

## ENVIRONMENTAL ASSESSMENT

# Virginia Peak Wind Company LLC

# Virginia Peak Wind Right-Of-Way Application

DOI-BLM-NV-C020-2010-0015-EA

U.S. Department of the Interior  
Bureau of Land Management  
Carson City District  
Sierra Front Field Office  
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October 2010



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

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## LIST OF ACRONYMS AND ABBREVIATIONS

<b>ACEC</b>	Area of Critical Environmental Concern
<b>APE</b>	Area of Potential Effect
<b>AUM</b>	Animal Unit Month
<b>BLM</b>	Bureau of Land Management
<b>BMP</b>	Best Management Practice
<b>CRMP</b>	Carson City Field Office Consolidated Resource Management Plan
<b>EA</b>	Environmental Assessment
<b>ESA</b>	Endangered Species Act
<b>FLPMA</b>	Federal Land Policy and Management Act
<b>FONSI</b>	Finding of No Significant Impact
<b>GBBDC</b>	Game Birds Below Desired Conditions
<b>GIS</b>	Geographic Information System
<b>IBA</b>	Important Bird Area
<b>JBR</b>	JBR Environmental Consultants, Inc.
<b>MBTA</b>	Migratory Bird Treaty Act
<b>NAGPRA</b>	Native American Graves Protection Act
<b>NDEP</b>	Nevada Division of Environmental Protection
<b>NDOW</b>	Nevada Department of Wildlife
<b>NEPA</b>	National Environmental Policy Act
<b>NNHP</b>	Nevada Natural Heritage Program
<b>NRCS</b>	Natural Resources Conservation Service
<b>NRHP</b>	National Register of Historic Places
<b>NRS</b>	Nevada Revised Statutes
<b>PLPT</b>	Pyramid Lake Paiute Tribe
<b>PMU</b>	Population Management Unit
<b>RPIC</b>	Reno-Sparks Indian Colony
<b>ROW</b>	Right of Way
<b>SCC</b>	Species of Conservation Concern
<b>SUP</b>	Special Use Permit
<b>SWReGAP</b>	Southwest Regional Gap Analysis Project
<b>UEPA</b>	Utility Environmental Protection Act
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>VPWC</b>	Virginia Peak Wind Company, LLC
<b>VRM</b>	Visual Resources Management
<b>WAP</b>	Wildlife Action Plan
<b>Washoe</b>	Washoe Tribe of Nevada and California

# CHAPTER 1 INTRODUCTION

## 1.1 INTRODUCTION

Virginia Peak Wind Company, LLC (VPWC), a subsidiary of Nevada Wind, LLC, is requesting a right-of-way (ROW) authorization from the Bureau of Land Management (BLM) to build a 3,372 foot segment of new road on public land and cross public land with four aerial transmission line corner crossings. The proposed road segment and transmission line would be located within the Pah Rah Range in Washoe County, Nevada, east of the community of Warm Springs and 20 miles northeast of the town of Sparks (Figure 1). VPWC intends to use Microwave Road to haul equipment and components to its Virginia Peak wind energy generation facility which is located on private land. Energy generated by the facility would be fed into the NV Energy's energy grid, via a transmission line to NV Energy's East Tracy Substation adjacent to the Truckee River in Tracy, Storey County, Nevada.

## 1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The BLM's need is to respond to VPWC's SF299 application for a new ROW that was submitted to the BLM's Sierra Front Field Office on October 19, 2008. The ROW authorization would allow the construction, operation, and maintenance of a bypass road and electrical transmission line on portions occurring on public land administered by the BLM.

The BLM must assure that authorization of the Proposed Action avoids undue or unnecessary degradation of public land and has prepared this Environmental Assessment (EA) as part of the decision-making process in consideration of the requested ROW grant. Based on this environmental documentation, the BLM will determine whether a Finding of No Significant Impact (FONSI) can be signed or whether an Environmental Impact Statement (EIS) must be prepared for the project. Through this decision process, BLM would meet obligations under the National Environmental Protection Act (NEPA), the Federal Land Policy and Management Act (FLPMA) of 1976, and other Public Land Acts.

The purpose of the Proposed Action is to (1) provide a safe roadway that can accommodate oversized construction vehicles and (2) deliver the electricity generated by the Virginia Peak wind energy generation facility to NV Energy's electric transmission system. A bypass road is needed because Microwave Road is the designated haul route to transport materials and equipment to the Virginia Peak wind energy facility. One switchback on Microwave Road has a narrow turning radius that allows loads only 75 feet in length. Expected loads delivered to the Virginia Peak wind energy facility would be over 160 feet. The new road would bypass this unsafe section of roadway. The construction of a new transmission line is needed because there is no existing electrical transmission infrastructure available.

The Virginia Peak wind generation facility is located entirely on private land. The federal responsibility is only for the short segment of road improvement and the four aerial transmission line crossings on public land. VPWC applied for a special use permit (SUP) from Washoe County for the construction, installation and operation of 44 wind turbines, associated roads, collection lines, a transmission line and substation in June 2008. Through the Washoe County SUP process, seven public meetings were held to discuss the Virginia Peak wind generation facility including the project components which cross public lands. Two public meetings were held by the Truckee Meadows Planning Agency. Washoe County approved the SUP on February 2009.

### **1.3 RELATIONSHIP TO PLANNING AND CONFORMANCE WITH PLANS**

The public lands administered by the BLM in the project area are managed in accordance with the Carson City Field Office Consolidated Resource Management Plan (CRMP) (BLM 2001). Although the Proposed Action is not specifically addressed in the RMP, it is consistent with objectives and administrative actions for Right of Way Corridors.

Objectives from the CRMP follow National Policy for Rights of Way (43 CFR 2800.0-2 - Rights-of-Way – Objectives). Applicable provisions are as follows:

*It is the objective of the Secretary of the Interior to grant rights-of-way and temporary use permits, covered by the regulations in this part, to any qualified individual, business entity, or governmental entity and regulate, control and direct the use of said rights-of way on public lands so as to:*

- A. Protect the natural resources associated with the public lands and adjacent private property or other lands administered by a government agency.*
- B. Prevent unnecessary or undue environmental damage to the lands and resources.*
- C. Promote the utilization of rights-of-way in common with respect to engineering and technological compatibility, national security and land use plans.*
- D. Coordinate to the fullest extent possible, all actions taken pursuant to this part with state and local governments, interested individuals, and appropriate quasi-public entities.*

Administrative Actions from the CRMP that address utility facilities include:

*All applicants for right-of-way grants, whether or not they are within corridors, are subject to standard approval procedures as outlined in the right-of-way regulations (43 CFR 2802). These procedures include: 1) Preparation of an environmental assessment in accordance with the National Environmental Policy Act of 1969, 2) A determination of compliance of the applicants*

*proposed plan with applicable federal and state laws, 3) Consultation with federal, state, and local agencies, and 4) Any other action necessary to fully evaluate and make a decision to approve or deny the application and prescribe suitable terms and conditions for the grant or permit. Consultation with the public, including adjacent landowners, will occur throughout the process.*

The Proposed Action is in conformance with Truckee Meadows Regional Planning Agency (TMRPA) Truckee Meadows Regional Plan, as amended, and utilizes a designated regional utility corridor adopted by the plan (TMRPA 2009). The Proposed Action does not conflict with any known state or local planning, ordinance, or zoning.

## CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

### 2.1 ALTERNATIVE A: PROPOSED ACTION

VPWC is requesting a new ROW to include the following project elements (Figure 2):

1. Construct 3,372 linear feet of road to bypass a switchback on Microwave Road.
  - 35-foot-wide all weather gravel road
  - 100-foot-wide permanent ROW
  - Township 22 North (T22N), Range 22 East (R22E), Section 36 NW1/4NW1/4
2. Cross public land with 120 kV electrical transmission line wires at four locations. No electrical structures would be constructed on public land.
  - 60-foot-wide permanent ROW
  - 1,130 linear feet within T20N, R22E, Section 4
  - 60 linear feet within T20N, R22E, Section 8
  - 160 linear feet within T20N, R22E, Section 16
  - 300 linear feet within T20N, R22E, Section 20

#### 2.1.1 Project Description

The bypass road would start on private land, west of designated BLM land, and would curve around the back of a mountain slope and continue north, connecting back to the existing Microwave Road north of the BLM section. Approximately 3,372 feet (0.64 mile) would be constructed on public land; approximately 2,875 feet (0.54 mile) would be constructed on private land. The proposed road would be a permanent all weather gravel road constructed with up to 4 inches of gravel base. Gravel would be hauled to the site from a permitted local off-site source. This bypass road would be constructed according to BLM standards to provide safe operating conditions.

The road prism would vary from 20 to 35 feet wide. Disturbance needed to construct the road would generally be 45 feet wide but could extend up to the boundary of the proposed ROW width (100 feet). The road would be constructed in the following sequence:

1. Stake centerline of road

2. Install temporary stabilization features, such as silt fences, straw bales, and other controls, at the limits of construction
3. Clear and grub area
4. Separate and stockpile top soil for later use
5. Grade roads to slopes/design indicated on construction drawings
6. Compact sub-grade
7. Install aggregate all weather road surface
8. Install final stabilization and re-vegetate disturbed areas associated with the roadway corridor
9. Remove temporary stabilization measures once final stabilization measures are established

Once the construction of the road is complete, areas disturbed by construction would be reclaimed. The materials cut during the road construction would be used to return contours to near preconstruction conditions. Any remaining cut materials would be distributed across the site to the extent practicable. Vegetation material may be shredded or spread over the ROW as mulch erosion control or disposed of off-site. Any debris and garbage generated would be removed and disposed of appropriately, such as at the Lockwood landfill. Any exposed areas that are not covered by road materials would be re-vegetated using a seed mixture specified by BLM.

The new electric transmission line would be a double or single circuit 120 kV line from the Virginia Peak wind energy generating facility and NV Energy's East Tracy Substation. It would be approximately 16 miles long, but only 0.3 mile of the line would cross public land. No access or maintenance roads would be constructed on public land. Conductor and shield wires would span public land since all poles would be constructed on private land. Conductor wires would consist of three- to seven-stranded aluminum conductor wires, approximately 1.2 inches in diameter. A shield wire approximately 0.375 to 0.75 inch in diameter would be placed along the top of each pole to provide lightning protection. The shield wire could also contain fiber optic cable. The shield wire would connect to copper ground wires buried in each pole excavation and would electrically ground all of the poles. Poles would be built on private land only. Most poles would be wooden, but a few poles would be steel and would vary from 50 to 150 feet depending on the terrain. Steel poles would have self-weathering (rusty brown) finish to match the color of wood poles. The span between poles would typically be 300 feet but could range from 50 feet to over 1,500 feet, again, depending on obstructions or terrain. All conductor wires would be at least 22 feet from the ground surface.

