routine maintenance would follow the same precautions as taken during construction. BLM would be contacted prior to initiation of routine maintenance activities on public lands.

Emergency maintenance activities are those activities necessary to repair a power line or prevent damage to a line. Such work is required to eliminate a safety hazard, prevent imminent damage to the power line or to restore service in the event of an outage. Emergency maintenance would involve prompt movement of crews to repair or replace any damage. BLM would be contacted in a timely manner regarding emergency maintenance on public lands. Crews would be instructed to protect plants, wildlife, and other environmental resources.

Restoration procedures following completion of routine or emergency maintenance (raking out tracks, recontouring disturbed areas if needed, reseeding, etc.) would be similar to those previously described for construction.

2.1.8 Termination

If the Project is to be terminated or abandoned, a joint inspection would be held with the authorized officer(s) of BLM prior to termination. This would be held to agree upon an acceptable rehabilitation plan for the area.

2.2 Alternative B – Modified Proposed Action Alternative (Mokaac Wash)

Alternative B, the Modified Proposed Action Alternative, was developed using visual contrast ratings, photo simulations, and a viewshed analysis (**Appendix A**) to reduce the visibility of the power line from Quail Hill Road as compared to the Proposed Action.

Under Alternative B (**Figure 3**) the power line would leave the Navajo-McCullough transmission line utility corridor at Mokaac Wash and generally follow an existing primitive road for approximately 2.7 miles before reaching Quail Hill Road. From there it would follow the same general path as the Proposed Action, although it would be offset by between approximately 125-600 feet to the east along Quail Hill Road. The total estimated length of the power line route under Alternative B would be 15 miles, with an estimated 228 poles. Alternative B would require approximately 8.2 miles of overland travel access temporarily disturbing 29.45 acres. Disturbance from permanent road construction would be the same as described for Alternative A – Proposed Action.

All other aspects of the Project (i.e., construction, maintenance, EPMs) would be the same as for the Proposed Action.

2.3 Alternative C – Partial Burial Alternative

Under Alternative C (**Figure 4**) the power line would follow the same route as Alternative B, the Modified Proposed Action Alternative (Mokaac Wash); however, instead of being an overhead line the entire distance, the power line would be buried adjacent to the Quail Hill Road where the two are parallel in order to minimize visibility of the power line from Quail Hill Road. At the point where the overhead line meets the Quail Hill Road alignment and goes underground, the last pole supporting the overhead portion of the line would be guyed. Similarly, when the line transitions from underground to overhead where it diverges from the Quail Hill Road alignment, the first pole would require guys as well. In order to bury the portion of the line following the Quail Hill Road alignment, a trench would need to be dug, and in some cases blasting of bedrock would be required. Approximately 12.4 miles of the Alternative C route would be overhead power line with an estimated 186 poles; while approximately 2.6 miles would be underground. In addition to permanent disturbance associated with pole structures and access (0.52 acre), the underground portion of the power line would permanently disturb 3.15 acres. Alternative C would require approximately 8.6 miles of overland travel access temporarily disturbing 31.27 acres. Disturbance from permanent road construction would be the same as described for Alternative A – Proposed Action.

All other aspects of the Project (i.e., construction, maintenance, EMPs) would be the same as for the Proposed Action.

2.4 Alternative D – No Action

Under the No Action Alternative, the ROW would not be granted and the proposed distribution line would not be constructed. Current and projected land uses would continue in this area. The communication tower would continue to be powered from diesel generators.

2.5 Alternatives Considered but Eliminated from Further Analysis

A number of alternatives were considered for the Project but eliminated from further analysis. Solar power at the communications tower site was considered as an energy source for the site but was eliminated from further analysis because it was determined that the technology to make solar reliable and consistently meet the needs of the site was not realistic and an additional power source (generator or power line) would thus be required. The Seegmiller Communications Site uses about 150 kW of energy 24 hours a day and a solar array must deliver 150 kW for the operating load and be able to charge the batteries fully to provide the energy for the site. Several companies have been consulted in the last three years and it was determined that with the size of the load the site draws it would not be possible to have 24 hour reliability. It was estimated that about 3,000 solar panels (600,000 watts) would be needed with full sun. A solar array of this size would need 4-5 acres of flat, vegetation free land. It has also been proven that solar panels next to a 360-foot tower are incompatible, as ice from the tower can be found 500 feet away after a winter storm. Often, there are periods when the panels would not get enough sun light to operate the system, thus this site would continue to be a generator powered site.

Several other routes for the power line were considered but eliminated. One route followed Quail Draw from east of Little Black Mountain south to the communications site, but after completing a field trip it was determined the terrain was too rough, containing numerous washes and a very winding access road. The power line could not follow the road alignment, considerably more surface disturbance would be required to construct the power line and access pole locations, and a new road would need to be constructed partially up the north side of Seegmiller Mountain. Another modified Proposed Action alignment went diagonally from the

Navajo-McCullough transmission line to Quail Hill Road where the Mokaac Trail intersects; however, this alternative was eliminated due to numerous large boulders and it would create new access (i.e., a new road) across the valley in an area that is currently unroaded. A third alignment went south from the connecting point with the existing Dixie Power 12.5 kV line, then east going south of Quail Spring. All of these routes had either rough terrain, limited access that would require additional roads, or other features that required more extensive earthwork than the alternatives being considered.

2.6 Comparison of Alternatives

Table 1 summarizes and compares temporary and permanent disturbance under the three action alternatives. All alternatives would have 0.03 acre of permanent disturbance for the one permanent access route and between 0.22 and 0.27 acre of permanent disturbance associated with the poles themselves. In addition, Alternative C would have 2.6 miles by 10 feet (3.15 acres) of permanent disturbance associated with the buried portion which would be considered permanent because the area above the line would be mostly rocks and rocky soils that are difficult to revegetate/reclaim.

Table 1. Alternative Disturbance Summary and Comparison

| Alternative | Power Line Route Linear Miles | Access Route Linear Miles | Total Temporary Disturbance ^{1,5} (acres) | Total Permanent Disturbance ^{2,5} (acres) |
|-----------------------------------|-------------------------------|---------------------------|--|--|
| A – Proposed Action | 15.3 | 5.6 | 49.76 | 0.57 |
| B – Modified Proposed Action | 15.0 | 8.2 | 58.61 | 0.56 |
| C – Partial Burial ^{3,4} | 15.0 | 8.7 | 67.98 | 3.67 |

¹ Temporary disturbance consists of a 50 foot by 100 foot area or 0.12-acre per pole, and was calculated by multiplying 0.12 acre by the number of poles.

² Permanent disturbance was calculated for overhead lines by adding the footprint of tangent poles (16 sq. ft. each) and the angle-guyed poles (216 sq. ft. each).

³ This is the total disturbance for Alternative C, which would consist of overhead and underground section disturbance.

⁴ Alternative C underground temporary disturbance assumes a 40-foot wide portion of the ROW would be temporarily disturbed. Alternative C underground permanent disturbance assumes a 10-foot wide portion of the ROW would be permanently disturbed where the conductor would be buried. The area is very rocky and after trenching in the line the surface is likely to just be rocks with little to no topsoil.

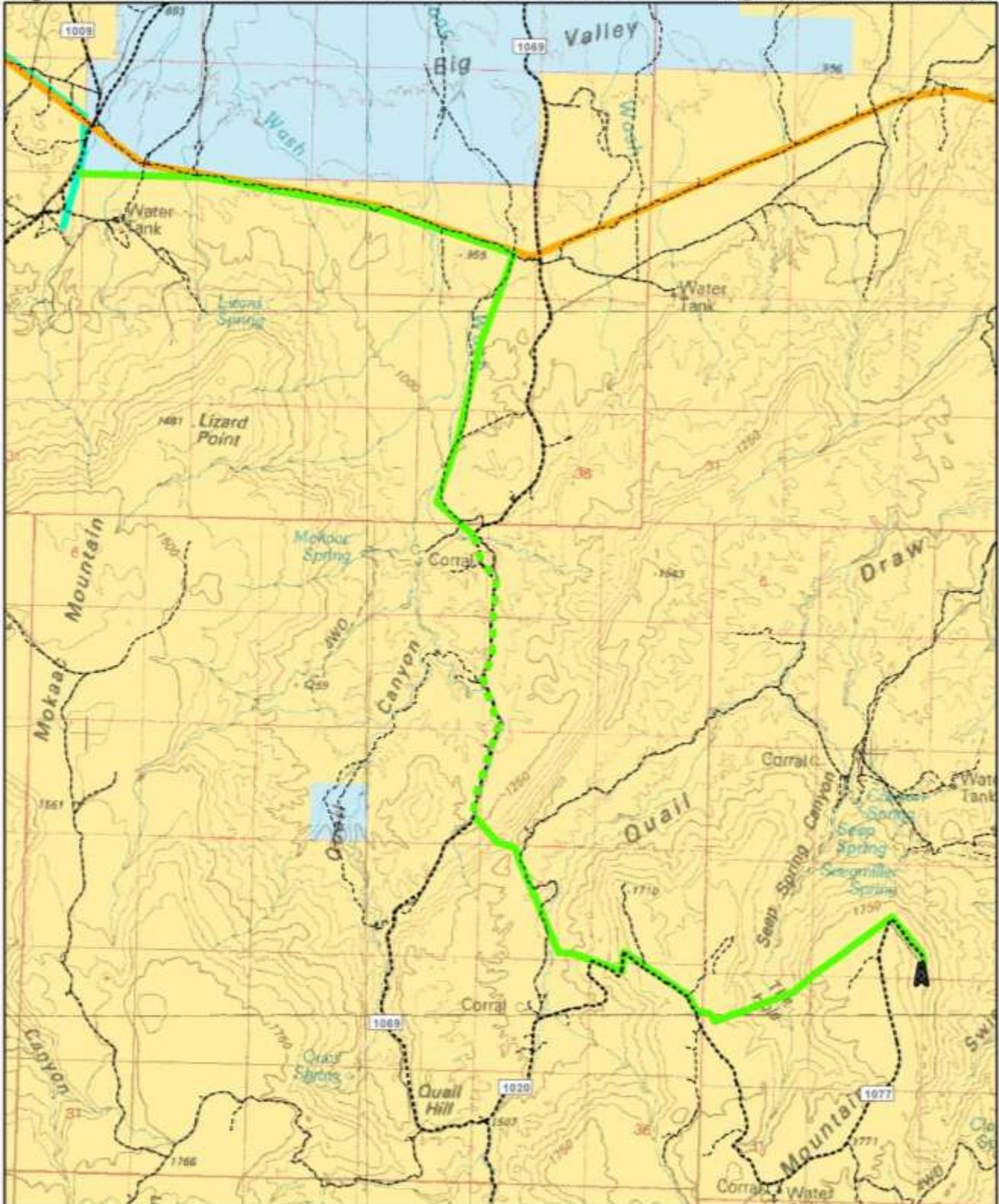
⁵ Access disturbance, the majority of which would be overland travel, is an estimate based on a maximum width of 30 feet.

Figure 3 Alternative B - Modified Proposed Action



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Figure 4 Alternative C - Partial Burial Alternative



| | | | |
|-----------------------------|--------------------------------|------------------|-------|
| Communication Site | Navajo-McCullogh Existing Line | Improved Road | BLM |
| Alternative C - Overhead | Dixie Power Existing Line | Un-Improved Road | State |
| Alternative C - Underground | | | |

0 2 4 Miles

Date: 2/26/2015

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3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The purpose of this chapter is to describe the existing environment potentially affected by one of the alternatives in order to assist the reader in understanding the existing situation. The affected environment of this EA was considered and analyzed by an interdisciplinary team of resource specialists. The resources identified and discussed in **Section 3.4** of this EA include the relevant physical, social and biological conditions that may be impacted with implementation of the alternatives, and provides the baseline for comparison of impacts described in Chapter 4.

3.2 General Setting

Mohave County is located in northwestern Arizona in a physiographic transition zone between the Mojave Desert and the Great Basin Desert. The general area is characterized by northerly trending mountain ranges and basins. The local topography is varied with plateaus and undulating valleys and draws. Mokaac Mountain is located to the south and west of the Project Area. Seegmiller Mountain is located at the south end of the Project Area. The environment is semi-arid with lots of sunshine and extreme temperature variations. The regional climate is characterized by low precipitation and humidity, with hot summers and cool winters. Average rainfall is approximately 8 inches per year at the lower elevations of the Project Area to approximately 13 inches on Seegmiller Mountain. The majority of this precipitation occurs in late summer and during winter months. The Project Area is located approximately 5 miles southeast of I-15, about 11 miles south of St. George, Utah and 18 miles east-northeast of Mesquite, Nevada. The proposed Project corridor would pass along the southern edge of Big Valley, just north of Mokaac Mountain, then south along the course of Mokaac Wash, and then southeast/east onto Seegmiller Mountain at elevations ranging from approximately 3,040 to 6,205 feet above mean sea level.

3.3 Elements/Resources of the Human Environment

The BLM is required to consider many authorities when evaluating a federal action. Those elements of the human environment that are subject to the requirements specified in statute, regulation, or executive order, and must be considered in all EAs (BLM 2008b) have been considered by BLM resource specialists to determine whether they would be potentially affected by the alternatives. These elements are identified in **Table 2**, along with the rationale for determination on potential effects. If any element was determined to potentially be impacted it was carried forward for detailed analysis in this EA. If an element is not present or would not be affected, it was not carried forward for analysis. **Table 2** also contains other resources and elements that have been considered in this EA. As with the elements of the human environment, if these resources were determined to be potentially affected, they were carried forward for detailed analysis in this document.

Table 2. Elements/Resources of the Human Environment

NP = not present in the area impacted by any of the alternatives

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for impact – analyzed in detail in the EA

| Resource | Determination | Rationale for Determination |
|---|---------------|--|
| Air Resources (including GHG emissions and air quality) | PI | Construction of the Project would create fugitive dust. GHG emissions would be affected as a result of the Project. |
| ACECs | NP | There are no ACECs within or near the Project Area. |
| Environmental Justice | NI | The alternatives would have no disproportionately high or adverse human health or other environmental effects on minority or low income segments of the population. The alternatives would have no effect on low income and minority populations because none exist near the Project Area. |
| Farmlands (Prime or Unique) | NP | There are no prime or unique farmlands within the Project Area. |
| Floodplains | NI | No actions are proposed that would result in permanent fills or diversions, or affect the function of floodplains or special flood hazard areas. |
| Native American Religious Concerns | NI | The alternatives would not limit access to any ceremonial use of Indian sacred sites, or adversely affect the physical integrity of any such site. During coordination and consultation with the American Indian Tribes that claim cultural affiliation to northern Arizona (Tribal mailing list dated 4/10/2014), no Native American religious concerns were identified in relation to the alternatives or in the Project Area. |
| Threatened, Endangered or Candidate Species | PI | <p>Designated critical habitat for the Gierisch mallow (<i>Sphaeralcea gierischii</i>) is located close to or within the Project Area, specifically the location where the line would tie in to an existing power line is within the designated critical habitat. The plant was designated as Endangered, and critical habitat designated, in 2013. Construction of the proposed power line has the potential to affect the species, and is therefore analyzed in detail in this EA.</p> <p>The California condor may occasionally fly over or feed in the Project Area at any time of year. California condors are federally listed as endangered. A population of these condors was reintroduced on the Arizona Strip in 1996 and is designated as experimental non-essential under Section 10(j) of the Endangered Species Act. Condors are strictly scavengers and prefer to eat large, dead animals such as mule deer, elk, pronghorn, bighorn sheep, cattle, and horses. Condors range widely, easily covering over 100 miles in a day, and their current range includes the entire Arizona Strip. Although condors may either fly over or feed within the Project Area, they have not been observed doing so. In addition, stipulations (i.e., BMPs) are incorporated into the alternatives (concerning site clean-up and no harassment of wildlife) that would minimize the likelihood of impacts to condors. Thus, no effect to this species is expected from the alternatives, and condors are not analyzed further in this EA.</p> <p>Potential habitat for the threatened Mojave desert tortoise exists within a portion of the project area, however none have been found to occupy the project area. Therefore, no effect to this species is</p> |

| Resource | Determination | Rationale for Determination |
|--------------------------------------|---------------|--|
| | | <p>expected from the alternatives and the Mojave desert tortoise is not analyzed further in this EA.</p> <p>No other federally listed plant or animal species are known or suspected to occur in or near the Project Area.</p> |
| Cultural Resources | PI | Historic properties and the characteristics that make them eligible for the NRHP could be impacted by the Project. |
| Invasive, Non-native Species | NI | Nine invasive plant species designated in Arizona as noxious are found in the Arizona Strip including Russian knapweed (<i>Acroptilon repens</i>), camelthorn (<i>Alhagi maurorum</i>), globed-podded hoary cress/whiteweed (<i>Cardaria draba</i>), diffuse knapweed (<i>Centaurea diffusa</i>), spotted knapweed (<i>Centaurea maculosa</i>), halogeton (<i>Halogeton glomeratus</i>), three-lobed morning glory (<i>Ipomoea triloba</i>), puncture vine (<i>Tribulus terrestris</i>), and scotch thistle (<i>Onopordum acanthium</i>). In addition, four invasive species could occur in the Project Area: perennial pepperweed (<i>Lepidium latifolium</i>), downy brome/cheatgrass (<i>Bromus tectorum</i>), red brome (<i>Bromus rubens</i>), and Malta star thistle (<i>Centaurea Melitensis</i>). Medusahead (<i>Taeniatherum caput-medusae</i>), a species of concern, is moving from the north and may occur in the area in the future (BLM 2007). Measures to prevent the spread of invasive, non-native species have been built into the alternatives (see Section 2.1.6.5). |
| Wastes (hazardous or solid) | NP | Measures to prevent the spillage of hazardous materials have been built into the alternatives (see Sections 2.1.6.1 and 2.1.6.5). No hazardous materials issues are therefore anticipated. |
| Water Quality (drinking / ground) | NI | Although some sediment might be deposited in ephemeral stream channels during construction due to erosion from the Project Area, the amount that may enter drinking water sources is negligible. Actions proposed in this EA are not expected to alter the current situation, and therefore would not affect water quality. |
| Wetlands / Riparian Zones | NP | There are no wetlands/riparian zones in or near the Project Area. |
| Wild and Scenic Rivers | NP | There are no river segments within the Project Area that are designated, eligible, or suitable as wild, scenic, or recreational under the Wild and Scenic Rivers Act. |
| Wilderness | NP | The proposed Project is not located within designated wilderness. The closest designated wilderness area to the Project Area is the Paiute Wilderness, 4.9 miles west-northwest. |
| Livestock Grazing | NI | The Project Area overlaps with several livestock grazing allotments (Black Rock, Lizard, Quail Canyon), but would have negligible effects on the allotments as disturbances would be less than one percent of the allotments and would be reclaimed. |
| Woodland / Forestry | NP | There are no woodlands or forest resources present in the Project Area. |
| Vegetation | PI | Impacts to vegetation along the route of the proposed power line would occur during construction. Some brush would be crushed as vehicles travel along the route and the power line is installed. In addition, some plants would be torn up by the equipment as poles and guy wires are placed in the ground. This issue is therefore analyzed in detail in this EA. |
| BLM or State Sensitive Plant Species | NP | No BLM or State Sensitive plant species occur within the Project Area. |