The transmission line, including segments on private land, would be designed to discourage its use as a perching and nesting structure by birds, particularly ravens and raptors. The power line and poles would be configured to minimize raptor electrocutions. Visual flight diverters and perch and nesting deterrents would be utilized. Design modifications would follow established guidelines (APLIC and USFWS 2005, APLIC 2006).

Conductors and shield wires would be installed in the following sequence:

1. Install sock line (wire pull ropes)
2. Pull conductors and shield wires
3. Sag and connect conductors and shield wires to appropriate tension

Travelers or stringing blocks would be attached to the insulators prior to pole setting. The travelers allow the conductors to be pulled between poles until the entire line is ready to be clipped in and pulled up to the final tension position. Conductor stringing operations begin by pulling a sock line (a small cable or rope used to pull the conductor) onto the travelers from pole to pole using aerial manlifts, a helicopter, or a construction vehicle traveling along access roads or the centerline travel route. Once the sock line is installed, it would be attached to reels of conductor or shield wire at the wire setup sites and pulled through in the reverse direction back through the travelers. During the pulling process, enough tension would be maintained to keep the wires above the ground, avoiding any damage to the conductors due to dragging. After the conductors and shield wires are strung, they would be sagged to the proper tension and clipped into the insulators.

Once the transmission line is operational, the transmission line maintenance service provider (Operations and Maintenance Provider), either VPWC or NV Energy, would conduct annual inspections of the line to check for maintenance needs. Generally, one structure-climbing inspection is anticipated every ten years. The transmission line Operations and Maintenance Provider would also patrol the ROW after unexplained outages or significant natural incidents (such as fires, earthquakes, floods, torrential rains, or extreme electrical storms) to observe the facility conditions and surrounding environment and to begin repairing any damages. The inspections would be conducted by pickup trucks or all terrain vehicles (ATVs) generally following an overland travel route from pole to pole used for project construction. A 15 foot wide maintenance road would be bladed on private land.

Trees that may interfere with the safe operation of the transmission line would be pruned or removed as needed over the life of the project. Trimming or removal of trees is needed to provide safe clearance distance between conductors and vegetation and to meet national industry safety standards and federal regulations. A transmission line can be expected to sag during heavy electrical loading and warm weather to within 22 feet of minimum line clearance of the ground at mid-span at a conductor temperature of 212° Fahrenheit. To achieve the required 10 feet of clearance of trees and provide an approximate 10-year growth envelope, trees taller than 10 feet in height would be removed from the ROW from about the middle one-third of each span between structures. The clearance width would be 60 feet to accommodate wire-swing. Beyond mid-span, closer to the structures (where the wires would be higher), the height of trees that would require removal for line clearance would progressively increase. It is anticipated that selective tree removal or pruning beneath the transmission line would only be needed at mid-span, if trees are present, and would occur every ten years.

### 2.1.2 Environmental Protection Measures

To protect avian species VPWC would design and construct the entire transmission line, including segments on private land, using *Suggested Practices for Avian Protection on Power Lines: The State of the Art 2006* (APLIC 2006). This document would be utilized as a BMP and would reduce the number of raptors, including golden eagles, that could potentially collide with or be electrocuted by transmission line facilities. It would also reduce the potential for roosting, perching, and nesting on transmission structures.

To protect water and air quality, VPWC would implement Best Management Practices (BMPs) at all times during the construction of the Proposed Action. BMPs are described in the Nevada Division of Environmental Protection (NDEP) *State of Nevada Best Management Practices Handbook* (NDEP 1994). Project-specific BMPs would be identified in the Stormwater Pollution Prevention Plan, as required by the General Construction Stormwater Permit, and in the Dust Control Plan to be prepared for the project, as required by the Washoe County Air Quality Management Division. Such measures would include dampening the topsoil during the construction phase to reduce dust emissions, and established erosion control devices on steeply graded terrain.

### 2.1.3 List of Permits

VPWC is responsible for obtaining valid permits and approvals from all relevant federal, state, and local agencies prior to the construction of the proposed project. Table 1 lists the permits and approvals needed for this project.

**Table 1 Permits and Approvals**

Authorizing Action/Permit	Agency
Stormwater General Permit NVR10000	Nevada Division of Environmental Protection, Bureau of Water Pollution Control
Dust Control Permit	Washoe County District Health Department Air Quality Management Division
Construction of Utility Facilities	Nevada Public Utility Commission
Project of Significance approval	Truckee Meadows Regional Planning Agency

The Proposed Transmission Line has been approved by Washoe County through a Special Use Permit. As a part of the Nevada Public Utility Commission approval, an Environmental Statement will be prepared in compliance with the Utility Environmental Protection Act (UEPA) prior to construction of the wind energy generation facility.

## 2.2 ALTERNATIVE B: NO ACTION

Under the No Action Alternative, no ROW would be issued, Microwave Road would remain unchanged, and no transmission line would be constructed. Available funding would be lost, and

federal American Recovery and Reinvestment Act funding would no longer be available. There would be no impact to the existing environment.

### **2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED**

The proposed bypass road would be located on the flattest terrain available in order to minimize the amount of cut and fill. Alternatively, a road modification could occur completely on private land. However, for appropriate grades to be met the side of a mountain would need to be shaved for approximately 2.2 miles. This would require bulldozing and blasting the mountain slope to cut into its side. The disturbance area would include long cut and fill slopes impacting vegetation and wildlife habitat. The angle of the cut and fill slopes could make reclamation of disturbances challenging and the potential for erosion could be a concern. Constructing a bypass road on private land was eliminated because it would have greater environmental impacts, particularly on vegetation and wildlife habitat.

The proposed transmission line passes through four miles of checkerboard lands (alternating sections of public and private land). The power poles for this segment of transmission line would be located on private land with only 1,650 feet of power line aerially crossing public land. No surface disturbance associated with the transmission line would occur on public land. Alternative transmission lines could be built that avoid public land. An approximately 16 mile transmission line could be constructed to the Sugar Loaf Substation in Spanish Springs or an approximately 35 mile transmission line could be constructed using a route that first heads west to Spanish Springs, south through Sparks, and then west to Tracy through the Truckee River corridor.

A transmission line to the Sugar Loaf Substation or through the Truckee River corridor would require construction near homes and residential developments. VPWC presented similar routes at seven public information meetings to obtain feedback on these potential alternatives. Homeowners who would potentially be affected repeatedly voiced concerns that the project would have substantial visual impacts that would affect the value of their property and their quality of life. The alternative using the Truckee River corridor raised additional concerns from Native American tribes and an evaluation of cultural resources also found that this alternative would have the potential to impact numerous known cultural resources. Private land transmission line routes were rejected because of high community opposition.

### **2.4 SCOPING**

The project was internally scoped by the BLM Interdisciplinary Team in 2008 and again in June 2010. The BLM Interdisciplinary Team identified the supplemental authorities and other resources to be addressed in this document as discussed in Section 3.1 Resources Considered for Analysis. BLM sensitive species, particularly greater sage-grouse and golden eagle, were raised as important resources to address in the analysis.

Seven public meetings soliciting public input on the proposed Virginia Peak wind energy project were held in 2008 by Washoe County as a part of its SUP application review process. Two public meetings were held by Truckee Meadows Planning Agency. No concerns were raised specific to the road improvements or the aerial crossings on public land.

**CHAPTER 3  
AFFECTED ENVIRONMENT**

**3.1 RESOURCES CONSIDERED FOR ANALYSIS**

The BLM is required to address specific elements of the environment that are subject to requirements specified in statute or regulation or by executive order (BLM 2008a). The following table lists the elements that must be addressed in all environmental analyses and indicates if the Proposed Action affects those elements. Supplemental Authorities determined to be Not Present or Present but Not Affected need not be carried forward for analysis or discussed further in the document.

**Table 2 Supplemental Authorities Considered for Analysis**

<b>Supplemental Authority*</b>	<b>Not Present**</b>	<b>Present/Not Affected**</b>	<b>Present/May Be Affected***</b>	<b>Rationale</b>
Air Quality		X		The proposed project is not within an area of non-attainment where total suspended particulates or other criteria pollutants exceed Nevada air quality standards. There would be an increase in particulate matter during construction; however, Nevada air quality standards would not be exceeded. VPWC would be required to implement dust control measures to comply with its Washoe County District Health Department, Air Quality Management Division dust control permit and NDEP Stormwater General Permit.
Area of Critical Environmental Concern (ACEC)	X			Resource is not present. The Pah Rah High Basin (Dry Lakes) Petroglyph District is a 3,881-acre ACEC located approximately 10.5 miles west of the project area.
Cultural Resources	X			A cultural resources inventory of the Area of Potential Effect (APE) was performed by Chambers Group, Inc. on June 10-11, 2010 (BLM Report CRR 3-2534). The report was submitted to the BLM on June 24, 2010. The APE included the public lands directly affected by the proposed bypass road and 6.1 miles of transmission line through checkerboard land status area (i.e. where sections alternate between private and public) north of the East Tracy Substation. No sites recommended as eligible for inclusion to the National Register of Historic Places (NRHP) were found. Section 4.11 Mitigation Measures describe measures that would be taken in the event of a discovery of previously unidentified cultural resource.

Supplemental Authority*	Not Present**	Present/Not Affected**	Present/May Be Affected***	Rationale
Environmental Justice	X			Resource is not present.
Farm Lands (Prime or Unique)	X			Resource is not present.
Floodplains	X			Resource is not present.
Forests and Rangelands (HFRA only)				N/A
Human Health and Safety (herbicide projects)				N/A
Migratory Birds			X	Carried through the EA.
Native American Religious Concerns			X	Carried through the EA.
Noxious Weeds/Invasive Non-native Species			X	Carried through the EA.
Threatened and Endangered Species	X			There are no federally-listed species on BLM-administered land associated with the Proposed Action based on review of the USFWS website (Appendix C) and consultation with the BLM Wildlife Biologist and Botanist.
Waste – Hazardous and Solid			X	Carried through the EA.
Water Quality (Surface/Ground)		X		A field survey conducted on June 10, 2010, found a swale feature. The swale did not have physical signs of erosion or deposition that would indicate frequent or regular flow. The field survey also found no springs or seeps within 800 feet of the proposed bypass road ROW.
Wetlands/ Riparian Zones	X			Resource is not present.
Wild & Scenic Rivers	X			Resource is not present.
Wilderness	X			Resource is not present.

\*See H-1790-1(January 2008) Appendix 1 Supplemental Authorities to be Considered.

\*\*Supplemental Authorities determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.

\*\*\*Supplemental Authorities determined to be Present/May Be Affected must be carried forward in the document.

Other resources of the human environment that have been considered for analysis are listed in the table below. Elements that may be affected are further described in the EA.

**Table 3 Other Resources Considered for Analysis**

Resource or Issue	Present/Not Affected#	Present/May Be Affected##	Rationale
BLM Special Status Species		X	Carried through the EA.
General Wildlife and Fisheries		X	Carried through the EA. There are no fisheries present in the project area.
Land Use Authorization		X	Carried through the EA.
Soils		X	Carried through the EA.
Vegetation		X	Carried through the EA.
Visual Resources		X	Carried through the EA.

*#Resources or uses determined to be Present/Not Affected need not be carried forward or discussed further in the document.*

*##Resources or uses determined to be Present/May Be Affected must be carried forward in the document.*

### 3.2 GENERAL SETTING

The Pah Rah Mountain Range (39°41'14.679" N; 119°27'5.637" W) is located approximately 20 miles north-east from the town of Sparks, Nevada, southwest of Pyramid Lake. The range is about 20 miles long with an average elevation of about 7,900 feet and is home to Pond Peak (8,035 ft), Virginia Peak (8,367 ft) and Pah Rah Peak (8,249 ft). The climate is typical of the arid West and Great Basin region with precipitation ranging from 7 inches at the valley floors up to 15 inches at the higher elevations. There is no permafrost in the region.

### 3.3 ADMINISTRATIVE LAND USES

In addition to VPWC’s proposed ROW authorization, there are five ROWs that are approved or are pending approval within areas of public lands that are adjacent to, or cross, the project area. These ROWs are all located in Section 36 of T22N, R22E, and coincide with the area where the proposed bypass road would be constructed. The Elko TV District and Nevada Bell have both been granted ROWs for communications infrastructure (NVN-011038 and NVN-005641, respectively). Ridgeline Nevada Energy, LLC holds an approved ROW (NVN-077701) for wind energy testing and a ROW (NVN-084113) pending approval for development of wind facility. Lily Investment Holdings, LLC has been granted a ROW (NVN-80937) for wind energy testing.

The proposed transmission line alignment is fully contained within a regional utility corridor designated by the Truckee Meadows Regional Planning Agency (TMRPA). The regional corridor was adopted into the Truckee Meadows Regional Plan (Truckee Meadows Regional Planning Agency 2009).

### **3.4 HAZARDOUS AND SOLID WASTE**

Solid waste generated by the project would include cleared vegetation. Vegetation material may be chipped or shredded and spread over the ROW as mulch erosion control as an alternative to disposal off-site. All solid waste generated during construction would be removed from the project site and, if appropriate, hauled to the Lockwood landfill for disposal. The Proposed Action would not generate, use, or dispose of any hazardous waste. Diesel, oil, and lubricants would not be stored on-site.

### **3.5 NATIVE AMERICAN RELIGIOUS CONCERNS**

The Native American Tribes that have cultural affiliation with the area of the BLM-lands are the Pyramid Lake Paiute Tribe (PLPT), Reno-Sparks Indian Colony (RPIC) and the Washoe Tribe of Nevada and California (Washoe), and they were consulted in 2009 and 2010 relative to wind energy undertakings in the region (per 36 CFR 800 and 43 CFR 8100 [BLM], as amended). The BLM sent a consultation letter to the PLPT, RPIC, and the Washoe in July 2010, concerning the specific Proposed Action of this EA.

The people that were associated with this area in the past maintain some association today, and they incorporate these issues within their religious system. Within the vicinity of the Proposed Action, tribally identified TCPs and specific Native American cultural, traditional, or spiritual activity sites or resources are not known to exist or have not yet been identified by tribal participants. Consultation between the Tribes and the BLM would remain on-going throughout the period of permitting and operation.

### **3.6 SOILS**

The proposed bypass road would be located on soils mapped as a Softscrabble-Gabica-Sumine association. This unit is typically 35 percent Softscrabble very stony loam, 15 to 50 percent slopes; 25 percent Gabica very cobbly sandy loam, 8 to 30 percent slopes; and 25 percent Sumine very stony loam, 30 to 50 percent slopes (NRCS 2009). This soil association is found in mountains and forms from residuum and colluviums derived from volcanic rocks. The soil association is composed of soil units that are typically well-drained, yielding high available water content and supporting a variety of vegetation.

### **3.7 VEGETATION**

Geographic Information System (GIS) data from the Southwest Regional Gap Analysis Project (SWReGAP) indicates that the Great Basin Pinyon-Juniper Woodland cover type is the most abundant and extensive vegetation cover in the Pah Rah Range. Most of the public lands that

would be within the proposed ROW are within this cover type, including two of the aerial crossings and the ROW for the bypass road. Other cover types abundant in the range include the Great Basin Xeric Mixed Sagebrush Shrublands and the Inter-Mountain Basins Montane Sagebrush Steppe. Each of these cover types would be located within a ROW for an aerial crossing.

According to the SWReGAP, the Great Basin Pinyon-Juniper Woodland cover type is woodlands dominated by a mix of pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*), pure or nearly pure occurrences of pinyon pine, or woodlands dominated solely by Utah juniper. Curl-leaf mountain mahogany (*Cercocarpus ledifolius*) is a common associate. Understory layers are variable. Associated species include shrubs such as greenleaf manzanita (*Arctostaphylos patula*), little sagebrush (*Artemisia arbuscula*), black sagebrush (*Artemisia nova*), big sagebrush (*Artemisia tridentata*), littleleaf mountain mahogany (*Cercocarpus intricatus*), blackbrush (*Coleogyne ramosissima*), and bunch grasses needle and thread grass (*Hesperostipa comata*), Idaho fescue (*Festuca idahoensis*), bluebunch wheatgrass (*Pseudoroegneria spicata*), basin wildrye (*Leymus cinereus*), Great Basin wildrye (*Elymus cinereus*), and muttongrass (*Poa fendleriana*) (SWReGAP 2004).

The Great Basin Xeric Mixed Sagebrush Shrublands are dominated by black sagebrush (mid and low elevations) and little sagebrush (higher elevation) and may be codominated by Wyoming sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) or yellow rabbitbrush (*Chrysothamnus viscidiflorus*). Other shrubs that may be present include shadscale (*Atriplex confertifolia*), Mormon tea (*Ephedra* spp.), rabbitbrush (*Ericameria* spp.), spiny hopsage (*Grayia spinosa*), Shockley's desert-thorn (*Lycium shockleyi*), bud sagebrush (*Picrothamnus desertorum*), greasewood (*Sarcobatus vermiculatus*), and horsebrushes (*Tetradymia* spp.). The herbaceous layer is likely sparse and composed of perennial bunch grasses such as Indian ricegrass (*Achnatherum hymenoides*), desert needlegrass (*Achnatherum speciosum*), Thurber's needlegrass (*Achnatherum thurberianum*), squirreltail (*Elymus elymoides*), or Sandberg bluegrass (*Poa secunda*) (SWReGAP 2004).

The dominant species associated with the Inter-Mountain Basins Montane Sagebrush Steppe are primarily mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and related taxa such as spiked sagebrush (*Artemisia tridentata* ssp. *spiciformis*). Antelope bitterbrush (*Purshia tridentata*) may codominate or even dominate some stands. Other common shrubs include coralberry (*Symphoricarpos* spp.), serviceberry (*Amelanchier* spp.), rubber rabbitbrush (*Ericameria nauseosa*), wax currant (*Ribes cereum*), and yellow rabbitbrush. Most stands have an abundant perennial herbaceous layer (over 25 percent cover), but this system also includes big sagebrush shrublands. Common graminoids include Arizona fescue (*Festuca arizonica*), Idaho fescue, needle and thread grass, muttongrass, slender wheatgrass (*Elymus trachycaulus*), California brome (*Bromus carinatus*), Sandberg bluegrass, spike fescue (*Leucopoa kingii*), tufted hairgrass (*Deschampsia caespitosa*), pinegrass (*Calamagrostis rubescens*), and bluebunch wheatgrass (SWReGAP 2004).

JBR Environmental Consultants, Inc. (JBR) performed a field survey of the proposed bypass road ROW and vicinity on June 14, 2010. The survey findings were generally consistent with the SWReGAP data mapped for the area and thus representative of the habitat common throughout the Pah Rah Range. Representative photographs of the bypass road ROW are contained in Appendix A. The dominant species observed included Utah juniper and Wyoming sagebrush, which coincide with the dominant species common to Great Basin Pinyon-Juniper Woodland and Great Basin Xeric Mixed Sagebrush Shrublands cover types. No pinyon pine grow in the area. This is consistent with the description of Pinyon-Juniper woodland which can be dominated solely by Utah juniper. Shrubs frequently observed within the survey area included Mormon tea and antelope bitter brush, both typical of shrubs found in the SWReGAP data for the Pah Rah Range. Common herbaceous and graminoid species observed during the survey were Great Basin wildrye, squirrel-tail bottle brush, bluebunch wheatgrass, silver lupine (*Lupinus albifrons*), and serviceberry. Cheatgrass (*Bromus tectorum*) was observed throughout the survey area, but generally in low density.

### 3.8 GENERAL WILDLIFE AND FISHERIES

The Nevada Department of Wildlife's (NDOW) Wildlife Action Plan (WAP) characterized Nevada's vegetative land cover into eight broad ecological system groups and linked those with key habitat types, which are further refined into ecological systems characterized by plant communities or associations that support various wildlife species (Nevada Wildlife Action Plan Team 2006). The habitat mapped within the Pah Rah Range and, specifically, the proposed ROW areas, is Great Basin Pinyon-Juniper Woodland dominated by Utah juniper and Wyoming sagebrush (see section 3.7 Vegetation). Typical wildlife species associated with the overstory include Cassin's finch (*Carpodacus cassinii*), western scrub-jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), juniper titmouse (*Baeolophus ridgwayi*), gray flycatcher (*Empidonax wrightii*), Clark's nutcracker (*Nucifraga columbiana*), and the black-throated gray warbler (*Dendroica nigrescens*). Species that are expected to forage in this include Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), big-free-tailed bat (*Nyctinomops macrotis*), Cooper's Hawk (*Accipiter cooperii*). Generalist species that would be found in this community include the greater short-horned lizard (*Phrynosoma hernandesi*) and the pygmy short-horned lizard (*Phrynosoma douglasii*).

Based on an onsite review of the proposed bypass road ROW conducted on June 2010, common bird species that would be expected to occur in the entire project area, include house finches (*Carpodacus mexicanus*), common ravens (*Corvus corax*), sage thrashers (*Oreoscoptes montanus*), western meadowlarks (*Sturnella neglecta*), white-crowned sparrows (*Zonotrichia leucophrys*), Brewers and sage sparrows (*Spizella breweri* and *Amphispiza belli*, respectively), and common poorwills (*Phalaenoptilus nuttallii*). Several raptors, some of which are BLM sensitive species, have been documented in the area and are also expected to use the area to forage for prey, including American kestrel (*Falco sparverius*), golden eagle (*Aquila chrysaetos*), Cooper's hawk, and turkey vulture (Northwest Wildlife Consultants, Inc. 2007).