| Resource | Determination | Rationale for Determination |
|--|---------------|--|
| Wildlife (including sensitive species and migratory birds) | PI | Short-term disturbance to wildlife could occur during construction and maintenance activities caused by noise, presence of humans, impacts to vegetation causing the loss of food and shelter to small rodent and reptile populations, and destruction of burrows caused by the installation of the power line. This issue is therefore analyzed in detail in this EA. |
| Soil Resources | PI | There could be some soil loss due to water or wind erosion during construction activities. |
| Recreation | NI | Disturbance to the recreating public (including displacement of users) is unlikely, except possibly during construction of the portion of the new power line along the Quail Hill Road. However, the majority of the proposed power line would be located away from the road, so disturbance to the recreating public is not anticipated to occur. |
| Visual Resources | PI | The proposed Project Area is within Class II and Class III Visual Resource Management areas. The objective of Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The presence of a new power line could affect the visual landscape in the Class II areas. This issue is therefore analyzed in detail in this EA. |
| Geology / Mineral Resources / Energy Production | NI | The alternatives would not affect geology, mineral resources, or energy production as it would not close any areas to mineral development or alter any known geological feature. |
| Paleontology | NP | No paleontological resources are known to occur in the Project Area. |
| Lands / Access | PI | Access to public lands would not be altered or impaired by implementation of the alternatives. However, the proposed ROW would result in a new and reliable power source for the Seegmiller Mountain Communications Site. This issue is therefore analyzed in detail in this EA. |
| Fuels / Fire Management | NI | No hazardous fuel reduction or fuels management projects are proposed for the area. Applicant proposed fire prevention and protection measures (Section 2.1.6.5) and mitigation measures in Section 4.3 would be in place to minimize effects from wild fire. |
| Socio-economic Values | NI | The economic base of the Arizona Strip is mainly ranching with a few gypsum/selenite and uranium mines. Nearby communities are supported by tourism (including outdoor recreation), construction, mining activities, and light industry. The social aspect involves remote, unpopulated settings with moderate to high opportunities for solitude. Construction of the proposed power line would be accomplished by existing power company crews, so would not affect the local economy overall. |
| Wild Horses and Burros | NP | The Project Area is not within a wild horse or burro herd management areas, and no wild horses or burros occur within the Project Area. |
| Areas Managed to Maintain Wilderness Characteristics | NP | The Project Area contains the Mokaac Fault Area, which has the three wilderness characteristics of naturalness, solitude, and opportunities for primitive and unconfined recreation. However, in accordance with the Arizona Strip Field Office RMP, the area is not managed to maintain wilderness characteristics. |

3.4 Resources/Issues Brought Forward for Analysis

3.4.1 Air Resources

3.4.1.1 Greenhouse Gas Emissions

GHGs are chemical compounds in the Earth's atmosphere that allow incoming short-wave solar radiation but absorb long-wave infrared radiation re-emitted from the Earth's surface, trapping heat. Most studies indicate that the Earth's climate has warmed over the past century due to increased emissions of GHGs and that human activities affecting emissions to the atmosphere are likely an important contributing factor (US Energy Information Administration 2014).

Computer-based modeling suggests that rising GHG concentrations may produce an increase in the average temperature of the Earth, which may produce changes in sea levels, rainfall patterns, and intensity and frequency of extreme weather events. Collectively, these effects are referred to as "climate change."

GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor, and several trace gases. Some GHGs, such as CO₂, occur naturally and are emitted into the atmosphere through both natural processes and human activities, while others are created and emitted solely through human activities. The GHGs that enter the atmosphere due to human activities include CO₂ from the burning of fossil fuels, solid waste, and trees and wood products; CH₄ emitted during the production and transport of coal, natural gas, and oil, as well as by livestock, deforestation, and agricultural practices; N₂O from agricultural and industrial activities and the combustion of fossil fuels and solid waste; and fluorinated gases that result from a variety of industrial processes.

Total GHG emissions in the US rose 14.7 percent from 1990 to 2006. The primary GHG emitted by human activities in the US is CO₂. It totals approximately 84.8 percent of all GHG emissions, with the largest source being fossil fuel combustion. According to the Environmental Protection Agency Inventory of US Greenhouse Gas Emissions and Sinks (USEPA 2014a), CO₂ emitted in the US totaled 7,054.2 teragrams in 2006. These GHG emissions are partly offset by carbon sequestration in forests, trees, urban areas, and agricultural soils, which, in aggregate, offset 12.5 percent of total US emissions in 2006 (USEPA 2014a).

Currently, the diesel generator that powers the largest communication site uses approximately 9,144 gallons of diesel fuel per month to generate an average load of 140 kW (personal communication, email from Kelton, Canyon Media Group to Russell Condie, Dixie Power, November 21, 2013). In addition it takes three to five trips per week to perform maintenance on the generator and backup generator. Assuming 1) delivery of diesel fuel from St. George, Utah at approximately 66 miles round trip, 2) 30 trips per year, and 3) seven miles per gallon diesel for the fuel delivery truck, **Table 3** shows estimated GHG emissions from the diesel generator and the diesel fuel delivery trucks on a monthly and annual basis: the emissions are reported in CO₂ equivalents (CO_{2E}). The table also shows estimated emissions for 12 maintenance trips per month from St. George using a pickup truck getting 20 miles per gallon of gasoline.

Table 3. Current GHG Emission Estimates

| Source | Gallons/mo | Emissions | | | | |
|--------------------------------|------------|----------------------------|----------------------------|-----------------------------|-----------------------------|---------------------------------|
| | | CO ₂ (kg/mo) | CH ₄ (kg/mo) | N ₂ O (kg/mo) | CO _{2E} (kg/mo) | CO _{2E} (tons/year) |
| Diesel Generator | 9,144 | 93,360 | 5 | 2 | 94,199 | 1,246 |
| Fuel Delivery Truck | 23.6 | 241 | 0.01 | 0.01 | 243 | 3.2 |
| Maintenance Truck | 39.6 | 348 | 0.02 | 0.01 | 352 | 4.7 |
| Total Current Emissions | | | | | | 1,254 |

Sources: USEPA 2008; USEPA 2014b

3.4.1.2 Air Quality

The Clean Air Act, as amended, establishes National Ambient Air Quality Standards (NAAQS). The Arizona Department of Environmental Quality is the regulating and enforcing agency for Arizona air quality standards and has adopted these federal standards as the Arizona Ambient Air Quality Standards. Geographic areas (commonly referred to as airsheds) are designated attainment, non-attainment, or unclassified for ambient air quality and pollutant emission sources. Areas in which levels of a pollutant measure below the NAAQS are designated “attainment” areas; areas that exceed the NAAQS may be designated “non-attainment” – these are usually urban regions and/or regions with higher density industrial development. The given status of an area is designated separately for each pollutant.

The Project Area is unclassified for all pollutants and has been designated as Prevention of Significant Deterioration (PSD) Class II. The Clean Air Act established programs and permitting processes designed to protect and improve air quality. Section 1761 (1) contains the language that mandates the general conformity rule. The Environmental Protection Agency promulgated PSD regulations to protect and enhance air quality. PSD review is a pollutant-specific review and a federally mandated program. This PSD review applies to new emission sources in areas designated attainment or unclassified, and it applies only to pollutants for which a project is considered a potential major contributor. The PSD provisions use an incremental approach and are intended to help maintain good air quality in areas that attain the NAAQS and to provide special protections for areas of special natural recreational, scenic, or historic value, such as national parks and wildlife areas. PSD permits are required for major new stationary sources of emissions that emit 250 tons (100 tons for categorical sources) or more per year of an air pollutant. The actions proposed in this EA do not trigger the requirements of the PSD review process.

Air quality in the Project Area is generally good. Exceptions include short-term pollution (particulate matter) resulting from vehicular traffic on unpaved roads. Fugitive dust is also generated by winds blowing across the area, coming from roads and other disturbed areas.

3.4.2 Cultural Resources

The NHPA, as amended, and its implementing regulations (36 CFR 60 and 800) require that federal agencies take into account the effects of their undertakings on cultural resources that are listed or eligible for listing on the NRHP. Eligible, potentially eligible, or listed resources are labeled “historic properties.” As required by the NHPA, an intensive archaeological field investigation of the Project Area was conducted in August and September 2014 (Gourley 2014) to identify historic properties within the Area of Potential Effect (APE).

Cultural resources are defined as any definite location of past human activity identifiable through field survey, historical documentation, and/or oral evidence. Cultural resources include archaeological or architectural sites, structures, or places, and places of traditional cultural or

religious importance to specified groups whether or not represented by physical remains. Cultural resources have many values and provide data regarding past technologies, settlement patterns, subsistence strategies, and many other aspects of history.

The prehistory of the region can be broken down into a series of developmental stages based on changing technologies, economics, and social systems. Generally these include: Paleoindian (11,000 – 7000 BC); Archaic (Early 7000 – 4200 BC, Middle 4200 – 26000 BC, Late 2600 – 1 BC); Formative/Virgin Anasazi/Fremont (Basketmaker II 100 BC – AD450, Basketmaker III AD 450 – 750, Pueblo I AD700 – 900, Pueblo II/III AD 900 – 1300); Late Prehistoric/Protohistoric (AD 1200 – 1850); and Historic (AD 1776 – 1880). For more information refer to general syntheses of the regional prehistory (Altschul & Fairley 1989; Geib 1996; Lyneis 1995). Historic exploration and settlement of the area began in 1776 with the Dominguez and Escalante Expedition. For more information on the history of the area refer to historic syntheses of the general area (e.g. Alder & Brooks 1996).

Examination of the proposed Project corridor and the alternatives resulted in the identification and documentation of nine new cultural sites, AZ A:2:86(ASM) – AZ A:2:93(ASM) and AZ A:3:61(ASM). Three previously recorded cultural sites, NA11411/AZ A:2:1(MNA)/AZ A:2:62(ASM), AZ A:2:38(ASM), and AZ A:2:64(ASM), were also relocated within the Project corridor. The three previously recorded sites are eligible for the NRHP, while the nine newly recorded sites are all recommended not eligible. See Table 10 in **Section 4.2.2** for more information on these sites.

3.4.3 Lands/Realty

The existing land use in the Project Area includes open range grazing, recreational use, and some utility development. The area is mostly undeveloped with dirt roads, the Seegmiller Mountain Communications Site, and existing power lines in the northern portion of the Project Area. Other ROWs in the area include: a 25-foot wide water pipeline ROW (AZA 033683) held by Western Mining and Minerals (gypsum mine) which has not yet been constructed; a 200-foot wide 500 kV transmission line ROW (AZA 004064) held by Los Angeles Water and Power; and communication site ROWs held by Media Advisors LLC (AZA 024029), Robert W. Cox (AZA 024294), Washington County (AZA 026158), and BLM (AZA 026156).

As noted in **Section 1.2**, the Seegmiller Mountain Communications Site currently consists of four communication site ROWs for uses including FM radio broadcast, broadcast translator, commercial/private mobile radio service, and amateur radio. The largest ROW site (Media Advisors LLC) is a radio and telecommunications tower and associated facilities within a fenced site, which provides public and private communications services to the St. George, Utah, and Arizona Strip areas, that was constructed about 20 years ago (Dixie 2014a). The current users of this communication facility include: Canyon Media Group, Simmons Media Group, Cherry Creek Media, and Nevada Public Radio. There are three to five weekly trips to the communication site for fuel delivery and maintenance of the generators.

A portion of the proposed ROW would be within a designated West-wide Energy Corridor (WEC), a portion of which is occupied by the existing 500 kV Navajo-McCullough transmission line ROW. The 1-mile wide utility corridor was established by the Arizona Strip Field Office RMP, which also directs that the use of designated ROW corridors will be encouraged to the extent possible (see Section 1.5 of this EA). The proposed Project would be partially constructed in the designated Corridor, parallel to the Navajo-McCullough transmission line ROW.

3.4.4 Soils

Soils in the area consist of fine reddish-tan sands with numerous small rock fragments composed primarily of limestone and basalt. Some fairly large basalt boulders are also present in areas. The geology of the proposed Project corridor consists of Permian aged limestone and sandstone, Early and Middle Triassic mudstone and sandstone, Late Miocene to Pliocene basalt flows, and Quaternary aged sand and gravels.

Soils types in the Project Area are variable, reflecting the differences and interactions between topography, elevation, parent material, and time. Topography ranges from nearly level valley bottoms to vertical cliffs. The dominant parent materials in the Planning Area are sedimentary rocks such as limestone, mudstone, shale, gypsum, and sandstone. Igneous rocks, such as basalt, basalt cinders, and granite are also prevalent, and metamorphic rocks such as gneiss are present. Many alluvial soils have formed from mixes of these various parent materials (BLM 2007).

The National Resources Conservation Service (NRCS) has completed and published soil surveys for the Project Area that are available online and can be custom tailored to any geographic area. For this EA, the web survey function was used to define the soils in the 23 sections that the Proposed Action and action alternatives would travel through (see **Section 2.1** above), which NRCS refers to as the Area of Interest (AOI) (NRCS 2014). **Table 4** lists the soils in the Project Area.

Table 4. Soils

| Shivwits Area, Arizona, Part of Mohave County (AZ623) | | | | |
|---|---|---------------------------|----------------|---|
| Map Unit Symbol | Map Unit Name | Acres in AOI ¹ | Percent of AOI | Landform; Parent Material |
| 1 | Akinville-Mokaac association, 2 to 20 percent slopes | 536.8 | 3.7% | Fan terraces; gypsiferous and calcareous alluvium and/or colluvium derived from sedimentary rock |
| 16 | Cave-Harrisburg-Grapevine complex, 1 to 15 percent slopes | 1,020.4 | 7.1% | Fan terraces; mixed alluvium |
| 20 | Dermala family-Guy family-Rock outcrop complex, 10 to 40 percent slopes | 1,156.9 | 8.0% | Mesas; colluvium |
| 26 | Grapevine-Hobcan complex, 1 to 5 percent slopes | 445.6 | 3.1% | Fan terraces, alluvial fans; mixed alluvium derived from igneous and sedimentary rock |
| 27 | Grapevine-Shelley complex, 1 to 5 percent slopes | 532.6 | 3.7% | Fan terraces; mixed alluvium and/or colluvium derived from igneous and sedimentary rock |
| 29 | Gypill fine sandy loam, 15 to 40 percent slopes | 83.5 | 0.6% | Hills; Gypsiferous alluvium and/or colluvium derived from sedimentary rock |
| 30 | Gypill-Hobog complex, 6 to 35 percent slopes | 2,890.2 | 20.1% | Hills & mesas; Gypsiferous alluvium and/or colluvium derived from sedimentary rock (Gypill) mixed alluvium and/or eolian deposits derived from igneous and sedimentary rock (Hobog) |
| 31 | Gypill very cobbly sandy loam, 15 to 40 percent slopes | 602.7 | 4.2% | Hills; Gypsiferous alluvium and/or colluvium derived from sedimentary rock |
| 34 | Hindu-Rock outcrop-Gypill complex, 35 to 70 percent slopes | 286.3 | 2.0% | Mountains; colluvium derived from limestone (Hindu) gypsiferous alluvium and/or colluvium derived from sedimentary rock (Gypill) |
| 35 | Hobcan fine sandy loam, 1 to 5 percent slopes | 31.4 | 0.2% | Fan terraces, alluvial fans; mixed alluvium derived from igneous and sedimentary rock |
| 36 | Hobog-Grapevine complex, 2 to 35 percent slopes | 379.3 | 2.6% | Mesas, fan terraces; mixed alluvium and/or eolian deposits derived from igneous and sedimentary rock (Hobog) mixed alluvium derived from igneous and sedimentary rock (Grapevine) |
| 38 | Hobog-Tidwell family complex, 8 to 35 percent slopes | 256.7 | 1.8% | Mesas, plateaus; mixed alluvium and/or eolian deposits derived from igneous and sedimentary rock |
| 39 | Hobog very gravelly sandy loam, 5 to 30 percent slopes | 103.4 | 0.7% | Mesas, plateaus; mixed alluvium and/or eolian deposits derived from igneous and sedimentary rock |

| Shivwits Area, Arizona, Part of Mohave County (AZ623) | | | | |
|---|--|---------------------------|----------------|---|
| Map Unit Symbol | Map Unit Name | Acres in AOI ¹ | Percent of AOI | Landform; Parent Material |
| 46 | Mellenthin-Strych complex, 4 to 25 percent slopes, cool | 283.2 | 2.0% | Mesas, plateaus; alluvium and/or colluvium and/or eolian deposits derived from limestone and sandstone (Mellenthin) mixed alluvium and/or colluvium derived from sedimentary rock (Strych) |
| 47 | Mellenthin-Strych complex, 4 to 25 percent slopes, warm | 193.1 | 1.3% | Mesas, plateaus; alluvium and/or colluvium and/or eolian deposits derived from limestone and sandstone (Mellenthin) mixed alluvium and/or colluvium derived from sedimentary rock (Strych) |
| 50 | Mellenthin-Tanbark complex, 5 to 50 percent slopes, warm | 787.2 | 5.5% | Mesas, plateaus, hills; alluvium and/or colluvium and/or eolian deposits derived from limestone and sandstone (Mellenthin) alluvium, colluvium and/or eolian deposits derived from sedimentary rock (Tanbark) |
| 51 | Meriwhitica-Rock outcrop-Strych complex, 35 to 70 percent slopes | 251.8 | 1.7% | Plateaus; colluvium derived from limestone (Meriwhitica) mixed alluvium and/or colluvium derived from sedimentary rock (Strych) |
| 56 | Nikey family-Ruesh family-Rock outcrop complex, 10 to 40 percent slopes | 967.6 | 6.7% | Mesas; colluvium derived from sandstone and shale (Nikey) gypsiferous colluvium derived from sedimentary rock (Ruesh) |
| 58 | Nutter-Gypocket complex, 2 to 20 percent slopes | 200.4 | 1.4% | Fan terraces; gypsiferous alluvium and/or colluvium derived from sedimentary rock |
| 61 | Pocum-Spenlo complex, 1 to 10 percent slopes | 1,659.3 | 11.5% | Mesas; mixed alluvium and/or colluvium derived from volcanic rock (Pocum) mixed alluvium (Spenlo) |
| 63 | Radnik loam, 1 to 5 percent slopes | 34.6 | 0.2% | Flood plains; mixed alluvium |
| 67 | Ruesh very gravelly fine sandy loam, 3 to 20 percent slopes | 221.5 | 1.5% | Fan terraces; gypsiferous alluvium and/or eolian deposits derived from sedimentary rock |
| 74 | Tanbark family-Strych family-Rock outcrop complex, 10 to 40 percent slopes | 1,358.8 | 9.4% | Mesas; colluvium derived from igneous and sedimentary rock (Tanbark) mixed alluvium derived from interbedded sedimentary rock (Strych) |
| 75 | Tanbark loam, 15 to 75 percent slopes | 117.5 | 0.8% | Hills; alluvium and/or colluvium and/or eolian deposits derived from sedimentary rock |
| Totals for Area of Interest | | 14,400.5 | 100.0% | |