Agency correspondence letters are contained in Appendix B. According to a letter and available GIS data provided by NDOW, several raptors, specifically, the merlin (*Falco columbarius*) prairie falcon (*Falco mexicanus*), great horned owl (*Bubo virginianus*), Cooper's hawk, American kestrel, and red-tailed hawk (*Buteo jamaicensis*) are known to occur in the Pah Rah Range. The bypass road and the aerial crossings would occur within their habitat. Additionally, osprey (*Pandion haliaetus*), northern harrier (*Circus cyaneus*), long eared owl (*Asio otus*), barn owl (*Tyto alba*), and burrowing owl (*Athene cunicularia*) are known in the southern Pah Rahs and one or more aerial crossings would occur within their habitat. According to NDOW, there are two red-tailed hawk nests in T21N, R22E, Section 2, west of the proposed road bypass.

NDOW also comments that several big game species, specifically, pronghorn antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), California bighorn sheep (*Ovis canadensis californiana*), and black bear (*Ursus americanus*) occur in the Pah Rah Range. The bypass road and the aerial crossings would occur within their habitat. NDOW states that the pronghorn population in the area has been increasing over the past few years. With regard to bighorn sheep, there are documented occurrences on occasion, although currently there is no resident population. There is the potential that self-pioneering bighorn sheep could establish a viable population in the area because there is adequate habitat. The proposed bypass road and the aerial crossings would also occur within occupied year-round mule deer habitat, but not crucial winter habitat.

### **3.9 BLM SPECIAL STATUS SPECIES**

BLM Manual 6840 provides policy and guidance for the conservation of BLM special status species and the ecosystems upon which they depend on BLM-administered lands. BLM special status species are (1) species listed or proposed for listing under the Endangered Species Act (ESA) and (2) species requiring special management considerations to promote their conservation and reduce the likelihood and need for future listing under the ESA, which are designated as Bureau sensitive by the State Director(s).

#### Federally Listed Species (Threatened and Endangered Species)

The Endangered Species Act (ESA) was passed in 1973 to address the decline of fish, wildlife, and plant species in the USA and throughout the world. The USFWS website provides a list of proposed and candidate species for Nevada (Appendix C) and it was reviewed in August 2010. There are no federally-listed plant or animal species in the proposed ROW.

#### BLM Sensitive Species

BLM Manual 6840 establishes policy for the management of BLM sensitive species and their habitat (BLM 2008b). All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau sensitive species. Species designated as Bureau sensitive 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.

It is in the interest of the BLM to undertake conservation actions for such species before listing is warranted. A list of sensitive animal and plant species associated with BLM lands in Nevada was signed in 2003 (BLM 2003). Appendix D contains a list of sensitive wildlife species that may occur based on habitat types in the project area.

Habitat for the greater sage-grouse (*Centrocercus urophasianus*), a BLM sensitive species and a candidate for listing under the ESA, occurs within the Pah Rah Range and the project area. According to available GIS data provided by the Nevada Department of Wildlife (NDOW), the majority of the project area is within the Pah Rah Sage-grouse Population Management Unit (PMU). The proposed bypass road is within delineated greater sage-grouse winter, summer, and nesting habitat, and the aerial crossings are within delineated summer and winter habitat.

According to NDOW lek data, there is one active lek just outside of the Pah Rah PMU and one historic lek on the PMU boundary. A new lek has recently been discovered within the PMU. The letter from NDOW specifies that known greater sage-grouse activity occurs in Section 35 of T22N, R22E, presumably 1 mile west of the proposed bypass road. JBR conducted a field survey of sage grouse habitat on June 14, 2010, that included the proposed ROW and the NW¼ of Section 36 covering the habitat area between Microwave Road and the proposed bypass. The survey found no signs of greater sage-grouse and concluded that greater sage-grouse would tend to utilize other sites. Greater sage-grouse would favor habitat containing lower stature (shorter) sagebrush and fewer trees than what was found on-site. Greater sage-grouse would also favor meadows and spring sites in the PMU based on an evaluation of the existing habitat.

According to NDOW, several BLM sensitive bird species have been documented within or near the project area. Prairie falcon is known to occur within or near the project area and one or more aerial transmission line crossings occur in long eared owl and burrowing owl habitat. Bald eagles (*Haliaeetus leucocephalus*) have been regularly documented in the Pyramid Lake area and may potentially occur along the Truckee River. Golden eagles are present in the Pah Rah Range. The U.S. Fish and Wildlife Service (USFWS) indicated that 10 golden eagle pairs are known to nest within the range (S. Abele, pers. comm., June 4, 2010), are known to move through the area given the projects site location between Pyramid Lake and the Truckee River. Golden eagles typically nest on projections or ledges of cliff faces. JBR surveyed the proposed bypass road

ROW and found no suitable nesting sites (i.e., cliffs or rock outcrops), but foraging habitat exists. No survey was performed of the ROW for the aerial transmission line corner crossings. However, information on file with the USFWS document that 11 active nests are known within 12 miles of the aerial crossings, the nearest on is approximately 3.2 miles.

Both the bald eagle and the golden eagle are protected under the Bald and Golden Eagle Protection Act (Eagle Act) and the MBTA. The Eagle Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." Permits issued by BLM (e.g. ROW) will state that the applicant has the responsibility to be in compliance with the Eagle Act. It is the applicant's responsibility to consult with the USFWS and obtain any necessary permits.

There is potential habitat for bats throughout the Pah Rah Range, and 15 BLM sensitive bat species have been documented in Washoe County according to the Revised Nevada Bat Conservation Plan. The list of bats is included in Appendix D. According to the Nevada Natural Heritage Program (NNHP) habitat may be available for the western small-footed myotis (*Myotis ciliolabrum*) and the Townsend's big-eared bat within the project area (Appendix B). The Townsend's big-eared bat is generally found in desert scrub and pinyon-juniper habitats. The species is a cave dweller and is known to utilize mine shafts and adits, as well as buildings. Small-footed myotis is also found in pinyon-juniper forest habitat, roosting in cliffs, crevices, buildings, caves, and mines. Both bat species may forage in the project area but would not be expected to roost or hibernate due to lack of suitable habitat.

### **3.10 MIGRATORY BIRDS**

Migratory birds include species of birds that may breed in the project area but would migrate south, out of the area, prior to the onset of winter. On January 11, 2001, President Clinton signed Executive Order 13186 placing emphasis on the conservation and management of migratory birds. Migratory birds are protected under the Migratory Bird Treaty Act of 1918, and the Executive Order addresses the responsibilities of federal agencies to protect migratory birds by taking actions to implement the MBTA. BLM management for migratory bird species on BLM-administered lands is based on Instruction Memorandum No. 2008-050 (BLM 2007). Based on this Instruction Memorandum, migratory bird species of conservation concern include "Western BLM Bird Species of Conservation Concern" and "Game Birds Below Desired Conditions" (GBBDC).

The list of migratory bird species of concern that occur or may occur in the project area is presented in Table 4.

**Table 4** Migratory Bird Species Potentially Occurring in the Project Area

Species	Scientific Name	Status
Brewer's sparrow	<i>Spizella breweri</i>	Bird Species of Conservation Concern
Burrowing owl	<i>Athene cunicularia</i>	Bird Species of Conservation Concern
Golden eagle	<i>Aquila chrysaetos</i>	Bird Species of Conservation Concern
Loggerhead shrike	<i>Gymnorhinus cyanocephalus</i>	Bird Species of Conservation Concern
Northern goshawk	<i>Accipiter gentilis</i>	Bird Species of Conservation Concern
Northern harrier	<i>Circus cyaneus</i>	Bird Species of Conservation Concern
Peregrine falcon (transient)	<i>Falco peregrinus</i>	Bird Species of Conservation Concern
Pinyon jay	<i>Lanius ludovicianus</i>	Bird Species of Conservation Concern
Prairie falcon	<i>Falco mexicanus</i>	Bird Species of Conservation Concern
Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>	Bird Species of Conservation Concern
Sage sparrow	<i>Amphispiza belli</i>	Bird Species of Conservation Concern
Swainson's hawk	<i>Buteo swainsoni</i>	Bird Species of Conservation Concern
Mourning dove	<i>Zenaida macroura</i>	GBBDC

The National Audubon Society has established a program of identifying areas of importance for migratory birds. The Audubon Society's Important Bird Areas (IBAs) were designed after being evaluated against a set of standard criteria by a Technical Advisory Committee. The IBA description contains useful information about the birds using a particular area, local land uses, and conservation issues. They carry no legal protection or federal management mandates, but the 2010 Memorandum of Understanding between the USFWS and the BLM states that special designations such as Important Bird Areas (IBAs) that apply to all or part of the planning area will be considered during the planning process and in appropriate plan documents.

The Intermountain West avifaunal biome is the center of distribution for numerous western birds (Rich et al. 2004). Over half of this biome's Species of Continental Importance have 75 percent or more of their population here. Many breeding species from this biome migrate to winter in central and western Mexico or in the Southwestern biome. Shrub-nesting species comprise the largest number of Species of Continental Importance in this biome.

The Pah Rah Range is uniquely situated between Pyramid Lake to the north and the Truckee River to the south. Birds likely cross over the project area when moving between these two water bodies. Water dwelling birds may also move between Pyramid Lake and the Stillwater National Wildlife Refuge located about 50 flight miles east of the project area.

During a baseline survey of the proposed bypass road site on June 14, 2010, JBR observed one migratory bird species of conservation concern, the red-tailed hawk. Golden eagles have been documented in the area (see section 3.9 BLM Special Status Species).

### **3.11 NOXIOUS WEEDS / INVASIVE SPECIES**

Within Nevada, noxious weeds are defined in the Nevada Revised Statutes (NRS) 555.005 as “any species of plant which is, or is likely to be, detrimental or destructive and difficult to control or eradicate.” The Nevada Department of Agriculture’s Noxious Weed website ([http://agri.state.nv.us/PLANT\\_NoxWeeds\\_index.htm](http://agri.state.nv.us/PLANT_NoxWeeds_index.htm)) provides a list of all weeds currently listed as noxious for the State of Nevada.

A noxious weed inventory was performed on June 14, 2010, along the proposed bypass road ROW. No State of Nevada noxious weeds were observed. The inventory documented that cheatgrass, an invasive, non-native species, is common in the surrounding area.

The extent of noxious weeds and invasive species within the proposed aerial crossings and remainder of the project area is unknown. However, the southernmost extent of the transmission line alignment near Interstate 80 was affected by wildfires within the last decade. Wildland fires often result in cheatgrass colonization. Other potential weed sources in the vicinity of the project area include disturbances from other utility corridors and roadways. Two Scotch thistle (*Onopordum acanthium*) rosettes were observed along Microwave Road one mile from the proposed road ROW and was subsequently eradicated by JBR staff. Tall whitetop (*Lepidium latifolium*) is known to occur along much of the Truckee River corridor.

### **3.12 VISUAL RESOURCES**

The BLM uses a Visual Resource Management (VRM) system to identify and manage scenic values on public lands. The potential impacts to visual resources is based on VRM class designations that are based on the scenic value of the landscape, viewer sensitivity to the scenery, and the distance between the viewer and the subject landscape. These management classes identify various permissible levels of landscape alteration while protecting the overall visual quality of the region. They are divided into four levels (Classes I, II, III, and IV). Class I is the most restrictive, and Class IV is the least restrictive (BLM 1986).

The proposed bypass road is located within a Class III zone. The aerial crossings of the transmission line wires are located within Class III and Class IV zones. The degree of modification allowed by each class are as follows (BLM 1986):

Class III Objective 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.

Class IV Objective is to provide for management activities which require major modifications 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.

The scenic character of the area is a natural landscape common in the region. The landscape consists of unaltered open spaces with a backdrop of sloping terrain with low shrubs, bare soil, rock, and an occasional juniper tree (Appendix A photographs). The 60 foot road ROW would not be visible from any direction except to users of the road at close range. The transmission line ROW would not be visible from sensitive receptors since there are no roads or access points near the proposed ROW for the aerial crossings.

## **CHAPTER 4**

### **ENVIRONMENTAL CONSEQUENCES**

This chapter describes the potential direct/indirect/residual/cumulative effects that may result from the Proposed Action, and also identifies appropriate mitigation measures and monitoring needs associated with the specific resources. Terms used in this assessment include “negligible and “minor.” Negligible means a change in current conditions that is too small to be physically measured using normal methods or perceptible to a trained human observer. There is no noticeable effect on the natural or baseline setting. Minor means a change in current conditions that is just measurable with normal methods or barely perceptible to a trained human observer. The change may affect individuals of a population or a small (<10 percent) portion of a resource but does not result in a modification in the overall population, or the value or productivity of the resource.

#### **4.1 ADMINISTRATIVE LAND USES**

The use of the proposed ROW area for the bypass road and overhead transmission line would not preempt the other current land use authorizations identified in Section 3.3. Impacts to existing grantees would be negligible. The BLM would notify all existing ROW grantees of the Proposed Action prior to implementation. Impacts to land use authorizations are not expected.

#### **4.2 HAZARDOUS AND SOLID WASTE**

Impact from solid waste would be negligible because any waste generated by the project would be disposed of appropriately, such as at the Lockwood landfill. No impacts from hazardous substances would occur because no hazardous material would be used or generated by the project. As will be specified in the project BMP plan, VPWC would implement BMPs for spill prevention and cleanup. In the event of oil, fuel, and hydraulic fluid leaks, cleanup would be conducted immediately after detection.

#### **4.3 NATIVE AMERICAN RELIGIOUS CONCERNS**

No tribally identified Tribal Cultural Properties and specific Native American cultural, traditional, or spiritual activity sites or resources are known to exist or have yet been identified by tribal participants. Though the possibility of disturbing Native American gravesites within the project areas is low, inadvertent discovery of gravesites would require VPWC to implement procedures in compliance with Native American Graves Protection Act (NAGPRA), which is codified at 43 CFR 10. Section (3)(d)(1). NAGPRA states that the discovering individual must

notify the land manager in writing of such a discovery. Mitigation Measures would be implemented as described in section 4.11.

#### **4.4 SOILS**

No soil would be disturbed by the aerial transmission line corner crossings. However, the construction of the proposed bypass road would permanently cover 2.71 acres of substrate and would disturb up to 5.03 acres of soil between the edge of the proposed gravel road, up to the limits of the proposed ROW. To minimize adverse effects VPWC would implement BMPs during construction to control erosion and siltation as an environmental protection measure. For example, to stabilize the soil disturbed during construction VPWC would restore disturbed areas on both public and private land portions of the bypass road to pre-construction contours and reseed with the BLM-approved seed mix. Impacts to soils are expected to be minimal.

#### **4.5 VEGETATION**

Implementation of the Proposed Action would result in temporary and permanent impacts on vegetation. In order to construct the bypass road, up to 7.73 acres of vegetation could be removed within the ROW area. However, 5.02 acres would be temporary for the duration of construction and establishment of reclamation seeding. The other 2.71 acres of vegetation would be permanently removed due to displacement by the bypass road surface.

Impacts to vegetation resulting from construction and operation of the Proposed Action, as described above, would generally impact the Great Basin Pinyon-Juniper Woodland vegetation community. This is the dominant and most readily occurring vegetation community in the Pah Rah Range. The permanent removal of 2.71 acres of vegetation from this community would be minimal considering the abundance of similar vegetation adjacent to the proposed ROW area and beyond. Impacts would be further minimized through reclamation of disturbed areas using a BLM-approved seed mix. Seeding may allow for quicker re-establishment of vegetation.

The overhead transmission line would span public land and would not require permanent removal of vegetation. However, during construction and wiring, several pieces of construction equipment would travel overland beneath the transmission line alignment. Overland travel is not expected to have substantial or lasting impact on vegetation because natural regeneration would be capable of replacing the loss of individual plants.

The two middle aerial crossings contain Great Basin Pinyon-Juniper Woodland community and would need vegetation management in compliance with National Electrical Safety Code requirements for safe clearance for electrical wires and North American Electric Reliability Corporation standards for transmission line vegetation management. Trees, which would be predominantly juniper trees, that may interfere with the safe operation of the transmission line

would be pruned or removed as needed over the life of the project. Trees taller than 10 feet would be trimmed or removed from the ROW from about the middle one-third of each span between structures. Minimal impacts are expected because the number of trees that would be cleared is few, and the length of ROW across public land containing Great Basin Pinyon-Juniper Woodland is short (60 feet and 150 feet). Although Utah juniper is a characteristic species of the Great Basin Pinyon-Juniper Woodland community, trees are interspersed throughout the community and are not found in great density. Additionally, the zone of tree trimming/clearing would be generally limited to the midspan area and not the entire span.

#### **4.6 GENERAL WILDLIFE AND FISHERIES**

Animals may be affected by construction and operation because of habitat loss and modification, and may exhibit behavioral avoidance due to disturbance from human activity, vehicle traffic, and noise. Approximately 2.71 acres of wildlife habitat would be permanently lost through the construction of the bypass road, and 5.01 acres of habitat would be disturbed but later reclaimed (for more detail on reclamation see section 4.5 Vegetation). The Great Basin Pinyon-Juniper Woodland habitat that would be impacted, both temporarily during construction and permanently for the life of the project, are common to abundant throughout the area. Considering the very small amount of habitat that would be lost, and the readily available abundance of similar habitat nearby, impacts to wildlife habitat, including big game species, would likely be minimal and have no impact to wildlife species populations. Surface disturbance results in high potential for the introduction and spread of non-native invasive weeds, and the transport of noxious weeds would be an ongoing issue for the lifetime of the project. Changes in plant community composition from non-native plants can negatively affect wildlife by changing characteristic fire regimes, habitat structure, and available forage. These effects are likely to be minimal because a comprehensive noxious weed plan would address how to treat and control noxious weeds if they are found within the project area (see section 4.9 Noxious Weeds/Invasive Species). The proposed project would not affect any water sources, riparian areas/wetlands, or riparian vegetation in the proposed ROW.

Direct injury or mortality of smaller, less visible and less mobile wildlife species could occur during construction if those species are present, particularly small reptiles. However, this would be expected to occur infrequently as construction would progress in a general linear path allowing wildlife the opportunity to escape before construction machinery reaches their location. Individual animals may be displaced during project implementation because of disturbance. Wildlife would be anticipated to either temporarily or permanently relocate to nearby areas as construction progresses through the habitat. There are large amounts of similar habitat available in the vicinity of the project area that individuals could move into. There could be minimal impacts to individual animals at the local level, but impacts would not affect wildlife species populations.

The proposed power transmission line may increase the potential of electrical shock for birds, especially for larger raptor species. Larger species have wider wing-spans that may contact two wires, a wire and pole structure, or other electrical ground. Overhead wires could also provide perching sites for raptors and ravens, resulting in increased predation on smaller wildlife species in the area, including greater sage-grouse. Impacts would be mitigated by installing anti-perching devices on transmission line structures to prevent electrical shock and discourage perching and nesting on wires (see section 4.11 Mitigation Measures).

#### **4.7 BLM SPECIAL STATUS SPECIES**

Impacts to sensitive species would be similar to those described for General Wildlife and Fisheries in section 4.6. The project area involves very little area and a loss of this amount of habitat is a tiny fraction of the habitat available in the general area. Displacement of individual animals during project implementation would be short-term or there is plenty of similar habitat available in the vicinity of the project area that individuals could move into.

Approximately 2.71 acres of greater sage-grouse nesting, summer, and winter habitat would be covered by the road, and an additional 5.03 acres would be temporarily lost until disturbed areas are successfully revegetated. The proposed project would not affect any water sources, riparian areas/wetlands, or riparian vegetation. Human activity associated with construction is not expected to disturb greater sage-grouse during the breeding season because the bypass is more than 3 miles from an active lek. Outside of the breeding season and within suitable greater sage-grouse habitat, sage-grouse using the project area could potentially be displaced into adjacent undisturbed habitat. Impacts to greater sage-grouse would likely be minimal because the area of habitat loss and modification is very small, no water sources would be affected, and because of the protective mitigation measures identified in section 4.11.

No nests, including those of bald eagle, golden eagle, prairie falcon, or loggerhead shrike, were found in the bypass road ROW area. Forage area would be lost by road construction but is not expected to measurably affect these species because the area of forage area is minimal and abundant forage is available outside the project area.

A few juniper trees may be removed during construction of the roadway project. These trees represent potential foraging habitat for juniper titmice and may be used by pinyon jays. Pinyon-juniper habitat is widespread in the Pah Rah Range, and the loss of a few trees during the construction of the Proposed Action is not expected to affect the populations of juniper titmice or pinyon jays in the area.

Although no roosting habitat for the Townsend's big-eared bat and small-footed myotis were found, the project would result in the permanent and temporary loss of bat foraging habitat and up to 5.03 acres would be temporarily disturbed until the disturbance is successfully revegetated.

Loss of habitat would have minimal impacts because the area is small, and abundant forage habitat is available outside the project area.