¹ AOI = area of interest, which includes all sections through which the Proposed Action power line travels.
Source: NRCS 2014

3.4.5 Threatened, Endangered, and Candidate Species

There are approximately 12,822 acres of designated critical habitat for the Gierisch mallow in two units in northern Arizona and southern Utah. Designated critical habitat for the Gierisch mallow (*Sphaeralcea gierischii*) is located close to or within the Project Area, specifically from the point where the proposed power line would tie in to the existing Dixie power line, approximately 3,191 feet (0.60-mile/5.86 acres) would be within Unit 2 of the designated critical habitat. The proposed ROW route was inventoried and no plants or suitable soil conditions for the species were found (Lambeth 3/26/2015). The plant was designated as Endangered, and critical habitat designated, in the Federal Register of August 13, 2013 (78 FR 49149 and 78 FR 49165, respectively). Gierisch mallow is found only on gypsum outcrops associated with the Harrisburg member of the Kaibab formation in warm desert scrub communities in northern Mohave County, Arizona and closely adjacent Washington County, Utah.

The California condor may occasionally fly over or feed in the Project Area at any time of year. California condors are federally listed as endangered and a population of these condors was reintroduced on the Arizona Strip in 1996. This population is designated as experimental non-essential under Section 10(j) of the Endangered Species Act.

Condors are strictly scavengers and prefer to eat large, dead animals such as mule deer, elk, pronghorn, bighorn sheep, cattle, and horses. Condors range widely, easily covering over 100 miles in a day, and their current range includes the entire Arizona Strip. Although condors may

either fly over or feed within the Project Area, they have not been observed doing so. In addition, stipulations (i.e., BMPs) are incorporated into the alternatives (concerning site clean-up and no harassment of wildlife) that would minimize the likelihood of impacts to condors. Thus, no effect to this species is expected from the alternatives, and condors are not analyzed further in this EA.

No other threatened, endangered, proposed, or candidate species or critical habitat is known to be present in the Project Area.

3.4.6 Vegetation

Vegetation in the area is consistent with that of the Mojave Desert and Mojave/Great Basin Transition Ecological Zones. The area is dominated by the Creosote/Bursage Community with Great Basin blackbrush, Mojave mixed scrub, and chaparral communities also present.

Observed vegetation includes scattered juniper trees (*Juniperus osteosperma*) at higher elevations, creosote bush (*Larrea tridentata*) (lacking in highest elevations), four-wing saltbush (*Atriplex canescens*), shadscale (*Atriplex confertifolia*), Mormon tea (*Ephedra viridis*), blackbrush (*Coleogyne ramosissima*), broom snakeweed (*Gutierrezia sarothrae*), yucca (*Yucca elata*), Russian thistle (*Salsola tragus*), desert trumpet (*Eriogonum inflatum*), globe-mallow (*Sphaeralcea* spp.), cholla cacti (*Opuntia imbricate*), prickly pear cacti (*Opuntia phaeacantha*), hedgehog cacti (*Echinocereus engelmannii*), cheatgrass (*Bromus tectorum*), Indian ricegrass (*Oryzopsis hymenoides*), and various other grasses and forbs.

Three major ecological zones were described for the Project Area in the Final Environmental Impact Statement for the Arizona Strip Resource Management Plan (BLM 2007). **Table 5** shows those zones and the dominant plant species in each.

Table 5. Dominant Plant Species by Ecological Zone

| Ecological Zone | Dominant Plant Species |
|-------------------------------|--------------------------------------|
| Mojave Desert | creosote, white bursage, Joshua tree |
| Mojave-Great Basin Transition | blackbrush, yucca |
| Great Basin | sagebrush, pinyon pine, juniper |

Source: BLM 2007

3.4.6.1 Mojave Desert Ecological Zone

Low shrubs characterize the Mojave Desert Ecological Zone, with creosote bush (*Larrea tridentata*) being the most common shrub. Creosote bush communities are typically very open and species-poor, and occur in areas with considerable amounts of bare ground. Exotic annual grasses, particularly red brome, have invaded large areas of the ecological zone. Joshua tree (*Yucca brevifolia*) communities are found throughout this ecological zone, although none occur within the Project Area. Mojave Desert plant species present in the Project Area include creosote bush, Mormon tea (*Ephedra nevadensis*), broom snakeweed (*Gutierrezia sarothrae*), blackbrush (*Coleogyne ramosissima*), white bursage (*Ambrosia dumosa*), Anderson wolfberry (*Lycium andersonii*), winterfat (*Krascheninnikovia lanata*), Mojave indigobush (*Psoralethamnus arborescens*), and a variety of grasses such as threeawn (*Aristida longiseta*), Indian ricegrass (*Oryzopsis hymenoides*), sand dropseed (*Sporobolus cryptandrus*), galleta (*Hilaria rigida*), and squirreltail (*Elymus elymoides* ssp. *Elymoides*).

3.4.6.2 Mojave-Great Basin Transition Ecological Zone

This ecological zone is a transition between the Mojave Desert and the Great Basin and contains vegetation-type representatives from both ecological zones. Soil and vegetation vary widely within the transition area, although it more closely resembles the Mojave Desert. Blackbrush communities occur in the Mojave-Great Basin Transition Ecological Zone. Blackbrush is typically found on gentle slopes above creosote bush communities and below the interior chaparral or big sagebrush/pinyon-juniper communities (BLM 2007). Blackbrush communities are characterized by relatively high cover (50 percent) of low stature (20 inches tall) evergreen woody shrubs, dominated by blackbrush, which can comprise 90 to 95 percent of the total plant cover (BLM 2007).

Mojave-Great Basin Transition vegetation present in the Project Area includes creosote, bursage, and blackbrush communities with minor amounts of understory grasses such as galleta, black grama (*Bouteloua eriopoda*), squirreltail, Indian ricegrass, and sand dropseed. Other shrubs present include winterfat, fourwing saltbush (*Atriplex canescens*), and Mormon tea.

3.4.6.3 Great Basin Ecological Zone

This ecological zone contains a wide range of vegetation communities including sagebrush and pinyon-juniper communities, grasslands, shrublands, and woodlands. Major shrubs include basin big sagebrush (*Artemisia tridentata*), blackbrush, shadscale (*Atriplex confertifolia*), Mormon teas, and greasewood (*Sarcobatus vermiculatus*). Invasive, annual grasses have invaded parts of the Great Basin desert scrub life zone, but have not caused the fire problems seen in the Mojave Desert scrub (BLM 2007).

The higher elevation portions of the Project Area (on Seegmiller Mountain) are within this ecological zone. This area is cooler and is characterized by big sagebrush with an understory of grasses (such as Indian ricegrass, needle and thread (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), galleta, black grama, blue grama (*Bouteloua gracilis*), and sand dropseed) in the valleys and rolling hills. Utah juniper and pinyon pine (*Pinus monophylla*) are scattered across the shallower soils on the upper elevation portions of Seegmiller Mountain. Winterfat, fourwing saltbush, and Wyoming big sagebrush are the dominant shrubs.

3.4.7 Visual Resources

The BLM uses a visual resource management (VRM) system to manage visual resources on public lands. The primary objective of VRM is to maintain the existing visual quality of BLM administered public lands and to protect unique and fragile visual resources. The VRM system uses four classes to describe the different degrees of modification allowed to the basic elements of the landscape (i.e., line, form, color, and texture; BLM 1986). The VRM Classes and their objectives are described in **Table 6**.

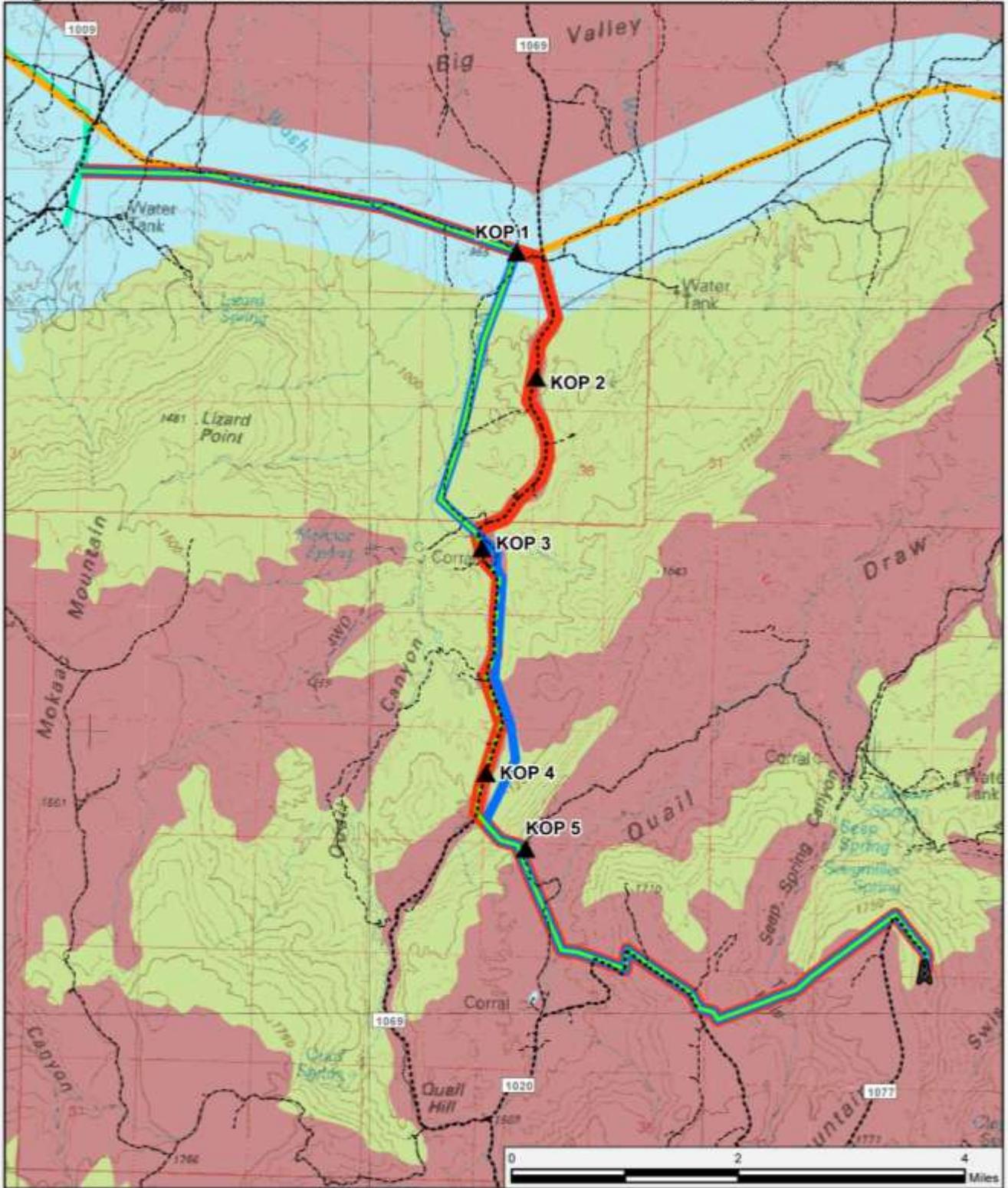
Table 6. Visual Resource Management Class Objectives

| VRM Class | Objectives |
|------------------|--|
| I | The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and should not attract attention. |
| II | The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. |
| III | The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. |
| IV | The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of the landscape (BLM 1986). |

The VRM classes assigned to the lands in the vicinity of the Project are shown on **Figure 5**. An area ranging from 600 to 800 feet wide encompassing Quail Hill Road is designated VRM Class III (not visible on **Figure 5** because that area is within the Proposed Action Project Area on this figure).

In order to assess compliance with BLM VRM objectives along the proposed ROW, five Key Observation Points (KOPs) were selected for analysis (**Table 7, Figure 5**). At each KOP, a Visual Contrast Rating worksheet was completed and a photo taken to represent the view from the KOP (**Appendix A**). The Visual Contrast Rating forms describe the existing characteristics of the viewshed seen from each KOP. The landscape is broken into land/water, vegetation, and structure. The elements of form, line, color, and texture are described for each. Both the current characteristics and the characteristics after the proposed Project are described and then the degree of contrast is determined by the changes. The KOPs are numbered from 1 to 5 starting on the north end of the Project Area.

Figure 5 Key Observation Points



| | | | |
|---------------------------------|--|---|--|
| ▲ Key Observation Points | Alternative B - Modified Proposed Action | Navajo-McCullogh Existing Line | Visual Resource Management (VRM) Class 2 Class 3 Class 4 |
| ▲ Communication Site | Alternative C - Overhead | Dixie Power Existing Line | |
| Alternative A - Proposed Action | Alternative C - Underground | ----- Improved Road - - - - - Un-Improved Road | |

While every effort has been made to ensure the accuracy of this information, Dixie Power makes no warranty, expressed or implied, as to the accuracy and expressly disclaims liability for the accuracy thereof. No warranty is made by the Dixie Power for the use of this map for purposes not intended by Dixie Power.

Table 7. KOP Descriptions

| KOP # | Description | View Direction | VRM | Associated Alternative |
|--------------|---|-----------------------|------------|-------------------------------|
| 1 | Junction with the existing Navajo-McCullough power line route | south | II & IV | Alternatives B & C |
| 2 | Typical Road Crossing | south | III | Alternatives A |
| 3 | Undisturbed area | southeast | II & III | Alternatives B & C |
| 4 | Undisturbed area | south | II & III | Alternatives A, B & C |
| 5 | Top of Ridge | south | III | Alternatives A, B, & C |

KOP 1 is located where the power line proposed under Alternatives B and C would turn south from the existing Navajo-McCullough transmission line (**Figure 5**), which is an area designated as VRM Class IV. The view is south looking along a dirt road in Mokaac Wash in an area that transitions from VRM Class IV (foreground) to VRM Class II (middle ground) (**Photo 1, Appendix A**). This KOP represents the views of recreationists that travel south on the unimproved road going up Mokaac Wash. The view is flat in the foreground, with rolling hills in the middle ground, and a flat ridgeline in the background with lower triangular peaks. The ridgeline creates a strong horizontal line at the horizon. Vegetation is uniform green, tan, and gray becoming patchy in the background. There is an existing road that creates a barren linear feature in the foreground and disappears behind the hills in the midground. Textures are stippled and coarse in the mountain, while the road is smooth.

KOP 2 is located southeast of KOP 1 along Quail Hill Road in a VRM Class III area (**Photo 2, Appendix A**), with views into VRM Class II areas. The view includes triangular, jagged to rolling hills in the middle ground and a long flat ridge line in the background. The ridgeline creates a strong horizontal line at the horizon. The existing graveled road presents a curving linear feature evident in the fore- and middle ground. Vegetation is stippled and patchy in green, tan, and gray. Textures are rough and broken in the landscape; the road is smooth in texture. This KOP represents the views of travelers using Quail Hill Road where the road would be crossed several times by the power line proposed in Alternative A.

KOP 3 is located within a VRM Class III area on Quail Hill Road looking north into a VRM Class II area (**Photo 3, Appendix A**). This area is where the Alternatives B and C power line route would be seen joining Quail Hill Road by observers traveling along Quail Hill Road, and where the Alternative C power line would transition to underground. The view includes rolling hills in the foreground, flat valley in the middle ground, and triangular, jagged peaks and a flat ridgeline in the background. The background exhibits a tan and red exposure devoid of vegetation. Vegetation is grey, green, patchy, and broken in the foreground. The color changes to mostly green in the middle ground, and then back to gray and green in the background. Land textures are coarse and rough. Looking north from the road, no manmade features are visible from this location along Quail Hill Road.

KOP 4 is located on Quail Hill Road looking south across a VRM Class II area that extends up to the ridge top (**Photo 4, Appendix A**). Just south of KOP 4, observers from Quail Ridge Road would see the power line route under all alternatives diverge from Quail Hill Road and travel southeast up the slope to the ridge top. The foreground to middle ground gently slopes up to a rugged ridge. The background is enclosed by the rugged ridge. The existing graveled road is

lined with snakeweed, which stands out from the gray green stippled shrubs and tan grasses. Vegetation in the background appears darker. Textures are rough and broken, while Quail Hill Road appears smooth to stippled in texture.

KOP 5 is located at the top of the ridge southeast of KOP 4, looking southeast upslope where all proposed routes continue in a VRM Class III area (**Photo 5, Appendix A**). The foreground consists of a narrow, curving unnamed dirt road. The middle ground slopes gently upward and the background is comprised of a low, flat ridgeline. The ridgeline creates a strong horizontal line at the horizon. Vegetation is stippled but uniform including greens, grays, and browns. Textures are rough and broken, while the texture of the unnamed road is smooth to stippled.

3.4.8 Wildlife Including Migratory Birds and Sensitive Species

3.4.8.1 General Wildlife Species

The Project Area supports low to medium densities of small mammals, birds, and reptiles. Wildlife found in the area include: mule deer (*Odocoileus hemionus*), kangaroo rat (*Dipodomys deserti*), black-tailed jackrabbit (*Lepus californicus*), coyotes (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), other small mammals, Gambel's quail (*Callipepla gambelii*), common raven (*Corvus corax*), and various snakes and lizards. The Project Area provides yearlong and summer mule deer habitat (BLM 2008a).

3.4.8.2 Migratory Birds

A number of migratory bird species use the Project Area yearlong or for a portion of the year. Nesting by these species generally occurs in the spring and summer (approximately April 1 to August 31). The Project Area also provides winter habitat for birds that breed farther north. During spring months when nesting migratory birds have returned to the hot, dry climate of the Mojave Desert and Mojave/Great Basin Transition Zones, vegetation and structures near water sources provide ideal nesting opportunities. Large canyon walls, rock faces, boulders, and cut banks are also present in the general area and could provide nesting opportunities for some migratory bird species.

Migratory birds that are found in the Project Area are too numerous to list here; however, the USFWS Birds of Conservation Concern that occur in the Project Area are prairie falcon (*Falco mexicanus*), Costa's hummingbird (*Calypte costae*), gray vireo (*Vireo vicinior*), juniper titmouse (*Baeolophus ridgwayi*), Brewer's sparrow (*Spizella breweri*), black-chinned sparrow (*Spizella atrogularis*), and Cassin's finch (*Carpodacus cassinii*).

3.4.8.3 BLM Sensitive Species

Sensitive species are usually rare within at least a portion of their range. Many are protected under certain state and/or federal laws. Species designated as sensitive by the BLM must be native species found on BLM-administered lands for which the BLM has the capability to significantly affect the conservation status of the species through management, and either:

1. There is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range; or
2. The species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk."

All federally-designated candidate species, proposed species, and delisted species in the 5 years following delisting are included as BLM sensitive species. No sensitive amphibians, fish, or invertebrates are expected to occur within the Project Area. The Project Area is not known to contain any mine adits or caves (roosting habitat for bats) or water sources (foraging areas for bats); however, any of the sensitive bats could potentially fly through the Project Area, including Allen's big-eared bat (*Idionycteris phyllotis*), Arizona myotis (*Myotis occultus*), cave myotis (*Myotis velifer*), spotted bat (*Euderma maculatum*), and Townsend's big-eared bat (*Corynorhinus townsendii*), and crevices on cliff faces in the Project Area can provide roosting habitat for some species (e.g., spotted bats and Allen's big-eared bats). Additionally, there are three livestock reservoirs near the top of Seegmiller Mountain close to the proposed power line route which also provide water for wildlife. One is at the bottom of Seep Spring Canyon and lies directly in the path of the proposed power line route. Six sensitive bird species have the potential to occur in the Project Area: bald eagle (*Haliaeetus leucocephalus*), pinyon jay (*Gymnorhinus cyanocephalus*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), western burrowing owl (*Speotyto cunicularia*), and American peregrine falcon (*Falco peregrinus*). A large pinyon jay flock occurs on Seegmiller Mountain and there is potential for a nesting colony, although one has not yet been located (Langston 4/13/2015).

Wildlife biologists for the BLM have located golden eagle and peregrine falcon nests in the general vicinity of the Project Area. The peregrine falcon nest (located approximately one mile from the Seegmiller Mountain Communications Site) has been occupied for at least three years, 2012 through 2014, with at least two fledglings observed in 2013 (personal communication, Shawn Langston, BLM Wildlife Biologist, in email to Eric Holt, Stantec Consulting Services, July 7, 2014). The golden eagle nest (located approximately three miles from the communications site) had at least one nestling on April 14, 2014, but it was not confirmed that the nestling fledged (ibid.).

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This chapter describes the potential environmental consequences to the affected environment described in Chapter 3 from implementing the Proposed Action, either action alternative, or the No Action alternative, as described in Chapter 2. Environmental consequences are described using the terms “effect” and “impact,” which are synonymous under NEPA. Impacts are defined as modifications to the existing condition of the environment and/or probable future condition that would be brought about by implementation of one of the alternatives. Impacts may be direct, indirect, or cumulative in nature.

- Direct effects occur at the same time and place as the action.
- Indirect effects are reasonable foreseeable effects that occur later in time or are removed in distance from the action.
- Cumulative effects are those impacts to the environment that result from the incremental impacts of an alternative when added to other past, present, and reasonably foreseeable future actions.

NEPA also requires that effects be discussed in terms of context and intensity. In this EA, context refers to the location, type, or size of the area to be affected and intensity refers to the severity or level of magnitude of impact. In this EA, the intensity of effects are defined as Major, Moderate, Minor, or Negligible. In addition, the duration of effects can be temporary, short-term, or long-term. These terms are described more specifically in **Table 8**.

Table 8. Terms Used to Describe the Environmental Effects

| Attribute of Effect | | Description |
|-----------------------|------------|--|
| Magnitude (intensity) | Negligible | No measurable change in current conditions. |
| | Minor | A small, but measurable change in current conditions. |
| | Moderate | A moderate, measurable change in current conditions. |
| | Major | A big, easily measurable change in current conditions. |
| Duration | Temporary | Short-lived (i.e., during construction) |
| | Short-term | 10 years or less |
| | Long-term | More than 10 years |

4.2 Direct and Indirect Impacts

Table 9 displays the amount of disturbance (acres and miles) for each of the action alternatives (Alternatives A, B and C).

Table 9. Disturbance Under Each Action Alternative

| Alternative | Type of Power Line | Linear Miles | Estimated Number of Poles | Temporary Power Line Disturbance (acres) | | Permanent Power Line Disturbance (acres) | Temporary Access Disturbance (Overland Travel) ⁵ | | Permanent Access Disturbance (Road Construction) | | Existing Road Maintenance (miles) |
|-------------|--------------------|--------------|---------------------------|--|------------------|--|---|-------|--|-------|-----------------------------------|
| | | | | Poles | Pulling Stations | | Miles | Acres | Miles | Acres | |
| A | Overhead | 15.3 | 233 | 27.96 ¹ | 1.80 | 0.27 ² | 5.5 | 20.00 | 0.1 | 0.30 | 1.1 |
| B | Overhead | 15.0 | 228 | 27.36 ¹ | | 0.26 ² | 8.1 | 29.45 | 0.1 | 0.30 | 3.2 |
| C | Total ⁴ | 15.0 | 186 | 34.92 ³ | | 3.37 ³ | 8.6 | 31.27 | 0.1 | 0.30 | 3.2 |
| C | Overhead | 12.4 | 186 | 22.32 ¹ | | 0.22 ² | 6.0 | 21.81 | 0.1 | 0.30 | 3.2 |
| C | Underground | 2.6 | N/A | 12.60 ⁴ | | 3.15 ⁴ | 2.6 | 9.45 | N/A | N/A | N/A |

¹ Temporary disturbance consists of a 50 foot by 100 foot area or 0.12-acre per pole, and was calculated by multiplying 0.12 acre by the number of poles.

² Permanent disturbance was calculated for overhead lines by adding the footprint of tangent poles (16 sq. ft. each) and the angle-guyed poles (216 sq. ft. each).

³ This is the total disturbance for Alternative C, which would consist of overhead and underground section disturbance.

⁴ Alternative C underground temporary disturbance assumes a 40-foot wide portion of the ROW would be temporarily disturbed. Alternative C underground permanent disturbance assumes a 10-foot wide portion of the ROW would be permanently disturbed where the conductor would be buried.

⁵ Access disturbance, the majority of which would be overland travel, is an estimate based on a maximum width of 30 feet.

4.2.1 Air Resources

4.2.1.1 Impacts of Alternative A – Proposed Action

4.2.1.1.1 Greenhouse Gas Emissions

By comparison with the current condition (**Table 3**) of powering the communication site using a diesel generator, the Environmental Protection Agency (EPA; USEPA 2008) has estimated regional GHG emission factors per megawatt hour of electricity generated off the grid for Arizona and New Mexico. Using the EPA emission factors for 150 kW continuous use, slightly more than the current use of 140 KW, yields annual emissions of 827 tons CO_{2E}, which is about two-thirds of current emissions. Assuming one maintenance truck trip per month for inspections and maintenance would add approximately 0.39 tons per year of CO_{2E}. Thus, the Proposed Action would reduce GHG emissions by approximately 426.61 tons per year of CO_{2E}.

4.2.1.1.2 Air Quality

Minor short-term impacts from fugitive dust may occur from construction traffic and construction activities. Temporary impacts would be minimized through EPMs/Design Features identified in **Section 2.1.6** including watering soil as needed to minimize fugitive dust. The Project would not affect the National Ambient Air Quality Standards as set by the Environmental Protection Agency. In the long term, there would be less vehicle traffic to the Seegmiller Mountain Communications Site; therefore there would be less fugitive dust.

4.2.1.2 Impacts of Alternative B – Modified Proposed Action

4.2.1.2.1 Greenhouse Gas Emissions

Impacts under this alternative would be the same as those described for Alternative A.

4.2.1.2.2 Air Quality

There would be additional air quality impacts under Alternative B as a result of potentially 2.6 miles more (Table 9) temporary access disturbance that would create more fugitive dust than Alternative A. However, this would be a temporary impact during construction. Long-term impacts under this alternative would be the same as those described for Alternative A.

4.2.1.3 Impacts of Alternative C – Modified Proposed Action

4.2.1.3.1 Greenhouse Gas Emissions

Impacts under this alternative would be the same as those described for Alternative A.

4.2.1.3.2 Air Quality

There would be additional air quality impacts under Alternative C, in comparison to both Alternatives A and B, as a result of trenching for the 2.6 miles of underground power line and more access improvement that would increase fugitive dust; this would be a temporary impact (**Table 9**) during construction. Long-term impacts under this alternative would be the same as those described for Alternative A.

4.2.1.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications site would continue to be powered by diesel generators, with trucks used to supply diesel and reach the site for repair.

4.2.1.4.1 Greenhouse Gas Emissions

Emissions of GHGs from the burning of diesel fuel in the generators, vehicles delivering fuel, and trucks associated with maintenance of the generators would continue at levels presented in **Table 3**.

4.2.1.4.1 Air Quality

Fugitive dust would continue to be generated by trucks routinely traveling on dirt roads to reach the Seegmiller Mountain Communications Site. There would be no reduction in fugitive dust impacts under the No Action alternative as vehicle traffic to the Communications Site would remain at current levels and not be reduced. There would be no short-term impacts (i.e., generation of fugitive dust) from construction activities.

4.2.2 Cultural Resources

The results of the cultural resource inventory indicate both prehistoric and historic use of the area. A total of 12 cultural resources sites are within the APE (**Table 10**); three of these, all previously recorded prehistoric lithic scatters, are recommended eligible for the NRHP.

Table 10. Cultural Resource Sites within the APE

| Site Number | Site Type | NRHP Eligibility | Alt. A | Alt. B | Alt. C | Recommendation |
|---|--|------------------|--------|--------|--------|--|
| NA 11411 / AZ A:2:1(MNA) / AZ A:2:62(ASM) | Prehistoric Open Lithic Scatter | Eligible | X | | | Monitoring and/or Treatment Plan |
| AZ A:2:38(ASM) | Prehistoric Open Lithic Scatter / Source | Eligible | X | X | X | Avoid by Project Design (i.e., spanning); Monitoring |
| AZ A:2:64(ASM) | Prehistoric Open Lithic Scatter / Source | Eligible | | X | X | Avoid by Project Design (i.e., spanning); Monitoring |
| AZ A:2:86(ASM) | Prehistoric Open Lithic Scatter & Historic Survey Marker | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:87(ASM) | Historic Can Scatter | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:88(ASM) | Prehistoric Open Lithic Scatter | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:89(ASM) | Historic Can Scatter | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:90(ASM) | Historic Can Scatter | Not Eligible | | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:91(ASM) | Historic Campsite & Prehistoric Isolated Find | Not Eligible | | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:92(ASM) | Historic Trash Scatter & Retaining Wall | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:2:93(ASM) | Historic Can Scatter | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |
| AZ A:3:61(ASM) | Prehistoric Open Lithic Scatter | Not Eligible | X | X | X | Avoid by Project Design (i.e., spanning) |

4.2.2.1 Impacts of Alternative A – Proposed Action

As noted in **Table 10**, two of the NRHP-eligible cultural sites would be traversed by the Project. There would be 216 square feet of disturbance around an angle-guyed pole within site AZ A:2:1(MNA)/AZ A:2:62(ASM), therefore requiring consultation and an agency-approved (i.e., BLM, Tribal, and State Historic Preservation Office) Treatment and Monitoring Plan. To ensure there are no inadvertent impacts to sites AZ A:2:1(MNA)/AZ A:2:62(ASM) and AZ A:2:38(ASM) during construction, these sites would be monitored by a qualified archeologist during

construction. If any future operation/maintenance activities would include additional ground disturbance in the vicinity of these sites, additional monitoring may be required by the BLM. All other sites along this route would also be avoided by Project design.

As presented in **Section 2.1.6.6**, in the unlikely event that additional archaeological remains are encountered during project construction or operations, all ground disturbing activities in the immediate vicinity should cease and the BLM authorized officer would be contacted immediately to evaluate the find.

4.2.2.2 Impacts of Alternative B – Modified Proposed Action

As noted in **Table 10**, 11 cultural resource sites are located along the proposed Alternative B route. Two of these (AZ A:2:64(ASM) and AZ A:2:38(ASM)) are NRHP-eligible. Site AZ A:2:64(ASM) is located adjacent but outside of the route; site AZ A:2:38(ASM) is traversed but would be spanned. Thus, both sites could be avoided by project design (i.e., span the site or place poles in previously disturbed areas along the existing roads adjacent to the sites) and both would be monitoring during construction activities. If future operation/maintenance activities would include ground disturbance in the vicinity of either of these sites, additional monitoring may be required by BLM. All other sites along this route would also be avoided by project design.

4.2.2.3 Impacts of Alternative C – Partial Burial

Under this alternative, neither of the two eligible sites (AZ A:2:64(ASM) and AZ A:2:38(ASM)) would be impacted by the buried portion of the proposed power line. These sites would therefore be avoided by project design, and would also be monitored by a qualified archaeologist during all construction activities. If future operation/maintenance activities would include ground disturbance in the vicinity of either of these sites, additional monitoring may be required by BLM. All other sites along the proposed power line route would also be avoided by project design.

4.2.2.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications site would continue to be powered by diesel generators, with trucks used to supply diesel fuel and reach the site for repair. Because there would be no disturbance or change in conditions under the No Action Alternative, there would be no impacts to cultural resources.

4.2.3 Lands/Realty

4.2.3.1 Impacts of Alternative A – Proposed Action

The proposed power line would provide electric service to the designated multi-user Seegmiller Mountain Communications Site which is the only site allowed for commercial broadcasting with transmitter power levels above 1,000 watts effective radiated power. Co-location and subleasing at the existing sites is encouraged and preferred by BLM (RMP 2008a). Additional ROWs may be granted and upgrades to existing facilities may be authorized. It is important to have reliable power to ensure emergency broadcasting services are available at all times. The proposed power line would become a much more reliable primary power source to the site with diesel generators only being used as a backup. Therefore, the Proposed Action would benefit existing and future ROW holders and emergency services at the Communications Site.

4.2.3.2 Impacts of Alternative B – Modified Proposed Action

Impacts would be the same as described under Alternative A.

4.2.3.3 Impacts of Alternative C – Partial Burial

Impacts would be the same as described under Alternative A.

4.2.3.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications Site would continue to be powered by diesel generators, with trucks used to supply diesel fuel and reach the site for repair.

Selection of the No Action Alternative would not meet Dixie's purpose and need of the Project to construct a power line to provide long-term dependable power to the Seegmiller Mountain Communications Site. Emergency communications services provided by the various media stations at the communications site would continue to be powered by diesel generators and subject to breakdowns and intermittent inaccessibility (i.e., wild fires).

4.2.4 Soils

4.2.4.1 Impacts of Alternative A – Proposed Action

Approximately 27.966 acres of soil would temporarily be disturbed with construction of the proposed power line. All power line construction activity would be within this ROW. Road construction permanently disturbing 0.30-acre would include blading (i.e., scraping off topsoil and removing vegetation). Overland travel disturbing approximately 20 acres may include pushing rocks out of the way and/or making wash crossing passable to construction equipment. During construction, some soil would be disturbed and possibly lost from the site due to wind and water erosion. Slopes would be kept to a reasonable grade (<20%) to avoid water erosion. EPMs/Design Features described in **Section 2.1.6** would be implemented to reduce impacts to soils as a result of construction, operation and maintenance of the Proposed Action. This includes minimizing vegetation removal and revegetation as part of the reclamation following construction. Temporary disturbances associated with the Project would be seeded with a BLM-approved seed mix. Since there would be no substantial loss or degradation of the soil resources, impacts on soils would be short-term and negligible.

Permanent disturbance totaling 0.57-acre includes 0.30-acre for an access road and 0.27-acre at pole locations. This represents a long-term negligible impact to soils.