Human activity associated with construction of the aerial corner crossings are not expected to impact a lek because they are more than 3 miles away, as verified by NDOW GIS data. However, the installation of transmission line structures and wires would likely increase the perching opportunities for raptors and ravens and could potentially increase predation on greater sage-grouse. Studies in California identified three factors associated with power lines that could decrease sage-grouse numbers or lek use, either singly or in combination: (1) raptors, especially immature golden eagles, hunt more efficiently from perches such as transmission line structures and may harass or take adult grouse near or on leks; (2) common ravens may use the structures as perches and nest sites and prey on eggs and young of sage-grouse near leks; and (3) sage-grouse may respond to structures as potential raptor perch sites and thus abandon, or decrease their use of, a lek from which structures can be seen (Rowland 2004).

To mitigate for impacts to greater sage-grouse, VPWC would install anti-perching devices along the entire transmission line in order to discourage raptors and ravens from utilizing power lines as a nesting or perching substrate using *Suggested Practices for Avian Protection on Power Lines: The State of the Art 2006* (APLIC 2006) and *Avian Protection Plan Guidelines* (APLIC and USFWS 2005); see section 4.11 Mitigation Measures.

Based on information provided by USFWS, no golden or bald eagle nests or nesting habitat are known in the transmission line corner crossing ROW. Since the ground would not be disturbed, no forage area for special status raptors would be lost, but the presence of transmission lines could potentially cause mortality from electrocution. To minimize impacts to eagles, VPWC would install anti-perching devices and avian safe design features using established guidelines (APLIC and USFWS 2005, APLIC 2006) along the entire transmission line. To ensure that eagles are avoided and minimized to the maximum extent practicable, use of these references would be required as a mitigation measure; see section 4.11 Mitigation Measures.

#### **4.8 MIGRATORY BIRDS**

Migratory birds utilize the project area for foraging and nesting. Impacts to migratory bird species of conservation concern would be similar to those described for General Wildlife and Fisheries in section 4.7. The project area involves very little area and a loss of this amount of habitat is a tiny fraction of the habitat available in the general area. Displacement of individual animals during project implementation would be short-term or there is plenty of similar habitat available in the vicinity of the project area that individuals could move into.

Construction of the road and stringing conductor wires on to poles could disturb nesting migratory birds if conducted during the migratory bird nesting season (approximately March 1 to July 31). If construction occurs during the nesting season, mitigation measures would be

implemented as described in section 4.11 Mitigation Measures. A preconstruction survey for nesting migratory birds would be conducted by a qualified biologist. If active nests are found, nests would be avoided until the nesting attempt has been completed.

Once constructed, the transmission line would have indirect effects to nesting migratory birds. Overhead wires would provide perching sites for raptors and ravens, resulting in increased predation on birds and bird nests in the vicinity. Impacts would be mitigated by installing anti-perching devices on transmission line structures; see Mitigation Measures 4.12.

#### **4.9 NOXIOUS WEEDS / INVASIVE SPECIES**

The construction of the bypass road would temporarily disturb up to 5.03 acres of public land from the edge of the permanent road bed to the limits of the ROW. Ground disturbance increases the risk of colonization by noxious and invasive weeds. While no Nevada state-designated noxious weeds were identified in the bypass road survey area, the proposed ROW would be prone to colonization by weeds because it is for a roadway on which weed seeds can be transported. With regard to the transmission line ROW areas, no ground disturbance other than overland travel between poles would occur at the aerial crossing locations. Since the travel route from pole to pole would not be bladed or otherwise improved, there would be limited opportunity for the transport of weed seeds.

Changes in plant community composition from non-native plants can negatively affect wildlife by changing characteristic fire regimes, habitat structure, and available forage. To minimize adverse effects along the bypass road ROW, VPWC would implement environmental protection measures to reduce the potential for the establishment of noxious weeds and spread of invasive species. VPWC would reseed all areas disturbed by construction on both public and private land portions of the roadway with a BLM-approved erosion control seed mix. VPWC would also implement other BMPs during construction specifically intended to reduce the potential for weed establishment. For example, only certified weed-free hay would be used if hay bales are used for erosion control, and construction equipment would be washed prior to construction.

The transport of noxious weeds throughout the project area will be an ongoing issue for the lifetime of the project. Should noxious weeds be found within the ROW in the future, VPWC would develop and implement a comprehensive noxious weed plan of operation; see section 4.11 Mitigation Measures.

#### **4.10 VISUAL RESOURCES**

Implementation of the Proposed Action, specifically, the construction of the bypass road, would result in 7.73 acres of new disturbance and represent an alteration of the existing landscape. Approximately 2.71 acres of natural vegetation would be replaced by gravel road, and the

remaining 5.02 acres would be reseeded after construction. No ground disturbance would result on BLM land associated with the aerial crossings; however, transmission line wires would be a new feature viewed on the immediate landscape. Depending on the time of day and the angle of the sun, the lines may be more visible or less visible to the casual observer. There are no sensitive receptors within the immediate proximity to either the bypass road or the aerial crossings.

Visual impacts resulting from the Proposed Action would be minimal because the bypass road is sited in a location where it would be seen mostly by users of the road and there is no new disturbance associated with the transmission line crossing. Both actions, the bypass road and the aerial crossings, would represent a minimal change to the landscape and are not likely to dominate the view of the casual observer. Improvements to the existing road would be in conformance with BLM objectives of VRM Class III. Aerial transmission line crossings would be in conformance with BLM objectives of VRM Classes III and IV.

The visibility of surface disturbances made during construction of the bypass road would be minimized through reseeding disturbed areas using a BLM-approved seed mix. Seeding would allow for the re-establishment of vegetation and erosion control.

#### **4.11 MITIGATION MEASURES**

The following mitigation measures would be implemented in conjunction with the Proposed Action. The measures are designed to reduce the severity of impacts associated with the Proposed Action to below potentially significant thresholds.

##### Cultural and Native American Resources

1. The Archaeological Resources Protection Act, as well as the Native American Graves Protection and Repatriation Act, provides protection for historic properties, cultural resources, and Native American funerary items, gravesite, and/or physical remains located on federal land. Section (3)(d)(1) of NAGPRA states that the discovering individual must notify the land manager in writing of such a discovery. In addition, ARPA provides for the assessment of criminal and/or civil penalties for damaging cultural resources. Any unplanned discovery of surface and/or subsurface cultural properties, items, or artifacts (e.g., stone tools, projectile points, etc.), human remains, items of cultural patrimony, sacred objects, or funerary items, requires that all activity in the vicinity of the find ceases and that notification be made to the BLM Sierra Front Field Office by telephone, with written confirmation to follow, immediately upon such discovery. The location of the find should not be publically disclosed and any human remains must be secured and preserved in place until a Notice to Proceed is issued by the authorized officer. BLM Sierra Front Field Office would respond in a timely manner to NVWC's notification.

## BLM Special Status Species and Migratory Birds

2. To protect golden eagles and other raptors from electrocution and to protect greater sage-grouse from a potential increase in predation by raptors and ravens, the power line and poles would be configured to minimize electrocutions and visual flight diverters and perch and nesting deterrents would be utilized. Design modifications would follow established guidelines (APLIC and USFWS 2005, APLIC 2006).
3. To protect greater sage-grouse, if construction occurs from March 1 to May 15 a preconstruction survey for nesting sage grouse would be conducted by a qualified biologist. If nests are located, or if other evidence of nesting observe, avoidance measures described in Mitigation Measure #4 below would be implemented.
4. To protect migratory birds during nesting season, if construction occurs from March 1 to August 1 a preconstruction survey for nesting migratory birds would be conducted by a qualified biologist. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, an appropriate avoidance buffer area, to be determined for the species in conjunction with the BLM, would be delineated and the entire area avoided, preventing destruction or disturbance to nests until they are no longer active.

## Noxious Weeds

5. If noxious weeds are found, a comprehensive noxious weed plan of operation would be funded and implemented by VPWC. The plan would include surveys, treatments and restoration, and would interface with other federal, state, tribal and county weed programs. All weed treatments on BLM-administered land implemented by VPWC would be in conformance with BLM Manual 9011 and the Vegetation Treatments Using Herbicides in 17 Western States PEIS. Weed treatment using chemical control methods would require the preparation of a Pesticide Use Proposal, Pesticide Application Record and Pesticide Use Report. Biological Control methods would require the preparation of a Biological Control Agent Release Proposal and Biological Control Agent Release Record.

### **4.12 NO ACTION ALTERNATIVE**

Under the No Action Alternative, the proposed access road and the transmission line would not be constructed. There would be no impact to the existing environment.

#### **4.13 RESIDUAL IMPACTS**

Residual impacts are those that would remain after mitigation is successfully implemented. With the successful implementation of the environmental protection measures and BMPs incorporated into the Proposed Action, the project would result in minimal residual impacts. There would be permanent loss of approximately 2.71 acres of vegetation, wildlife habitat, and soils within the footprint of the new bypass road; however, there are no biologically unique or rare communities that would be lost.

Under the No Action, no residual impacts would occur.

## **CHAPTER 5 CUMULATIVE EFFECTS**

### **5.1 CUMULATIVE IMPACTS ASSESSMENT**

A cumulative impact is defined under NEPA as “the change in the environment which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other action” (40 CFR Part 1508.7). “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (NEPA 40 CFR Part 1508.7).

Resource topics considered under the cumulative effects analysis include all resources identified in Table 2 for which the Proposed Action may cause direct or indirect impacts. Since minimal to negligible impacts were identified for Land Use Authorizations, Cultural Resources, Native American Religious Concerns, Solid Waste, Water Quality, Grazing Management, and Visual Resources, these resources are not addressed in the cumulative impacts assessment. Cumulative impacts are addressed for the following resources:

- Vegetation
- Noxious Weeds/Invasive Species
- Wildlife
- BLM Special Status Species
- Migratory Birds

It should be noted that aerial crossings of the transmission line over BLM land would not affect vegetation or noxious weeds/invasive species. Therefore, they are not addressed in the discussion of cumulative impacts of the transmission line crossings.

The area of cumulative effects analysis was based on the area in which project elements would have a measureable effect. Thus, two areas are considered in the cumulative effects analysis (Figures 4 and 5):

- All land in any direction within 200 feet of bypass road ROW centerline (37 acres)
- All land in any direction within 2 miles of each aerial transmission line crossing (15,914 acres)

The greater area of analysis for the transmission line crossings is based on a review of scientific literature on sage-grouse indicating that aerial wires can provide potential perching sites for predatory birds which could increase mortality of sage grouse. Connelly et al. recommend avoiding building power lines that provide perch structures within two miles of sage-grouse

seasonal habitats (Connelly 2000). Connelly et al. also identify that energy facilities, including road construction, adversely affects sage-grouse, but provide no recommendations for set-back distances from roads.

There is a considerable amount of interest in wind energy development in the project area. Each project will have its own approval process and a site specific review of potential environmental impacts separate from this project. For actions requiring BLM approval, the environmental analysis would include an assessment of cumulative impacts. For unavoidable impacts, BLM would require the project applicant to minimize and mitigate potential adverse effects, thus minimizing cumulative losses.