4.2.4.2 Impacts of Alternative B – Modified Proposed Action

As described in Chapter 2, the power line under this alternative would be routed along the existing Navajo-McCullough transmission line utility corridor to Mokaac Wash, where it would turn south and generally follow the existing unimproved dirt road through the wash and eventually meet Quail Hill Road in GSRM, T. 40 N., R. 12 W., sec. 2. From there, it essentially follows the Proposed Action route, although it would be offset by between approximately 125-600 feet to the east of (and parallel to) Quail Hill Road, before turning southeast up onto Seegmiller Mountain in the same location as the Proposed Action route. All other aspects of Alternative B would be the same as for the Proposed Action (i.e., construction, operation, maintenance, EPMs).

Because Alternative B would be 0.30-mile shorter than Alternative A – the Proposed Action, the number of poles required would be slightly less, and as a result, this alternative would produce slightly less disturbance to soils from the construction of the power line (**Table 9**). However, Alternative B would require 2.6 miles more temporary access disturbance along Mokaac Wash, resulting in approximately 9.5 acres more disturbance than under the Proposed Action, although much of this 9.5 acres would not have any disturbance at all because it would be via overland

travel and no blading would occur. With 0.56-acre of permanent disturbance, long-term impacts to soils would be negligible.

4.2.4.3 Impacts of Alternative C – Partial Burial

Under Alternative C, the power line would follow the same route as Alternative B along the existing Navajo-McCullough transmission line utility corridor as far as Mokaac Wash (**Figure 4**). From there, it would loosely follow the unimproved dirt road south through the wash to Quail Hill Road, as with Alternative B. Impacts for this portion of the Project under Alternative C would be the same as described for Alternative B.

From the point that the Alternative B route joins the Quail Hill Road alignment, the Alternative C route essentially follows the Proposed Action route to the communications facilities on Seegmiller Mountain. The primary difference between Alternative C and the Proposed Action and Alternative B is that 2.6 miles of the power line would be buried under Alternative C (**Figure 4** and **Table 9**). All other aspects of Alternative C would be the same as for the Proposed Action (i.e., construction, operation, maintenance, EPMs).

Alternative C would disturb more acres for the construction of the power line and would require more temporary access disturbance than the Proposed Action along Mokaac Wash. The long-term disturbance under this Alternative would be noticeably greater (3.32 acres) than the other action alternatives because the surface above the buried line would be difficult to revegetate and is considered permanent disturbance. Impacts would be long-term and negligible to minor.

4.2.4.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications Site would continue to be powered by diesel generators, with trucks used to supply diesel fuel and reach the site for repair. There would be no impacts to soils under the No Action alternative as there would be no construction activities.

4.2.5 Threatened, Endangered and Candidate Species

There are approximately 12,822 acres of Designated Critical Habitat for the Gierisch mallow in two units in northern Arizona and southern Utah. From the point where the proposed power line would tie in to an existing line, approximately 3,191 feet (0.60-mile) would be within Unit 2 of the Designated Critical Habitat. The proposed 80-foot wide ROW centered on the line would contain 5.86 acres, a portion of which would be disturbed temporarily during construction, then revegetated during reclamation. The 5.86 acres of disturbance represents 0.05 percent of Designated Critical Habitat. Although the area is within the Designated Critical Habitat polygon for this plant, not all areas within the polygon provide habitat for the species. Because the proposed ROW does not contain suitable habitat for the species, no impacts are expected to Gierisch mallow.

4.2.5.1 Impacts of Alternative B – Modified Proposed Action

Impacts under this alternative would be the same as those described for Alternative A.

4.2.5.2 Impacts of Alternative C – Partial Burial

Impacts under this alternative would be the same as those described for Alternative A.

4.2.5.3 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications Site would continue to be powered by diesel generators, with trucks used to supply diesel fuel and reach the site for repair. There would be no impacts to Gierisch mallow under the No Action alternative as there would be no construction activities.

4.2.6 Vegetation

4.2.6.1 Impacts of Alternative A – Proposed Action

Up to 49.76 acres of vegetation would be directly impacted, and approximately 0.57 acres would be permanently lost due to construction. Access for construction of the Proposed Action route would require 5.6 miles of new access routes. Road construction would include blading (i.e., scraping off topsoil and removing vegetation). Other access (overland travel) would require pushing rocks out of the way and/or making wash crossings passable to construction equipment. This would result in the loss of shrubs, grasses, and forbs through blading, crushing, or trampling.

Reclamation recontouring and seeding of disturbed areas would aid in the re-establishment of vegetation (**Section 2.1.5**). A seed mix, approved by the BLM's Authorized Officer, would be used. The seed mix would be broadcast over disturbed areas. The overall impact to vegetation would be minor when considering the amount of undisturbed similar vegetation is found on BLM-administered lands in the Arizona Strip. Short-term impacts due to construction and access would be minor to moderate; long-term impacts once reclamation and revegetation are established would be negligible to minor.

4.2.6.2 Impacts of Alternative B – Modified Proposed Action

Alternative B would result in about 9 acres more temporary disturbance (**Table 9**) to vegetation for the construction of the power line than the Proposed Action; however, permanent disturbance would be virtually identical to the Proposed Action. Temporary disturbance would be increased as Alternative B would require 2.6 miles more access disturbance and improvement of the existing road along Mokaac Wash. However, much of the temporary access would be overland travel where disturbance to vegetation would consist of pushing rocks out of the way, making wash crossings passable to construction equipment, and crushing/trampling plants by driving over them. Short-term impacts to vegetation due to construction and access would be minor to moderate; long-term impacts once reclamation and revegetation are established would be negligible to minor.

4.2.6.3 Impacts of Alternative C – Partial Burial

Alternative C could result in up to 10 acres more temporary disturbance to vegetation during construction than Alternative B, and approximately 19 acres more than the Proposed Action although it is likely that not all these acres would have vegetative mortality. It should also be noted that crushed vegetation would respond and recover quickly as long as the plants are not killed. Alternative C would result in more long-term disturbance (3.32 acres) to vegetation as 2.6 miles of trenching would occur for the buried portion of the line, but the route would revegetative over time. It would also require more access than the Proposed Action along the Mokaac Wash. Short-term impacts to vegetation due to construction would be minor to moderate; long-term impacts once reclamation and revegetation are established would be minor.

4.2.6.3 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications Site would continue to be powered by diesel generators, with trucks used to supply diesel fuel and reach the site for repair. There would be no impacts to vegetation under the No Action alternative as there would be no construction activities.

4.2.7 Visual Resources

4.2.7.1 Impacts of Alternative A – Proposed Action

Construction-related impacts to visual resources would be short-term reductions in scenic quality from construction-related surface disturbances, vegetation removal along the ROW, construction vehicles, construction equipment, and dust resulting from construction activity. The form, line, color, and texture of the Proposed Action would contrast with the existing visual characteristics of the landscape. Topsoil shallowly covers gravel and larger rock layers, which would be exposed when access routes and pole sites are bladed to remove vegetation and level the surface for access and equipment operation. Subsurface materials are a different color and texture than surface materials, and as a result, exposure of these subsurface materials would contrast with the surrounding weathered materials and vegetation. Following construction, disturbed areas would be reseeded and become less visible over time as vegetation becomes established, matures, and blends with the surrounding landscape. Despite reclamation, ground disturbance may be noticeable for the life of the Project due to the arid climate. **Appendix A** contains pictures of the visual impact of similar subsurface disturbance.

Impacts to the viewshed in the Project Area depend on the proximity of the viewer to the Project components or disturbance, landscape contrast, and proximity of the distribution line to roads or scenic features in areas that attract the attention of the casual observer. In areas where the ROW would be visible from a road or where a road would intersect the ROW, the more prominent the Project activities and impacts would be to the casual observer; therefore, viewshed impacts would be more adverse. In areas where the ROW would be further from a road, viewshed impacts would be less adverse.

The open landscape is characterized by expansive views, some visually attractive scenery, and strong horizontal, vertical, and diagonal elements. Beginning at the point where the proposed power line would connect at the tie-in point, the power line would parallel (but be separated by approximately 120 feet) the existing Navajo-McCullough transmission line and an existing native dirt/gravel surface road. Casual observers would be traveling along this road parallel to the Project (as well as the existing Navajo-McCullough transmission line). This portion of the proposed power line would repeat the vertical and horizontal linear elements of both the existing transmission line and the existing road. The proposed power line would duplicate these existing human modifications to the environment and would be a minor change from, or addition to, the existing condition. This portion of the Project Area would meet the VRM Class IV objectives established for the area, which allow for major modification to the existing character of the landscape. In keeping with VRM Class IV objectives (to minimize the impact of activities, even in this VRM class), the following design features have been incorporated into the Proposed Action:

- The Project would use dark wood poles and non-reflective wire that would blend and reduce contrast with the natural surroundings.
- Ground disturbance from all activities including overland travel would be minimized to the extent possible. Assuming most casual observers would be traveling existing routes, overland travel and new access routes would parallel to existing routes to the extent practicable to reduce visibility.
- Revegetation of disturbance areas would help reduce the appearance of contrast with the surrounding sparsely vegetated natural environment.

In the vicinity of KOPs 2, 3, and 4 where the power line would follow the Quail Hill Road alignment and cross the road at various points, the power line ROW would be within VRM Class III. Observers would be traveling along the road with Project components alternately on either

side of the road and sometimes crossing the road above the viewers. In relatively close proximity to the road, the vertical wood power poles, ranging from 30 to 40 feet in height would bisect the strong line at the horizon and be noticeable particularly where the poles are viewed with the sky behind them. The power line structures would create moderate form and line contrasts with the surrounding landscape by adding vertical wood power poles on relatively flat to hilly landscape. The contrast between the power poles and the rolling topography and varied color and texture of shrubland would have a moderate degree of contrast and would tend to change the existing character of the landscape in the immediate vicinity of the power line. The power line would be noticeable for about 10 minutes because of the contrast with the strong horizontal lines in the relatively undeveloped surroundings. Because of the overall moderate degree of contrast which would draw the attention of the casual observer, the Project would not meet the Class III objectives in this area.

In the vicinity of KOP 4, the power line route would travel southeasterly up the ridge through VRM Class II, entering VRM Class III where the line would disappear from sight at the top of the ridge near KOP 5 (**Figure 5**). The power line would follow the same contours up the ridge, thus the line formed from the Proposed Action would be similar to the existing lines along the ridge. Casual observers may notice the addition of vertical form and lines from the Proposed Action. However, because the wooden poles would be a similar color to the surrounding landform and may not be skylined from the viewer's perspective, the poles should blend with the landscape and would not attract attention of the casual observer. In addition, the power line route would be moving away from viewers on the road, growing smaller in the context of the open landscape (similar to the simulation provided in **Appendix A**). At the top of the ridge where the VRM Class transitions from II to III, the structures would be distant from the viewers at KOP 4, appearing relatively small and barely noticeable, and may or may not be skylined depending on the perspective of the observer. Travelers along Quail Hill Road would be impacted from the view of the Proposed Action in this area as they travel by, but only for a very short period of time (a few minutes depending on driving speed). Additionally, the landscape's ability to absorb the disturbance with varied elevations and distances from Quail Hill Road reduces the visual effect.

A sample simulation contained in **Appendix A** demonstrates the minimal effect the Project components would have on the view in the vicinity of KOP 4; however, the simulation does not include ground disturbance for access or clearing at pole sites. Two poles would be located along the top of the ridge and one that would be located near the base of the ridge within VRM Class II. Ground disturbance (resulting in damaged vegetation and different colored and textured exposed earth) along access routes to the poles immediately offset from the road would be parallel to the line of view from KOP 4. In addition, the permanent road at the top of the ridge viewed from KOP 4 would be a fixture in the viewshed. Disturbance associated with routes and the permanent road would appear as thin, horizontal lines (with contrasting color) in the landscape that may be noticeable but would not attract attention. Because the ground disturbance would be visually minimized from KOP 4 and the power line components would blend with the surrounding landscape, the Project would meet VRM Class II objectives as viewed from KOP 4. As the vegetation matures and the newly exposed materials weather, this disturbance would become less noticeable over time; the scar may always be visible but with time would not always be as noticeable and long term visual impacts would be weak.

The objective of VRM Class II areas (**Figure 5** - located on the east side of Quail Hill Road, where the power line climbs the ridge), is to retain the existing character of the landscape, with the level of change to the characteristic landscape being low. While a new power line would be introduced into some VRM Class II areas, the impacts to the visual landscape in the VRM Class II area as viewed by casual observers from KOP 4 would be minor.

From KOP 5, the power line route would traverse the rolling hills and may not be visible behind the higher hill in the middle ground. In relatively close proximity to the two-track, the vertical wood power poles would bisect the strong line at the horizon and be noticeable particularly where the poles are viewed with the sky behind them. The power line structures would create moderate form and line contrasts with the surrounding landscape by adding vertical wood power poles on the hilly landscape. The contrast between the power poles and the rolling topography and varied color and texture of shrubland would have a moderate degree of contrast and would tend to change the existing character of the landscape, but only in the immediate vicinity of the power line. However, the open nature of the landscape, and the relatively small size of the power line infrastructure would allow the power line to practically disappear in the distance; it would only be noticeable in the fore- to middle ground. The power line would be noticeable because of the contrast with the strong horizontal lines in the relatively undeveloped surroundings. In the short term, disturbance from the construction access route would result in damaged vegetation and different colored and textured exposed earth, appearing as a thin, undulating ribbon, would moderately contrast with the surrounding natural scenery. Because of the overall moderate degree of contrast, the Project would meet the Class III objectives in this area.

Long-term visual impacts would mostly be related to the power line itself and would be minor to moderate. Vegetation damaged by overland construction access would recover, and exposed earth would revegetate. Access routes would become thus less noticeable over time; the scar may always be visible but with time would not be as noticeable. In VRM Class III areas, the Proposed Action would not exceed the objective of moderate change and partial retention of the characteristic landscape (**Appendix A**, Visual Contrast Rating Worksheets). These impacts to the elements of line, form, texture, and color would be minor to moderate. However, travelers along Quail Hill Road (area with the most viewers) would see the poles and notice the power line for about 10 minutes as they drive by or under the line and it would draw the attention of those casual observers, therefore, not meeting this objective of VRM Class III.

4.2.7.2 Impacts of Alternative B – Modified Proposed Action

As described previously, the power line under this alternative would be routed along the existing Navajo-McCullough transmission line utility corridor to Mokaac Wash (KOP 1), resulting in the same impacts to visual resources in this section of the proposed power line as those described for Alternative A.

At KOP 1, the proposed power line would turn south and generally follow the existing unimproved dirt road through Mokaac Wash. At KOP 1, observers looking south would be looking down the ROW, in VRM Classes IV and II, until the power line becomes obscured by low hills. The power line would basically follow an existing road, so there would not be much additional disturbance for an observer to notice other than the power line itself. Looking south, the vertical elements of the poles nearest the road (and thus the viewers) would contrast with the strong horizontal lines at the skyline, and the poles would be viewed with the sky behind them. The brown color of the wooden poles would blend with the dark brown colors and natural textures in the middle ground and background of the landscape such that where the power line is within VRM Class II, the poles would blend with the natural landscape, and because of distance, would no longer contrast with the strong horizontal lines in the background. In addition, the scale and interesting nature of the view from KOP 1 is such that the proposed power line would be somewhat absorbed by the landscape and the portion of the power line in VRM Class II, as viewed from KOP 1, would not be noticeable to the casual observer or attract attention.

From KOP 1, the proposed power line would be within both VRM Class IV and II areas. Reviewing the viewshed analysis contained in **Appendix A**, between KOP 1 and KOP 3, the power line would only be intermittently visible, at most, from Quail Hill Road. Travelers on the road may catch intermittent glimpses of the power line crossing VRM Class II in the distance; however, views would be brief as travelers would be moving at speeds appropriate for an improved gravel road. While travelers along Quail Hill Road between KOPs 1 and 3 viewing the Project to the west would catch glimpses of the power line infrastructure, they would not likely see the access route disturbance because it would be parallel to Quail Hill Road, be obscured by vegetation, and have minimal disturbance to vegetation due to vehicles traveling overland (versus construction of new roads).

At KOP 3, looking north, casual observers would see the proposed power line route coming from the west to join the Quail Hill Road alignment. Southbound travelers would only catch a glimpse of the route in VRM Class II, while northbound travelers would have a more extended view, looking up the access route to the northwest. While views from KOP 3 contain strong horizontal elements, particularly where the distant cliff line meets the sky, the vertical elements of the poles would not contrast with the horizontal skyline until the poles come in close proximity to the road. Middle ground views (of VRM Class II areas) would not have this contrast as distance would diminish the size of the poles in comparison to the cliffs in the distance. The brown color of the poles would blend with the natural earth tones in the view. The power line components nearest the road in VRM Class II would attract attention, but the diminishing nature of the power line in the scenery would not attract attention of the casual observer in the VRM Class II areas similar to middle ground views described above.

The remainder of the proposed power line following Quail Hill Road would be offset by between approximately 125-600 feet to the east of (and parallel to) Quail Hill Road, before turning southeast up onto Seegmiller Mountain in the same location as the Proposed Action route. As the power line would be slightly offset from the Quail Hill Road alignment, it would be slightly less noticeable than under the Proposed Action, where the power line route would more closely follow the road and be in closer proximity. The poles would be further away from casual observers on Quail Hill Road, and thus appear smaller, and would blend better with the surrounding landscape. Access route disturbance from Quail Hill Road over to individual pole locations may be visible as the routes would be perpendicular to Quail Hill Road; however, observers would only see them for a few seconds as the view would pass quickly while driving down the road, and they would not provide a great degree of contrast because they would primarily involve overland travel with no route construction (i.e., no removal of vegetation).

Impacts on visual resources for the remainder of the Project would be the same as those described for the Alternative A.

Under Alternative B the line traverses from VRM Class IV into a VRM Class II area (Mokaac Wash area). The power line would add line, form, color, and texture elements. Placing the power line in Mokaac Wash rather than along Quail Hill Road would make the line less visible in the landscape to most observers, since Quail Hill Road is the main access to the area. Alternative B would also place 2.89 fewer miles of power line adjacent Quail Hill Road.