## **5.2 VEGETATION AND NOXIOUS WEEDS/INVASIVE SPECIES**

The area of cumulative effects analysis for vegetation and noxious weeds/invasive species is the area affected by the bypass road encompassing 37 acres (Figure 4). No past or present actions have impacted the Great Basin Pinyon-Juniper Woodland vegetation community contained in the analysis area. Completion of the private land portion of the bypass road, the only known reasonably foreseeable action, would cause the permanent loss of 0.32 acres of vegetation, less than 1 percent of the analysis area.

The Proposed Action would result in the loss of 2.71 acres of vegetation (7.4 percent of the cumulative effects analysis area) in an area that has experienced negligible cumulative losses from past, present, and future cumulative actions. However, the cumulative impact of the Proposed Action to vegetation would be minor because the loss of Great Basin Pinyon-Juniper Woodland vegetation community is small and the community type is common in the region. Additionally, project impacts would be minimized through reseeded areas disturbed from construction and noxious weeds would be controlled through implementation of a comprehensive noxious weed plan.

A survey of the bypass analysis area found that invasive cheatgrass was as a common component in the understory, but no noxious weeds were present. This would be expected because the area lacks disturbance from past cumulative actions. The reasonable foreseeable construction of the bypass road would introduce the risk of colonization by noxious weeds in the future because weed seeds can be transported on vehicles using the proposed road. Within the cumulative effects analysis area (i.e., 200 feet buffer from the centerline of proposed bypass road) the construction of the bypass road on private land (0.08 miles) would have a small cumulative effect. The construction of the public land portion of the bypass road (0.64 mile) would have a greater effect because the area of construction disturbance would be greater and more roadside area would be created where weeds could potentially colonize. Effects of the Proposed Action on vegetation and noxious weed/invasive species are assessed in further detail in sections 4.5 and 4.9 respectively.

The cumulative impact of the Proposed Action on the risk of noxious weed/invasive species establishment would be minimized through minimization and mitigation measures used to protect vegetation described above. VPWC would reseed disturbed areas and would implement a comprehensive noxious weed plan that requires monitoring and eradication of noxious weeds.

### **5.3 GENERAL WILDLIFE, MIGRATORY BIRDS, AND BLM SPECIAL STATUS SPECIES**

The area of cumulative effects analysis for wildlife, migratory birds, and BLM special status species considers two areas: the 37 acres of wildlife habitat affected by the bypass road and the 15,914 acres of wildlife habitat affected by the aerial transmission line corner crossings.

#### Bypass Road Area

No past or present cumulative actions have affected wildlife habitat surrounding the proposed bypass road. The only known action anticipated in the reasonable foreseeable future would be the construction of bypass road. The construction of the bypass road on public and private land would result in the loss of 3.13 acres of wildlife habitat (8.2 percent of the assessment area). The Proposed Action would contribute to the majority of impacts, impacting 2.71 acres of habitat on 7.3 percent of the assessment area. Adverse effects of the Proposed Action on wildlife, migratory birds, and BLM special status species would include the loss of forage, cover, and nesting habitat; see sections 4.6, 4.7 and 4.8 for further detail.

The cumulative impact of the Proposed Action to wildlife would be minor because amount of habitat that would be lost is small, the displacement of individual animals would be short-term and similar available habitat available nearby. Cumulative impacts from the Proposed Action to wildlife habitat would be minimized through reseeded of areas disturbed by construction and controlling noxious weeds through a comprehensive noxious weed plan. If construction of the bypass road occurs during the nesting season, cumulative impacts to nesting migratory birds would be minimized through mitigation which would require a pre-construction survey to be performed and nests, if found, would be avoided until they are no longer active.

#### Transmission Line Corner Crossings Area

Within the transmission line assessment area, 1,599 acres (10.0 percent) of wildlife habitat has been lost or modified by past and present actions, specifically, wildland fires, a utility corridor, transmission lines, and industrial development along Interstate 80 (Table 5). Most of the impacts are from past wildland fires which have affected 1,516 acres of habitat covering 9.5 percent of the analysis area. Past fires have converted the pre-fire vegetation community into a community that supports fewer shrubs and trees, likely diminishing the quality of habitat for wildlife species that depend on the Great Basin Pinyon-Juniper Woodland community. Shrub and tree cover is important to a wide variety of wildlife, including migratory birds and BLM special status species, because it provides nesting and roosting structures, protection from predators, thermal cover, forage, and food sources (Wildlife Action Plan Team 2006). The degree to which fire has affected woodland-dependent species is unknown.

The construction of the various buried utilities and overhead transmission lines near the East Tracy electric power generation facility and substation has disturbed 26.7 acres habitat and has modified the habitat by introducing 10.9 miles of aerial transmission lines into the landscape. As described in section 4.7 BLM Special Status Species, transmission lines can provide perch sites for raptors and ravens and would potentially increase the predation on greater sage-grouse, small mammals, and smaller birds and their nests. Additionally, transmission lines are known to increase the risk of mortality of avian species from collisions and electrocutions.

The construction of the reasonably foreseeable 120 kV transmission line in its entirety (public and private segments) would have less than an acre of habitat loss, but would introduce 7 miles of new transmission line, increasing the potential for predation of smaller birds and mammals by raptors and avian mortality by 65%. However, VPWC would minimize cumulative impacts by designing and constructing the transmission line using *Suggested Practices for Avian Protection on Power Lines: The State of the Art 2006* (APLIC 2006) and *Avian Protection Plan Guidelines* (APLIC and USFWS 2005).

The contribution of Proposed Action to the number of miles of transmission lines is very small and incremental (0.31 miles), and no losses to habitat would occur. Although cumulative effects of the Proposed Action would be minor, mitigation measures requiring compliance with avian protection guidelines would ensure cumulative impacts are minimized to the maximum extent.

No cumulative effects would occur with the No Action Alternative.

## **CHAPTER 6 CONSULTATION AND COORDINATION**

### **6.1 PUBLIC REVIEW**

Comments on the *Virginia Peak Wind Right-of-Way Application* EA and draft FONSI will be accepted until the close of business on November 17, 2010. Comments can also be sent by email to: [csievers@blm.gov](mailto:csievers@blm.gov). The EA and draft FONSI have been posted at [http://www.blm.gov/nv/st/en/fo/carson\\_city\\_field/blm\\_information/nepa.html](http://www.blm.gov/nv/st/en/fo/carson_city_field/blm_information/nepa.html). Hard copies of the EA are also available at the Carson City District Office.

### **6.2 REPORT PREPARERS**

This Environmental Assessment was prepared by the following individuals:

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Catherine Clark, Project Manager  
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Dave Worley, Wildlife Biologist  
Travis Branzell, Wildlife Biologist  
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Nevada Wind, LLC  
Dawn Marsino, Permitting Specialist  
Jim Forbes, GIS Specialist

BLM  
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Ken Nelson, Realty Specialist  
Brian Buttazoni, Planning and Environmental Coordinator  
Pilar Ziegler, Wildlife Biologist  
Jim Carter, Lead Archaeologist  
Jim Schroeder, Hydrologist  
Ryan Leary, Rangeland Management  
Steep Weiss, Visual Resource Management/Forestry  
Dean Tonenna, Natural Resource Specialist

### **6.3 PERSONS, GROUPS, AND AGENCIES CONSULTED**

Kenny Pirkle, Nevada Department of Wildlife  
Eric Miskow, Nevada Natural Heritage Program  
Steve Abele, U.S. Fish and Wildlife Service  
Robert Williams, U.S. Fish and Wildlife Service

## CHAPTER 7 REFERENCES

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## **FIGURES**

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R19E R20E

R20E R21E

R21E R22E

R22E R23E

R23E R24E

T23N

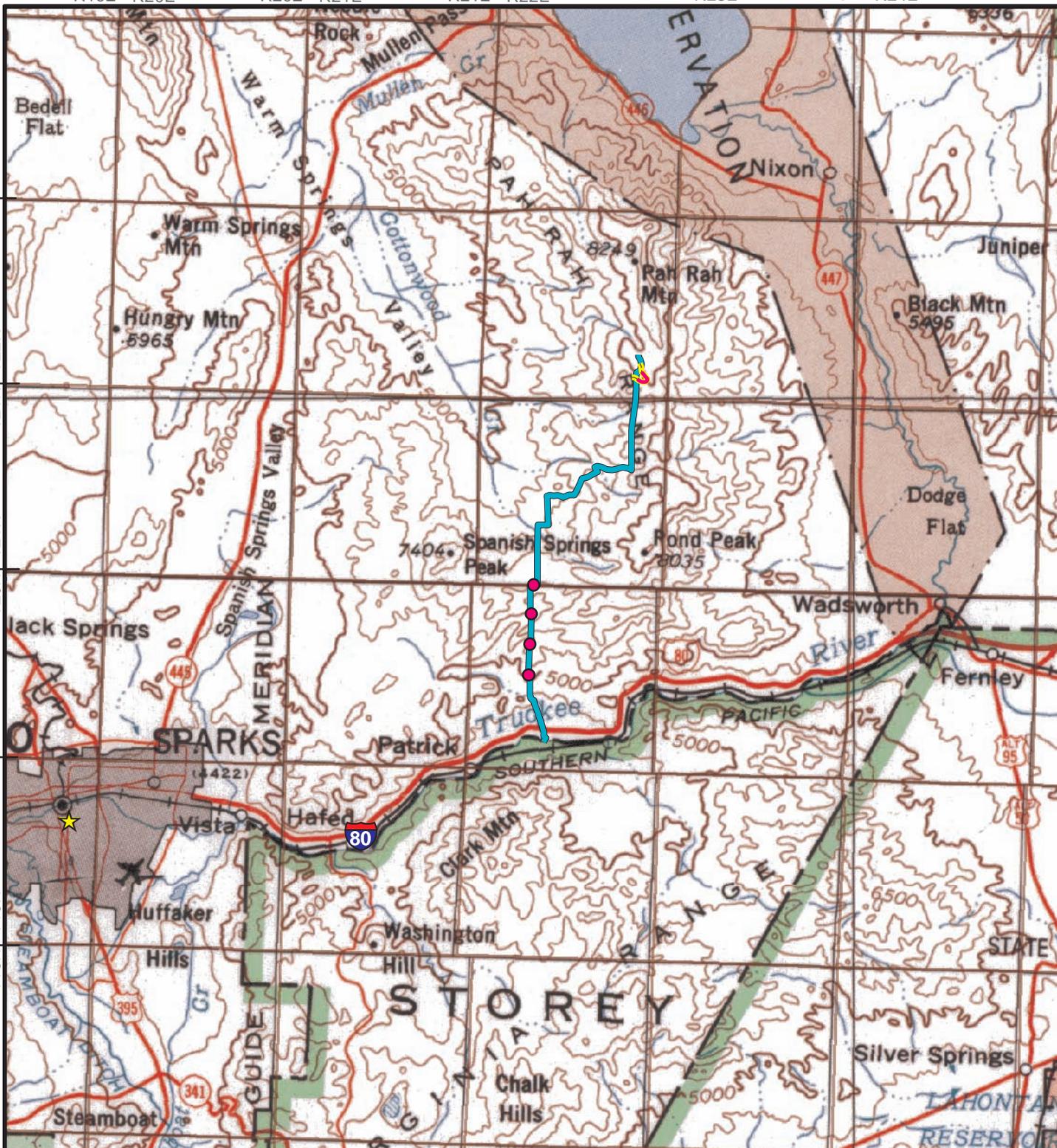
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T20N