4.2.7.3 Impacts of Alternative C – Partial Burial

Under Alternative C the trenching associated with burying the line would leave a noticeable scar on the landscape, creating a linear parallel and diagonal feature. Given the shallow soils, rock substrate, and presence of large rocks on the surface in this area (**Photos 6 and 7**), the scar would be of a different color than adjacent areas, would contain large rocks, and may be difficult

to revegetate, even if seeded, and would be a long-term visual impact (**Photo 8**) in areas where the route would be visible to travelers along Quail Hill Road (see rough simulations in **Appendix A**). This scarring would create greater and longer lasting contrast with the surrounding scenery than that described for construction-related disturbance under the Proposed Action. Additional anchor poles and/or guy wires would be required at the beginning and ending points of the buried sections, which would be close to Quail Hill Road making those points more visible. Placing the power line in Mokaac Wash rather than along Quail Hill Road would make the line less visible in the landscape to most observers, since Quail Hill Road is the main access to the area. Impacts would be the same as impacts to VRM Class II areas under the Proposed Action. Scraping off, retaining, and respreading topsoil over the disturbed area may help decrease scar visibility and aid revegetation. Alternative C would eliminate overhead power lines adjacent to Quail Hill Road (5.46 miles), but the scar from the buried portion of the line would remain visible and additional anchor poles/guy wires would be more visible than the single poles. Overall, Alternative C would have similar long-term impacts as the Proposed Action. However, Alternative C would have a long-term, reduced impact on casual observers.

4.2.7.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed. There would be no impacts to visual resources under the No Action alternative as there would be no new disturbance resulting from construction activities and no new infrastructure present. Continuing fuel truck/generator maintenance traffic would have no visual effects.

4.2.8 Wildlife, Including Migratory Birds and Sensitive Species

4.2.8.1 Impacts of Alternative A – Proposed Action

4.2.8.1.1 General Wildlife Species

The Proposed Action would have direct impacts to some small, less mobile individuals as they could be forced to disperse from the area or may be killed or injured during construction activities. Wildlife in the area would likely be displaced temporarily from active construction areas into adjacent undisturbed habitat. Populations on the whole would not be affected.

The long-term (0.57-acre) and short-term (49.76 acres) loss of vegetation would eliminate habitat, forage, and thermal coverage. Given the large areas of undisturbed habitat in the surrounding areas, these impacts would be negligible to minor. Disturbance-related impacts would last only as long as construction activities are being conducted or until successful reclamation and revegetation of the disturbed areas has occurred.

Efforts would be made to avoid shrubs and trees that provide important habitat for deer, birds, and other animals. EPMs/Design Features listed in **Section 2.1.6.3** would be implemented and followed in order to minimize impacts to wildlife. The length of time for successful revegetation might be slightly impacted by grazing effects from wildlife and livestock in the area.

Implementation of the Proposed Action could impact wildlife through elimination of the noise associated with the generators, thus potentially making the area available to species or individuals that may otherwise avoid the area because of the noise. This alternative would also impact wildlife by reducing the potential for wildlife-vehicular collisions by eliminating weekly truck traffic from diesel fuel delivery and generator maintenance.

4.2.8.1.2 Migratory Birds

Potential direct effects to migratory birds would include short-term disturbance related to noise and human presence during construction. Migratory birds would give way to construction equipment to avoid being killed or injured. EPMs/Design Features (**Section 2.1.6.3**) would

minimize potential effects by avoiding construction during the nesting season. Given the size of the Project Area in comparison to the amount of adjacent similar and suitable habitat, it is likely that migratory birds would make way for construction equipment. In addition, Dixie Power's Avian Protection Plan (Dixie 2007) would be followed in the design, operation and maintenance of the line; as a distribution line (**Figure 2**) the conductors would be spaced to preclude the potential for electrocution of migratory birds, although some risk of collisions with the conductors would still exist. The Avian Protection Plan also follows USFWS guidelines for dealing with problem nests. The vast majority of the line would be built with single arm construction which based on past experience is not conducive to nest building. Therefore, potential direct impacts to migratory birds would be short- and long-term, and negligible to minor.

4.2.8.1.3 Sensitive Species

Construction would not impact any caves, mine adits, or cliffs and impacts to sensitive bats would thus be limited to possible avoidance of the area; however, construction is planned during daylight hours when bats are least active. Potential impacts to sensitive birds would be as described above for migratory birds. There would be a total of 49.76 acres of habitat disturbed in the short-term (10 years or less) and 0.57 acres permanently lost. These impacts would be negligible to minor. The Project may impact individual sensitive wildlife species or their habitat but is not likely to cause a trend toward federal listing or to reduce viability for any population or species. No impacts to nesting peregrine falcons or eagles are anticipated because known nest sites for these species are located greater than one mile away from any project location.

4.2.8.2 Impacts of Alternative B – Modified Proposed Action

4.2.8.2.1 General Wildlife Species

Other than a minor difference in habitat loss (potentially up to 9 acres more temporary disturbance than the Proposed Action resulting from 2.6 miles more overland travel access and <0.1-acre less permanent disturbance), impacts under Alternative B would be the same as those described for Alternative A.

4.2.8.2.2 Migratory Birds

Other than a minor difference in habitat loss (potentially up to 9 acres more temporary disturbance than the Proposed Action resulting from 2.6 miles more overland travel access and <0.1-acre less permanent disturbance), impacts under Alternative B would be the same as those described for Alternative A.

4.2.8.2.3 Sensitive Species

Other than a minor difference in habitat loss (potentially up to 9 acres more temporary disturbance than the Proposed Action resulting from 2.6 miles more overland travel access and <0.1-acre less permanent disturbance), impacts under Alternative B would be the same as those described for Alternative A.

4.2.8.3 Impacts of Alternative C – Partial Burial

4.2.8.3.1 General Wildlife Species

Other than a minor difference in habitat loss (approximately 10 acres more temporary disturbance than Alternative B and 19 more acres than the Proposed Action; approximately three acres more permanent pole disturbance, and up to 3.1 miles more overland travel access disturbance), impacts under Alternative C would be the same as those described for Alternative A.

4.2.8.3.2 Migratory Birds

Other than a minor difference in habitat loss (approximately 10 acres more temporary disturbance than Alternative B and 19 more acres than the Proposed Action; approximately

three acres more permanent pole disturbance, and up to 3.1 miles more overland travel access disturbance), impacts under Alternative C would be the same as those described for Alternative A. However, there would be less risk of collisions between migratory birds or raptors with the power line since there would be fewer poles, and more temporary loss of vegetation associated with burying the line.

4.2.8.3.3 Sensitive Species

Other than a minor difference in habitat loss (approximately 10 acres more temporary disturbance than Alternative B and 19 more acres than the Proposed Action; approximately three acres more permanent pole disturbance, and up to 3.1 miles more overland travel access disturbance), impacts under Alternative C would be the same as those described for Alternative A.

4.2.8.4 Impacts of Alternative D – No Action

Under the No Action Alternative the power line would not be constructed and the Seegmiller Mountain Communications Site would continue to be powered by a diesel generator, with trucks used to supply diesel fuel and reach the site for repair. Under the No Action alternative, there would be no change in existing operations, thus no new impacts to wildlife, migratory birds, or sensitive species as there would be no new disturbance resulting from construction activities; and no new infrastructure present. Noise impacts to wildlife from the generator and associated traffic would continue, as well as potential for vehicle-wildlife collisions from three to five trips weekly to the communication site. However, travel on these (primarily) unimproved dirt roads is not of great speed, so most wildlife would be able to avoid collisions with vehicles.

4.3 Mitigation Measures

Following are mitigation measures, in addition to the EPMs/Design Features identified in **Section 2.1.6**, and standard terms and conditions/stipulations for rights-of-way in the Arizona Strip District that have been identified for this Project and would be included in a right-of-way grant.

4.3.1 Archaeology

- Any surface or sub-surface archaeological, historical, or paleontological remains not covered in the Cultural Resource Project Record discovered during preparation or actual work shall be left intact; all work in the area shall stop immediately and the BLM authorized officer (435-688-3323) shall be notified. Commencement of work shall be allowed upon clearance by the BLM authorized officer in consultation with the archaeologist.
- Additional archaeological survey shall be required in the event the proposed project location is changed or additional surface disturbing activities (short access routes requiring dozer/earth work – as yet unidentified in the Plan of Development) are added to the project. Any such survey would have to be completed prior to commencement or continuation of the project.
- If in connection with this work any human remains, funerary objects, sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P. L. 101-601; 104 Stat. 3048; 25 U.S.C. 3001) are discovered, the right-of-way grant holder shall stop operations in the immediate area of the discovery, protect the remains and objects, and immediately notify the BLM authorized officer (435-688-3323). The right-of-way grant holder shall continue to protect the immediate area of the discovery until notified by the BLM authorized officer that use may resume.

4.3.2 Access/Safety

- 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.
- 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.
- The right-of-way grant holder shall evenly spread excess soil excavated from pole holes within the right-of-way and in the immediate vicinity of the pole structure.
- The right-of-way grant holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful purposes except for those specific areas designated as restricted by the BLM authorized officer to protect the public, wildlife, livestock, or facilities constructed within the right-of-way.

4.3.3 Noxious/Invasive Weeds

- To reduce the potential for the spread of noxious and invasive weeds from vehicles and equipment contaminated with weed seed and/or biomass, the right-of-way grant holder will thoroughly power wash and remove all vegetative material and soil before transporting vehicles/equipment to the work site. This includes trucks, trailers, and all other machinery. In addition, the right-of-way grant holder is responsible for the eradication of noxious weeds within the right-of-way area throughout the term of the right-of-way. The right-of-way grant holder is responsible for consultation with the BLM authorized officer and local authorities for implementing acceptable weed treatment methods. Any use of chemical treatments will be made using only chemicals approved in the *Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (June 2007b), by a state certified applicator who will abide by all safety and application guidelines as listed on the product label and Material Safety Data Sheet. Any reclamation efforts requiring seeding will be done with certified, weed-free seed, using a seed mix approved by the BLM authorized officer.
- Use of herbicides shall comply with the applicable Federal and state laws. Herbicides 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 herbicides, the right-of-way grant holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, weed(s) to be controlled, method of application, location of storage and mixing areas, method of cleansing and disposing of containers, and any other information deemed necessary by the authorized officer. Emergency use of herbicides shall be approved in writing by the authorized officer prior to such use.

4.3.4 Wildlife

- Where California condors visit a worksite while activities are underway, the on-site supervisor must avoid interaction with condors. Authorized activities will be modified, relocated, or delayed if those activities have adverse effects on condors. Authorized activities will cease until the bird leaves on its own or until techniques are employed by permitted personnel that result in the individual condor leaving the area. The holder/permittee is required to notify the Bureau of Land Management wildlife lead (435-688-3373) of this interaction within 24 hours of its occurring. Heavy machinery must not be operated within 0.5 mile of active California condor nests during the nesting season

(February 1 - November 30), or as long as the nest is viable. Information regarding active condor nests can be obtained from the Bureau of Land Management's wildlife team lead at the above number.

4.3.5 Visual

- All above-ground structures not subject to safety requirements or other painting requirements specified by the BLM authorized officer shall be painted by the right-of-way grant holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee as determined by the BLM authorized officer.
- The right-of-way grant holder shall use nonreflecting lines and conductors.
- The right-of-way grant holder shall use gray metal or composite poles at the top of the ridge where pole structure would be skylined to better visually blend with the sky.
- All surface disturbance, including access route construction and associated travel, shall be kept to the minimum necessary to accomplish the task. Construction and reclamation activities shall be designed to minimize long-term impacts to natural lines, form, textures and color contrast. Reclamation methods shall avoid disturbing more area or exposing greater color contrast than resulted from the original operation and shall, to the extent practicable, include contouring disturbances to blend with the surrounding terrain, replacement of topsoil, and smoothing and blending the original surface colors to minimize impacts to visual resources.

4.3.6 Fire Protection/Prevention

- The holder shall be responsible to follow all fire restriction orders. When fire restriction orders are in place, the holder shall obtain an exemption letter from the authorized officer prior to using any welding or metal cutting equipment.
- All flammable material, including dead vegetation, dry grasses, and down trees shall be cleared for a minimum of 10 feet from areas of equipment operation that may generate sparks or flames. If standing dead trees are within the proposed work area, an alternate work area should be selected to eliminate the risk associated with this hazard.
- All internal combustion engines, both stationary and mobile, shall be equipped with approved spark arresters that have been maintained in good working condition. Light trucks and cars with factory-installed mufflers in good condition may be used on roads cleared of all vegetation with no additional equipment required. Vehicles equipped with catalytic converters are potential fire hazards and shall be parked on cleared areas only.
- The holder shall do everything reasonable, both independently and/or upon request of the authorized officer to prevent and suppress fires caused by their activity on or near lands utilized. Compensation may be required of the holder for Federal, state, or private interests in suppression and rehabilitation expenses.

4.3.7 Reclamation

- To facilitate revegetation, the topmost three inches of soil shall be removed in conjunction with surface disturbance and shall be conserved in stockpiles within the right-of-way. After backfilling and recontouring have taken place, the right-of-way grant holder shall uniformly spread the conserved topsoil over all unoccupied disturbed areas. Spreading shall not be done when the ground or topsoil is wet.
- The right-of-way grant holder shall recontour the disturbed area and obliterate all earth work by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

4.4 Cumulative Impacts

“Cumulative impacts” are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions. This EA attempts to qualify and quantify the impacts to the environment that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively important actions taking place over a period of time.

4.4.1 Cumulative Impacts Area

The cumulative impacts analysis area (CIA) is defined as a half-mile buffer on each side of the proposed power line and the action alternatives (**Figure 6**). This CIA includes the area that may be affected by the Project.

4.4.2 Past, Present, and Reasonably Foreseeable Actions

With the exception of a strip of state-owned land along the north, all land in the CIA is public land, administered by the BLM. There are other uses and activities occurring on the lands within the CIA. Specific actions that have occurred, are occurring, or are likely to occur in the reasonably foreseeable future are discussed below.

Mining and Mineral Resources: Public lands within the CIA are open to mineral development. There is a gypsum mine at Black Rock and several known deposits in Mokaac Wash. There is high potential with abundant direct evidence of breccia pipe materials (BLM 2008a). A variety of precious metals, including copper, gold, and silver, are found within breccia pipes. Uranium minerals are also found in breccia pipes. There is also the potential for salable minerals such as sand, stone, and gravel, in the CIA.

Energy Development: The 500 kV Navajo-McCullough transmission line and designated WEC corridor are within the northern portion of the CIA, as well as the existing Dixie Power 12.5 kV line extending from the I-15 Black Rock exit area to the gypsum mine. The 1-mile wide corridor was established by the Arizona Strip Field Office RMP (BLM 2008a). The Renewable Arizona: Restoration Design Energy Project Record of Decision and Approved Resource Management Plan Amendments identified five sites within the Arizona Strip Field Office area with one site, the Mokaac Gravel Pit (T. 41 N., R., 12 W., sec. 23, W1/2SW1/4), being located near the proposed Project Area. This site was identified for potential future solar energy generation which if ever developed may tap into this proposed power line.

Utilities: As noted in **Section 1.2**, the Seegmiller Mountain Communications Site was developed about 20 years ago. Authorized users of the site provide public and private communications services to the St. George and Arizona Strip areas. The current users of the communication site include: Media Advisors LLC, Canyon Media Group, Simmons Media Group, Cherry Creek, Dixie State University, Washington County, Robert W. Cox, and BLM. The current power needs at the largest facility are being met by a 250 kW diesel generator with an available backup generator capable of producing 175 kW. The current demand load is 140 kW. A water pipeline ROW has been granted extending from near Little Black Mountain to the gypsum mine and has not yet been constructed.

Roads: There are numerous roads and two-tracks within the CIA, including BLM Road 1020, Quail Hill Road (BLM 1069), and Seegmiller Mountain Road (BLM 1077). Quail Hill Road is gravel-improved, crowned, and ditched. Other roads have been bladed in the past but are not regularly maintained.

Livestock grazing: The CIA is within active grazing allotments. Each of these allotments is managed under a grazing system that is documented and described in an allotment management plan. Livestock grazing has occurred in the area for over 150 years.

Recreation: Recreation activities occur throughout the CIA and range from casual recreation to organized, BLM-permitted group uses. Typical recreation in the region includes off-highway vehicle (OHV) use, scenic driving, hunting, hiking, wildlife viewing, horseback riding, camping, mountain biking, geocaching, picnicking, night-sky viewing, target shooting, and photography. The Arizona Strip is known for its large expanses of undeveloped areas and its remoteness, which provide the opportunity for primitive and undeveloped recreation.

4.4.3 Cumulative Impacts on Resources

4.4.3.1 Air Resources

4.4.3.1.1 Greenhouse Gas Emissions

Under all Action Alternatives, replacement of the existing generators with power supplied by a power line would reduce overall GHG emissions; therefore, there would be no cumulative impacts to GHG emissions. This would be equally true for all three of the action alternatives, but not for the No Action Alternative. This would be a long-term minor cumulative effect to GHG emissions.

4.4.3.1.2 Air Quality

There would be no cumulative impacts to air quality because fugitive dust created during construction activities would be temporary and minimized with the use of EPMs/Design Features (**Section 2.1.6**). Over time, there would be a reduction in temporary fugitive dust generation as a result of elimination of truck trips to the Seegmiller Mountain Communications Site for fueling and repair of the generators; therefore, there would be minor cumulative effects to air quality.

4.4.3.2 Cultural Resources

Cultural resources in the CIA have been subject to degradation over time through weather and land use changes, and many cultural resources have been degraded or lost as development and recreation in the CIA has increased. Cumulative impacts to cultural resources can be broad and include impacts within and adjacent to the CIA, as well as the surrounding area view-shed. The CIA has been historically used for livestock grazing, mining, recreation, and utilities development. Continued use and/or development of the area would have the potential to detract from the integrity of cultural resources directly through physical disturbance or indirectly through the degradation of the historical environmental setting. Increased utilization of the area also increases the potential of illegal collection or vandalism of cultural resource sites. Alternatively, the development of the area would result in additional cultural resource studies. The information and data gained from these potential studies are valuable to the overall knowledge of the area and have the potential to aid in the mitigation of unknown adverse effects.

The potential impacts of the proposed power line would be mitigated through implementing protective measures (e.g., avoidance or treatment plan) described in **Section 4.2.2**, Cultural Resources. Similar measures would be implemented for other types of federal undertakings and would also limit cumulative impacts to cultural resources.

4.4.3.3 Lands/Realty

Construction of the proposed power line would allow a more reliable power source to be available at the Seegmiller Mountain Communications Site. None of the alternatives would

result in substantial cumulative impacts to the functions of the Lands and Realty Program (i.e., issuance of ROWs, permits, etc.).

4.4.3.4 Soils

Any land disturbing activity that removes or disturbs soil material would affect soil functions and erosion rates. Current land use practices that contribute to cumulative effects on soil resources include mining activities, livestock grazing, and miscellaneous recreational activity such as OHV traffic.

Future activities such as mineral exploration, possible mineral development, OHV travel, and recreational activities could cause increased soil disturbance and erosion. None of the alternatives would result in substantial cumulative impacts to soils resources when combined with past, present, and reasonably foreseeable actions in the CIA.

4.4.3.5 Threatened, Endangered, and Candidate Species

The Project would not contribute to additional impacts and would have no effect on Gierisch mallow or its habitat and there would thus be no cumulative effects.

4.4.3.6 Vegetation

Current land use practices that contribute to cumulative impacts on vegetation communities include mineral exploration, livestock grazing, increased OHV traffic, and increased recreational use. Successful reclamation would lessen vegetation impacts as planted areas become established. Reclamation practices for future disturbances would reduce impacts overall; the seeded areas would likely take many years to begin showing a natural growth of shrubs seeding in from adjacent areas, in addition to the planted species. Vegetation structure and composition would be altered in disturbed and reclaimed areas. None of the alternatives would result in substantial cumulative impacts to vegetation when combined with past, present, and reasonably foreseeable actions in the CIA.

4.4.3.7 Visual Resources

The visual impact of the proposed power line would contribute to changing the visual impression of the area from undeveloped to more developed. The main visual impact along the north portion of the CIA through Big Valley is the Navajo-McCullough transmission line. In Mokaac Wash the main visual impact is the graveled improved Quail Hill Road. Mining activities are apparent at Black Rock and in Mokaac Wash, but those impacts would not be noticeable to the casual observer traveling Quail Hill Road. Grazing is currently occurring and has been permitted historically by the BLM in this section, but would have minimal visual impacts.

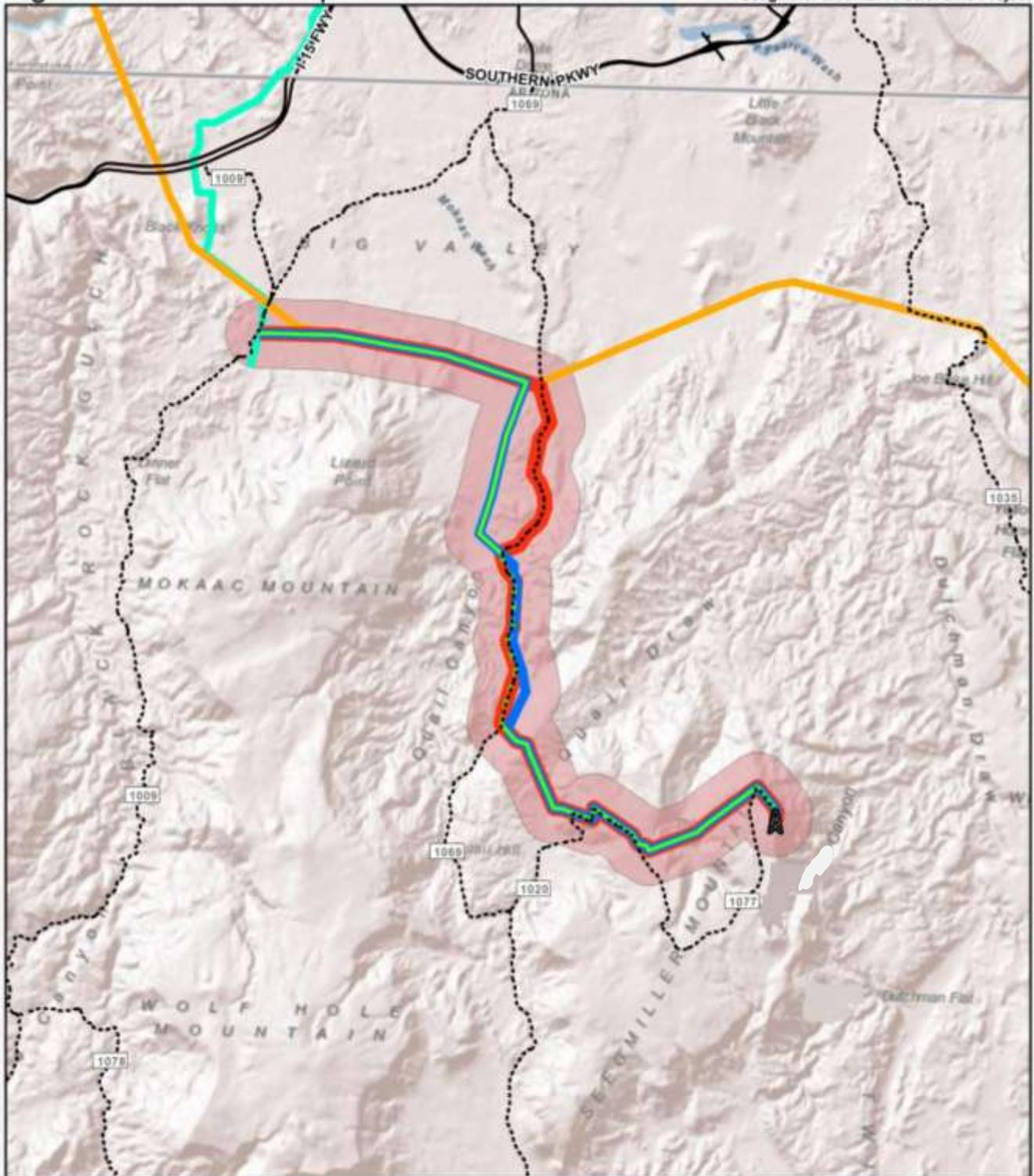
The long-term cumulative impacts from the proposed Seegmiller Mountain power line in conjunction with the Navajo-McCullough transmission line, roads, mines, and other disturbances and features on the landscape would depend on the location of the viewer, but would be minimal.

4.4.3.8 Wildlife, Including Migratory Birds and Sensitive Species

Past actions in the area have resulted in the loss or alteration of some areas of native habitats. However, the amount of habitat disturbance is quite small in comparison to the overall wildlife habitat in the area. Wildlife may be affected by other activities occurring within and adjacent to the CIA including mining activities at the Black Rock gypsum mine, maintenance activities along existing power lines or the Seegmiller Mountain Communications Site, and recreational activities. Increased human presence in the region could also cause cumulative effects to wildlife through vehicle mortalities, OHV use, periodic noise affects, and harassment. However, impacts from these actions would be moderated by the open and remote nature of the region. None of the alternatives would result in substantial cumulative impacts to wildlife resources when combined with past, present, and reasonably foreseeable actions in the CIA.

Figure 6 Cumulative Impacts Area

Dixie Power
Seegmiller Mountain Power Line Project



- | | | |
|--|--|--------------------------------|
| Communication Site | Alternative A - Proposed | Navajo-McCulloch Existing Line |
| Cumulative Impacts Area - Half Mile Buffer | Alternative B - Modified Proposed Action | Dixie Power Existing Line |
| | Alternative C - Overhead Segment | Paved Road |
| | Alternative C - Buried Segment | Improved Dirt Road |



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Date: 2/26/2015

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5.0 CONSULTATION AND COORDINATION

5.1 Summary of Public Participation

Public scoping was formally initiated by the BLM on July 3, 2014 with the mailing of a scoping letter to the public, Tribes, and various agencies. Eight comment letters were received. The comments and responses are shown below (in **Table 11**).

Table 11. Public Comments and Responses

| Commenter | Comment | Response |
|-------------------|--|---|
| USFWS | The BLM must examine potential effects to threatened and endangered species that could be present in the project area. | Gierisch Mallow (<i>Sphaeralcea gierischii</i>) and California condors (<i>Gymnogyps californianus</i>) are addressed in Table 2 and Sections 3.4.5 and 4.2.5. There is no designated desert tortoise habitat in the area. |
| USFWS | The BLM should coordinate with the American Indian Tribes and the Arizona Game and Fish Department. | BLM initiated consultation with Native American tribes with a scoping letter dated July 3, 2014. Arizona Game and Fish Department was also notified of the project with a scoping letter. |
| The Hopi Tribe | The Hopi Tribe supports identification and avoidance of prehistoric archaeological sites. Prehistoric archaeological sites are considered Traditional Cultural Properties by the Hopi Tribe. | Noted. Cultural resources, including prehistoric archaeological sites are addressed in Sections 3.4.2 and 4.2.2. |
| The Hopi Tribe | If prehistoric sites are identified in the project area and would be adversely impacted, the Hopi Tribe requests continued consultation including being provided with a copy of any proposed treatment plan for review and comment. | Noted. Cultural resources, including prehistoric archaeological sites are addressed in Sections 3.4.2 and 4.2.2. |
| The Navajo Nation | The project will not have adverse effects to Navajo Traditional Cultural Properties as the project is located outside of the Navajo National aboriginal land boundaries. No concerns at this time. | Noted. Cultural resources, including prehistoric archaeological sites are addressed in Sections 3.4.2 and 4.2.2. |
| The Navajo Nation | If habitation sites, plant gathering areas, human remains, or objects of cultural patrimony are inadvertently discovered, request notification in accordance with the Native American Graves Protection and Repatriation Act. | Noted. Cultural resources, including prehistoric archaeological sites are addressed in Sections 3.4.2 and 4.2.2. |
| Audubon Arizona | The power line is proximate to two key raptor areas. The region is known for concentrations of migrating raptors. | Potential impacts to raptors was analyzed in Section 4.2.8. Also, EPMs/Design Features (Section 2.1.6) have been integrated into the proposed project that address raptors and mitigate potential impacts. |
| Audubon Arizona | Nesting golden eagles and peregrine falcons are a possibility on Seegmiller Mountain. A pre-construction raptor nest site inventory should be conducted and BLM guidelines for buffer distance from nest sites should be used. Construction should be timed to avoid nesting season. | These are EPMs/Design Features that have been integrated into the proposed project (Section 2.1.6.3) to mitigate potential impacts to eagles and falcons. Further, Dixie will adhere to their Avian Protection Plan (Dixie 2007). |

| Commenter | Comment | Response |
|------------------|--|--|
| Audubon Arizona | The project design should meet standards for preventing raptor electrocution. | The distribution line would be designed and constructed according to Dixie's raptor-safe design standards (Dixie 2007). The goal of these design standards is to provide 60 inches of separation between energized conductors or energized parts and grounded equipment. This measurement greatly reduces risk and allows for the large size and wingspan of raptors. See Section 2.1.6.3. |
| Audubon Arizona | Introduction of invasive plant species is a concern. Pre-washing of vehicles and equipment should be a requirement. | All construction related equipment would be cleaned of soils, seeds, vegetative matter, or other debris or matter that could contain or hold noxious seeds. The cleaning of equipment would also be done any time thereafter if the equipment leaves the Project Area, is used on another project, and reenters the Project Area (Section 2.1.6.4) |
| Lubin & Enoch | Local Union 769 supports the proposed project because it will create jobs. | Construction of the proposed power line would be accomplished by existing power company crews, so would not affect the local economy overall. |
| Simmons Media | The current Seegmiller Communications site utilizes diesel fueled generators that consume vast quantities of liquid fuel trucked weekly to the site. The proposed power line would eliminate the need for large diesel fuel trucks to make frequent trips to the site. This would eliminate impacts to the road, potential for diesel fuel spills, and pollution from the generator and truck emissions. | See Sections 3.4.1 and 4.2.1 for discussion and analysis of GHG emissions. |
| Simmons Media | The proposed project would eliminate the noise that currently impacts the area as a result of the diesel fueled generators and truck traffic. | The effects of eliminating noise associated with the generators and associated truck traffic is presented in Section 4.2.8. |
| Simmons Media | Dixie Power had incorporated EPMs/Design Features that would preclude negative environmental impacts. | The EPMs/Design Features are presented in Section 2.1.6. |
| Simmons Media | Consistent electrical power is necessary to enable the communication transmitters to operate consistently so that public and private operators communicate with their licensed power authority and serve the entire population with necessary public safety information. | This information is presented in the EA in Section 1.2 Background. |
| Simmons Media | The cost of diesel fuel and maintenance of aging generators is no longer cost effective and could result in a loss of communication services to the area. | Noted. |
| Tom Folks | The proposed action would impact visual resources along Quail Road and Seegmiller Mountain Road. | See Sections 3.4.7 and 4.2.7 for a discussion on Visual Resources. Also, see Section 2.1.6.2 for EPMs/Design Features pertaining to Visual Resources. |

| Commenter | Comment | Response |
|-------------------------------|--|---|
| Tom Folks | The BLM should consider visual resource mitigation such as re-alignment to hide the structures in important viewing areas along road segments, duration of viewing, pole size, type, non-glare conductors, colors, burial of the line, or non-linear power sources. | Section 2.1.6.2 contains Visual Resources EPMs/Design Features that would be integrated into the proposed project. In addition, Alternatives B and C were developed to minimize impacts to visual resource by: 1) moving the location of the power line away from Quail Hill Road as much as possible; and b) burying the portion of the proposed power line that would parallel Quail Hill Road. |
| Tom Folks | The area west of the Quail Road was found to possess wilderness characteristics. A permanent power line and associated vehicular traffic during operations/maintenance would have some effect on wilderness characteristics of naturalness and outstanding opportunities for solitude. | The area was not identified in the RMP (BLM 2008a) for management of wilderness characteristics and is classified as VRM II and III. See Sections 3.4.7 and 4.2.7 for a discussion on Visual Resources. Also, see Section 2.1.6.2 for EPMs/Design Features pertaining to Visual Resources. |
| Arizona State Land Department | The map appears to show a portion of the proposed power line crossing Arizona State Trust land in sections 16 and/or 17, T. 41 N., R. 12 W. | None of the proposed power line right-of-way would be on Arizona State Trust land. |

5.2 List of Preparers

Tables 12 and 13 present the BLM staff and Non-BLM preparers of this EA.

Table 12. BLM Staff

| NAME | TITLE | RESPONSIBILITIES |
|--------------------|--|--|
| Laurie Ford | Team Lead, Lands & Geological Sciences | Project Lead, Lands/Realty, Minerals |
| Gloria Benson | Tribal Liaison | Native American Consultation |
| Whit Bunting | Range Team Lead | Range, Vegetation, Weeds, S&G |
| Lorraine Christian | Field Manager | Project Oversight |
| Diana Hawks | Team Lead Recreation, Wilderness, Cultural Resources | Recreation/Wilderness/VRM |
| John Herron | Archaeologist | Cultural |
| Jon Jasper | Outdoor Recreation Planner | Recreation, Wilderness, Visual Resources |
| Jace Lambeth | Rangeland Management Specialist | Special Status Plants |
| Shawn Langston | Wildlife Biologist | Wildlife, T&E Species |
| Marisa Monger | Realty Specialist | Lands/Realty |
| John Sims | Supervisory Law Enforcement | Law Enforcement |
| Richard Spotts | Environmental Coordinator | NEPA Compliance/Review |
| Jeff Young | Wildlife Biologist | Wildlife, TEPC Species |

Table 13. Non-BLM Preparers

| NAME | TITLE | RESPONSIBILITIES |
|----------------------|--------------------------------|--|
| Eric Holt | Project Manager | Project Management and Document Review |
| Jon Schulman | Lead Author | Document Preparation |
| Schelle Davis | NEPA Specialist | Document Preparation |
| Jenni Prince-Mahoney | Archaeologist, NEPA Specialist | Document Preparation |
| Greg Sharp | Environmental Scientist | Visual Analysis |
| Seth Topham | Biologist | Vegetation and Wildlife |

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Appendix A

Visual Evaluation Documents and Figures



Photo 1 - KOP#1 looking south



Photo 2 - KOP#2 looking south



Photo 3 - KOP#3 looking southeast



Photo 4 - KOP#4 looking south



Photo 5 - KOP#5 looking south



Photo 6 -. View of rock outcrops.



Photo 7 - View of shallow soil and rock substrate.



Photo 8 - View of a buried fiber optic ROW in soils similar to those along the proposed buried portions of Alternative C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9-25-14
District Arizona Strip
Resource Area Arizona Strip
Activity (program) Lands & Realty / ROW

SECTION A. PROJECT INFORMATION

| | | |
|--|---|--|
| 1. Project Name <u>Dixie Power - Black Rock to Seigmiller</u> | 4. Location Township _____ Range _____ Section _____ | 5. Location Sketch  |
| 2. Key Observation Point <u>#1 Junction Hwy. line going south</u> | | |
| 3. VRM Class <u>4, looking into 2</u> | | |

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|--|---|--|
| FORM | <u>Flat to rolling hills w/ flat, triangular peaks in back</u> | <u>Regular, patchy</u> | <u>existing linear, curving dirt road.</u> |
| LINE | <u>Curving, horizontal, broken, diagonal</u> | <u>irregular & broken</u> | <u>Curving</u> |
| COLOR | <u>Green, tan, red, Gray Brown</u> | <u>Green, tan, Gray</u> | <u>tan, Gray</u> |
| TEXTURE | <u>Stippled, coarse in Mtns, smooth</u> | <u>medium to stippled in background</u> | <u>Smooth to rough</u> |

SECTION C. PROPOSED ACTIVITY DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|------------------|---|--|
| FORM | <u>no change</u> | <u>Clearing of some veg for access.</u> | |
| LINE | <u>no change</u> | <u>no change</u> | <u>Add vertical, horizontal & curving from powerline</u> |
| COLOR | <u>no change</u> | <u>no change</u> | <u>Add to existing color of tan & Gray</u> |
| TEXTURE | <u>no change</u> | <u>no change</u> | <u>Smooth</u> |

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

| | | | | | | | | | | | | | |
|-----------------------|--------------------|----------|------|------|----------------|----------|------|------|----------------|----------|------|------|--|
| 1. DEGREE OF CONTRAST | FEATURES | | | | | | | | | | | | 2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) |
| | LANDWATER BODY (1) | | | | VEGETATION (2) | | | | STRUCTURES (3) | | | | |
| | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | 3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) |
| ELEMENTS | | | | | | | | | | | | | |
| Form | | | | ✓ | | | ✓ | | | | | ✓ | Evaluator's Names <u>Greg Sharp</u> Date <u>9-25-14</u> |
| Line | | | | ✓ | | | ✓ | | | | | ✓ | |
| Color | | | | ✓ | | | ✓ | | | | | ✓ | |
| Texture | | | | ✓ | | | ✓ | | | | | ✓ | |

Prepared by Stantec Consulting Services
Reviewed by Jon Jasper, BLM

Kop #1

SECTION D. (Continued)

Comments from item 2.

- This observation point begins in VRM IV and this alternative would meet the VRM objectives.

The alternative would continue on into VRM II. but would not be noticed as it disappears behind some hills.

Additional Mitigating Measures (See item 3)

- any access road constructed would be reclaimed. Vegetation clearing would be kept to a minimum.

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VISUAL CONTRAST RATING WORKSHEET

Date: 9-25-14
District: Arizona Strip
Resource Area: Arizona Strip
Activity (program): Lands & Realty / ROW

SECTION A. PROJECT INFORMATION

| | | |
|---|---|--|
| 1. Project Name <i>Dixie Power - Black Rock to Seigmiller</i> | 4. Location Township _____ Range _____ Section _____ | 5. Location Sketch  |
| 2. Key Observation Point <i>#2 - View for typical rd. Crossing</i> | | |
| 3. VIRM Class <i>3</i> | | |

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|---|-------------------------|---|
| FORM | <i>triangular, jagged, rolling hills</i> | <i>Stippled, patchy</i> | <i>Existing Quail Hill Rd linear, curving</i> |
| LINE | <i>Horizontal, vertical, broken, diagonal</i> | <i>Broken</i> | <i>Curving, diagonal</i> |
| COLOR | <i>Green, tan, red, Gray brown</i> | <i>Green, tan, Gray</i> | <i>tan, Gray</i> |
| TEXTURE | <i>rough, broken</i> | <i>medium</i> | <i>smooth</i> |

SECTION C. PROPOSED ACTIVITY DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|------------------|------------------|-----------------------------|
| FORM | <i>no change</i> | <i>no change</i> | <i>Add linear</i> |
| LINE | <i>no change</i> | <i>no change</i> | <i>vertical, horizontal</i> |
| COLOR | <i>no change</i> | <i>no change</i> | <i>Brown, Gray</i> |
| TEXTURE | <i>no change</i> | <i>no change</i> | <i>smooth</i> |

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

| | | | | | | | | | | | | | | |
|----------|--------------------|--------------------|----------|------|------|----------------|----------|------|------|----------------|----------|------|------|--|
| 1. | DEGREE OF CONTRAST | FEATURES | | | | | | | | | | | | 2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) |
| | | LANDWATER BODY (1) | | | | VEGETATION (2) | | | | STRUCTURES (3) | | | | |
| | | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | 3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) |
| ELEMENTS | Form | | | | ✓ | | | | ✓ | | | ✓ | | |
| | Line | | | | ✓ | | | | ✓ | | | ✓ | | |
| | Color | | | | ✓ | | | | ✓ | | | ✓ | | |
| | Texture | | | | ✓ | | | | ✓ | | | ✓ | | |

Prepared by Stantec Consulting Services
Reviewed by Jon Jasper, BLM

KOP#2

SECTION D. (Continued)

Comments from item 2.

- The proposed action would comply with VRM III objectives. There would be several crossings of Quail Hill Road within the VRM III corridor

Additional Mitigating Measures (See item 3)

- existing measures of reclaiming access roads & clearing only the minimum vegetation would be implemented.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9-25-14
District Arizona Strip
Resource Area Arizona Strip
Activity (program) Land & Realty / ROW

SECTION A. PROJECT INFORMATION

| | | |
|--|---|--|
| 1. Project Name <u>Dixie Power - Black Rock to Seigmiller</u> | 4. Location Township _____ Range _____ Section _____ | 5. Location Sketch  |
| 2. Key Observation Point <u>#3 - All Alternatives</u> | | |
| 3. VRM Class <u>3</u> | | |

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|---|------------------|-------------------------|
| FORM | triangular, diagonal horizontal buttes | patchy, broken | Existing Rd. Curving |
| LINE | Diagonal, Horizontal | irregular | Curving, diagonal |
| COLOR | Red, tan, Gray, brown | Green, tan, Gray | tan, Gray |
| TEXTURE | Coarse, rough | Medium | Smooth |

SECTION C. PROPOSED ACTIVITY DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|--------------|---|---|
| FORM | no change | no change | linear - All Alternatives |
| LINE | no change | Alt. C buried - remove veg causing distinct cut line Alt. A, B, C - no change | Vertical, Horizontal for Alt. A, B, C Curving for Alt. C - buried |
| COLOR | no change | no change | Brown, Gray All Alternatives |
| TEXTURE | no change | no change | Smooth for Alternatives A, B, C Buried Alt. C - Rough. |

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

| | | | | | | | | | | | | | | |
|-----------------------|--------------------|----------|------|------|----------------|----------|------|------|----------------|----------|---------|------|---|---|
| 1. DEGREE OF CONTRAST | FEATURES | | | | | | | | | | | | 2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) | |
| | LANDWATER BODY (1) | | | | VEGETATION (2) | | | | STRUCTURES (3) | | | | | 3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) |
| | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | | |
| | | | | ✓ | | | ✓ | | ✓ | | ✓ | | | |
| | | | | ✓ | | | ✓ | | | ✓ | | ✓ | | |
| | | | ✓ | | | ✓ | | | | ✓ | ✓ | | | |
| ELEMENTS | Form | | | | | | | | | | | | | |
| | Line | | | | | | | | | | | | | |
| | Color | | | | | | | | | | | | | |
| | Texture | | | | | | | | | | | | | |
| Evaluator's Names | | | | | | | | | | | Date | | | |
| Greg Sharp | | | | | | | | | | | 9-25-14 | | | |

Prepared by Stantec Consulting Services
Reviewed by Jon Jasper, BLM

Kop #3

SECTION D. (Continued)

Comments from item 2.

Alternative A

- Proposed powerline would follow along the main road within VRM III Corridor. Moderate changes to the form & lines would occur but are okay in VRM III.

Alternative B

- The powerline would become visible in the VRM III Corridor. The line would cross the road & continue along the east side of the VRM III Corridor. Moderate changes to form & lines would occur, okay in VRM III.

- Alternative C. - The buried line would continue south along road shoulder, road would be widened. Changes to line & texture would occur but would conform with VRM III.

Additional Mitigating Measures (See item 3)

Alt A+B

- existing measures of reclaiming access roads & clearing only the minimum vegetation would be implemented.

- Alt C - Burying the line would permanently widen the road corridor. Trenching the line would bring up large rocks & excess material that would form a large berm along the road. If not removed this would be a permanent feature.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date: 9-25-14
District: Arizona Strip
Resource Area: Arizona Strip
Activity (program): Land & Realty / ROW

SECTION A. PROJECT INFORMATION

| | | |
|---|---|--|
| 1. Project Name Dixie Power - Black Rock to Seigmiller | 4. Location Township _____ Range _____ Section _____ | 5. Location Sketch  |
| 2. Key Observation Point #4 - All Alternatives | | |
| 3. VRM Class 3 / 2 | | |

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|----------------------------------|--------------------|---------------------|
| FORM | Flat butte, rolling | stippled, uniform | Flat (exist Road) |
| LINE | Vertical, Horizontal Diagonal | broken | Horizontal, Curving |
| COLOR | Tan, red, Gray | Green, gray, brown | tan, Gray |
| TEXTURE | rough, broken | rough, medium | smooth |

SECTION C. PROPOSED ACTIVITY DESCRIPTION

| | 1. LANDWATER | 2. VEGETATION | 3. STRUCTURES |
|---------|--|---------------|--|
| FORM | Rocky berm - A+C No change - A+A, B | no change | A+C - Add rock berm A+B, A - add linear |
| LINE | A+A, B, C - Add some Diagonal, vertical, horizontal | no change | A+B, A - Add vertical A+C - Add curving |
| COLOR | A+C - Add gray mound A+A, B - Add little tan, Gray | no change | no change |
| TEXTURE | no change for All A+C. | no change | no change |

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

| | | | | | | | | | | | | | | |
|--|--------------------|----------|------|------|----------------|----------|------|------|----------------|----------|------|------|---|---------------------|
| 1. DEGREE OF CONTRAST | FEATURES | | | | | | | | | | | | 2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) | |
| | LANDWATER BODY (1) | | | | VEGETATION (2) | | | | STRUCTURES (3) | | | | | |
| | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | 3. Additional mitigating measures recommended? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) | |
| | | | ✓ | | | | | ✓ | | | ✓ | | | |
| | | | ✓ | | | | | ✓ | | | ✓ | | | |
| | | | ✓ | | | | ✓ | | | | ✓ | | | |
| ELEMENTS | Form | | | | | | | | | | | | Evaluator's Names Greg Sharp | Date 9-25-14 |
| | Line | | | | | | | | | | | | | |
| | Color | | | | | | | | | | | | | |
| | Texture | | | | | | | | | | | | | |

Prepared by Stantec Consulting Services
Reviewed by Jon Jasper, BLM

Kop #4

SECTION D. (Continued)

Comments from item 2.

Alternative A - would meet VRM III along the main road. Mitigation measures used would meet VRM II standards where line traverses to the top of the Ridge.

Alternative B - The line stays to the east in VRM II. Mitigation measures used would make the line unnoticed + meet VRM II standards.

Alternative C - trenching would make a noticed scar and berm of rock along the road. Where the line becomes unburied and goes on to poles may make a noticeable structure. This would be in VRM III + meet standards.

Additional Mitigating Measures (See item 3)

- overland travel with no blading. Moving of large rock would be okay.
- wooden poles would be used. They would darken over time, or dark wood poles could be used
- non speculative conductor would be used to reduce visibility to observers.
- possibly a metal Gray pole could be used at the top of the ridge. Gray would blend in with the sky better.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 9-25-14
District Arizona Strip
Resource Area Arizona Strip
Activity (program) Land & Realty - Lower line ROW

SECTION A. PROJECT INFORMATION

| | | |
|--|---|--|
| 1. Project Name <u>Dixie Power - Black Rock to Seegmiller</u> | 4. Location Township _____ Range _____ Section _____ | 5. Location Sketch  |
| 2. Key Observation Point <u>KOR 5 - Top of Ridge</u> | | |
| 3. VRM Class <u>III</u> | | |

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

| | 1. LAND/WATER | 2. VEGETATION | 3. STRUCTURES |
|---------|---|--------------------------|-------------------|
| FORM | <u>Rolling, butte hills,</u> | <u>stippled</u> | <u>linear</u> |
| LINE | <u>Horizontal, vertical, Diagonal</u> | <u>broken, irregular</u> | <u>Horizontal</u> |
| COLOR | <u>Tan, Gray, red</u> | <u>Green, tan, Gray</u> | <u>tan, Gray</u> |
| TEXTURE | <u>Rough</u> | <u>medium</u> | <u>smooth</u> |

SECTION C. PROPOSED ACTIVITY DESCRIPTION

| | 1. LAND/WATER | 2. VEGETATION | 3. STRUCTURES |
|---------|--|--------------------------|-----------------------------|
| FORM | <u>Rolling, Butte hills</u> | <u>Stippled</u> | <u>linear, parallel</u> |
| LINE | <u>Horizontal, vertical Diagonal</u> | <u>broken, irregular</u> | <u>Horizontal, vertical</u> |
| COLOR | <u>Tan, Gray, red</u> | <u>Green, Tan, Gray</u> | <u>Tan, Gray Brown</u> |
| TEXTURE | <u>Rough</u> | <u>medium</u> | <u>Smooth</u> |

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

| | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|----------|------|------|----------------|----------|------|------|----------------|----------|------|------|---|
| 1. | DEGREE OF CONTRAST | FEATURES | | | | | | | | | | | | 2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side) |
| | | LAND/WATER BODY (1) | | | | VEGETATION (2) | | | | STRUCTURES (3) | | | | |
| | | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | Strong | Moderate | Weak | None | 3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side) |
| ELEMENTS | Form | | | | ✓ | | | | ✓ | | | | ✓ | |
| | Line | | | | ✓ | | | | ✓ | | | | ✓ | |
| | Color | | | | ✓ | | | | ✓ | | | | ✓ | |
| | Texture | | | | ✓ | | | | ✓ | | | | ✓ | |

Prepared by Stantec Consulting Services
Reviewed by Jon Jasper, BLM

Kop#5

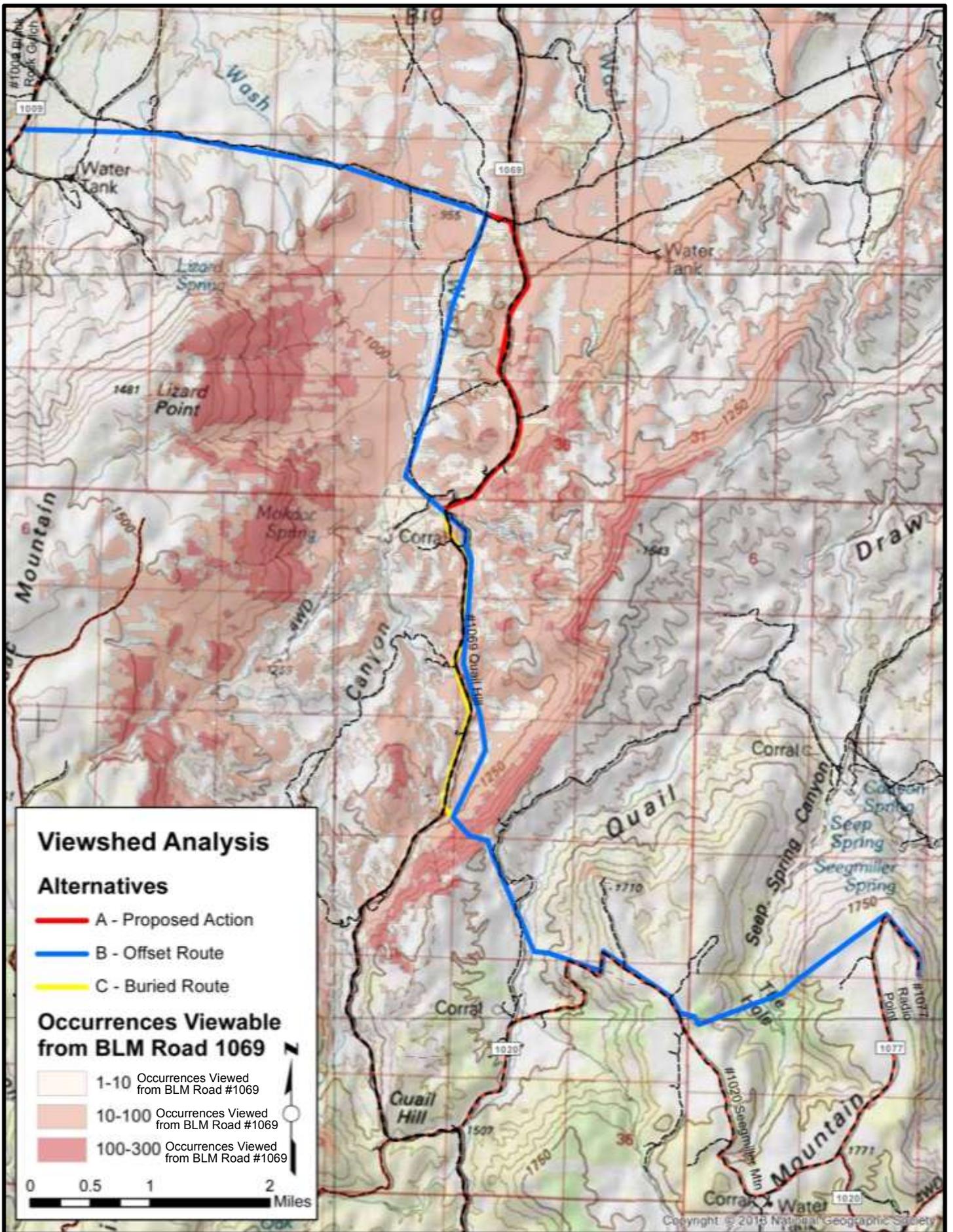
SECTION D. (Continued)

Comments from item 2.

- All Alternatives would follow the same route. The line would follow along existing roads in some parts. The line would be within a VRM III area & would meet the objectives.

Additional Mitigating Measures (See item 3)

- reclamation of access and using minimal vegetation clearing would be done.



Visual Simulation along Quail Hill Road



Visual Simulation along Quail Hill Road



FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT
DOI-BLM-AZ-A010-2013-0012-EA
Dixie Power Proposed Seegmiller Mountain Power Line Right-of-Way
May 5, 2015

This unsigned FONSI and the attached EA (DOI-BLM-AZ-A010-2013-0012-EA) for the proposed Dixie Power Seegmiller Mountain Power Line Right-of-Way (AZA 036398) are available for public review and comment for 30 days beginning on May 5, 2015.

Based on the analysis of potential environmental impacts in the attached EA and consideration of the significance criteria in 40 CFR 1508.27, I have determined that with applicable mitigating measures, the Alternative B – Modified Proposed Action Alternative (Mokaac Wash), Alternative C – Partial Burial Alternative, or a combination of Alternatives B and C would not result in significant impacts on the human environment. An environmental impact statement (EIS) is not required.

The decision to approve or deny the above alternatives and, if appropriate, a signed FONSI with rationale, will be released after consideration of public comments and completion of the EA.