T19N

T18N



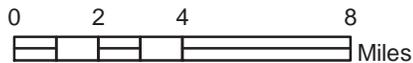
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MAP DATE: August 18, 2010

- Proposed Bypass Road ROW
- Proposed Transmission Line ROW
- Proposed Bypass Road
- Proposed Transmission Line



IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED



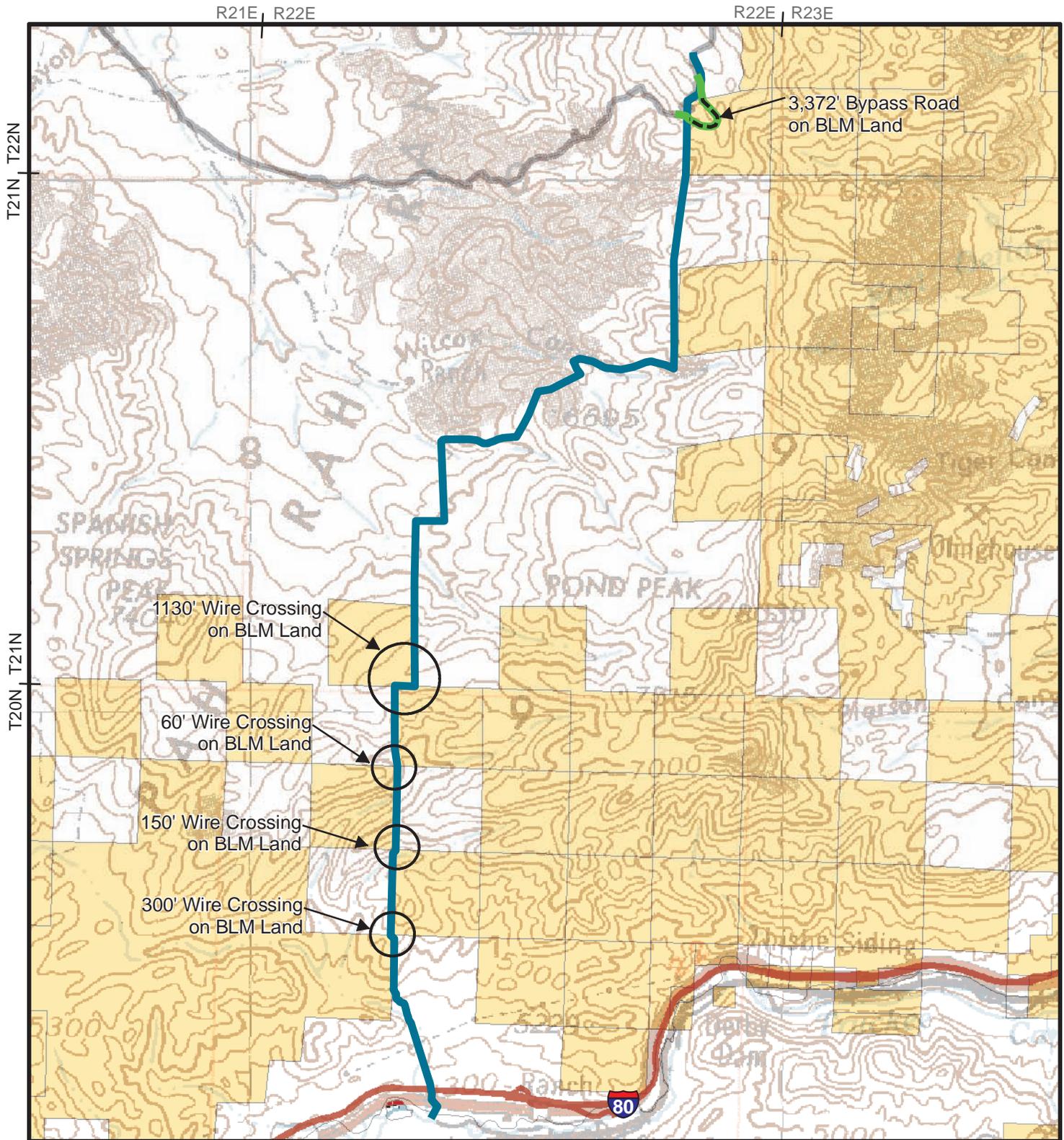
### VIRGINIA PEAK WIND COMPANY RIGHT-OF-WAY APPLICATION

### FIGURE 1 PROJECT VICINITY



BLM Carson City District  
 Sierra Front Field Office  
 5665 Morgan Mill Road  
 Carson City, NV 89701

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.



BASE IMAGE: USGS 1:250,000-Scale Topographic Map MAP DATE: August 18, 2010

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>--- Proposed Bypass Road ROW</li> <li>— Proposed Bypass Road</li> <li>— Proposed Transmission Line</li> <li>— Quaking Aspen/Microwave Road</li> </ul> | <p><b>Land Status</b></p> <ul style="list-style-type: none"> <li>Public</li> <li>Private</li> </ul> |
|--|---|



IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED

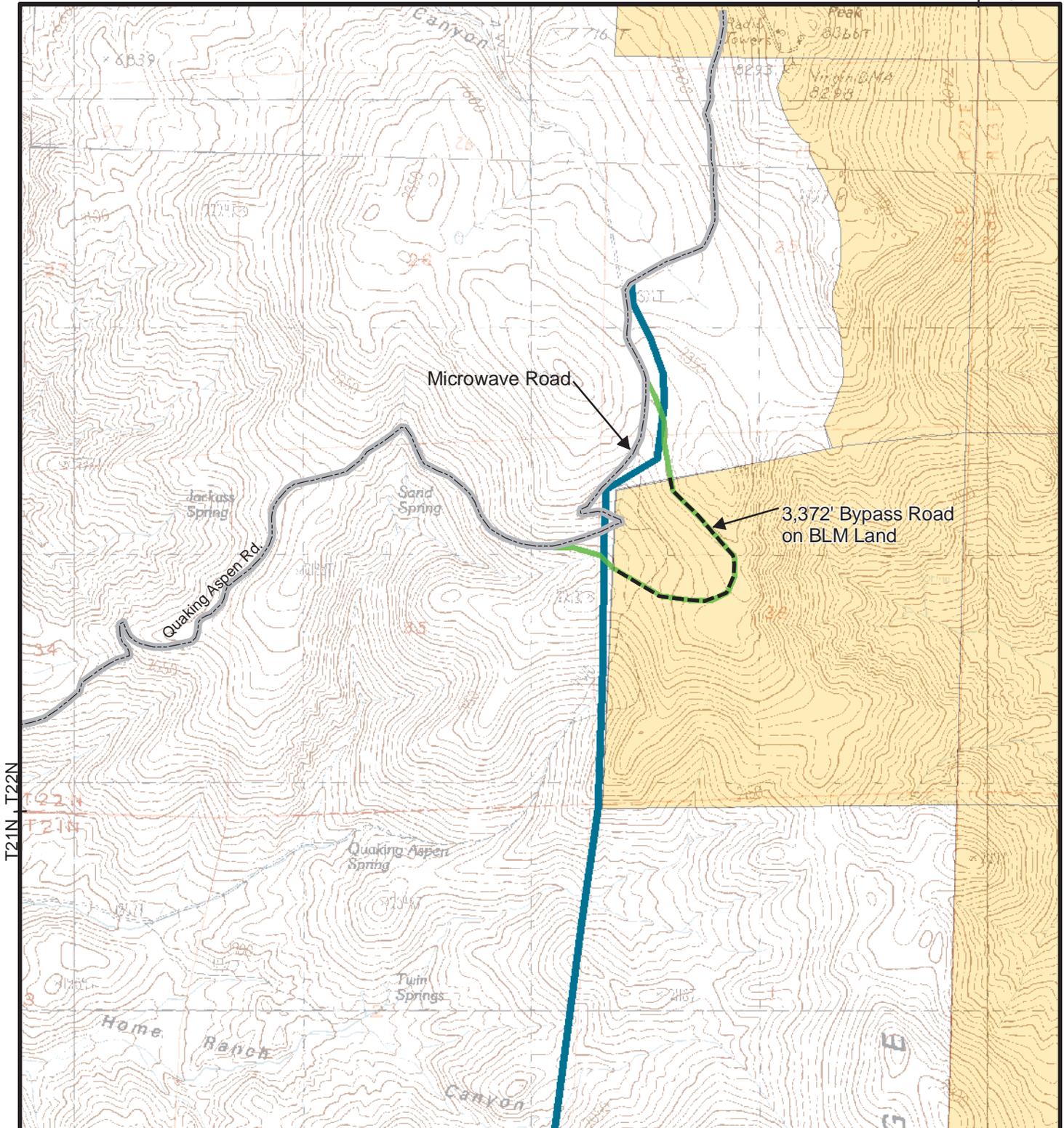
## VIRGINIA PEAK WIND COMPANY RIGHT-OF-WAY APPLICATION

### FIGURE 2 LAND STATUS



BLM Carson City District  
Sierra Front Field Office  
5665 Morgan Mill Road  
Carson City, NV 89701

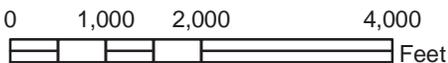
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.



BASE IMAGE: USGS 1:24,000-Scale  
 Topographic Maps: Olinghouse, Pah Rah Mountain

MAP DATE: August 18, 2010

- |                                |                    |
|--------------------------------|--------------------|
| --- Proposed Bypass Road ROW   | <b>Land Status</b> |
| --- Existing Access Road       | Public             |
| --- Proposed Bypass Road       | Private            |
| --- Proposed Transmission Line |                    |



IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED

## VIRGINIA PEAK WIND COMPANY RIGHT-OF-WAY APPLICATION

### FIGURE 3 EXISTING ACCESS ROAD



BLM Carson City District  
 Sierra Front Field Office  
 5665 Morgan Mill Road  
 Carson City, NV 89701

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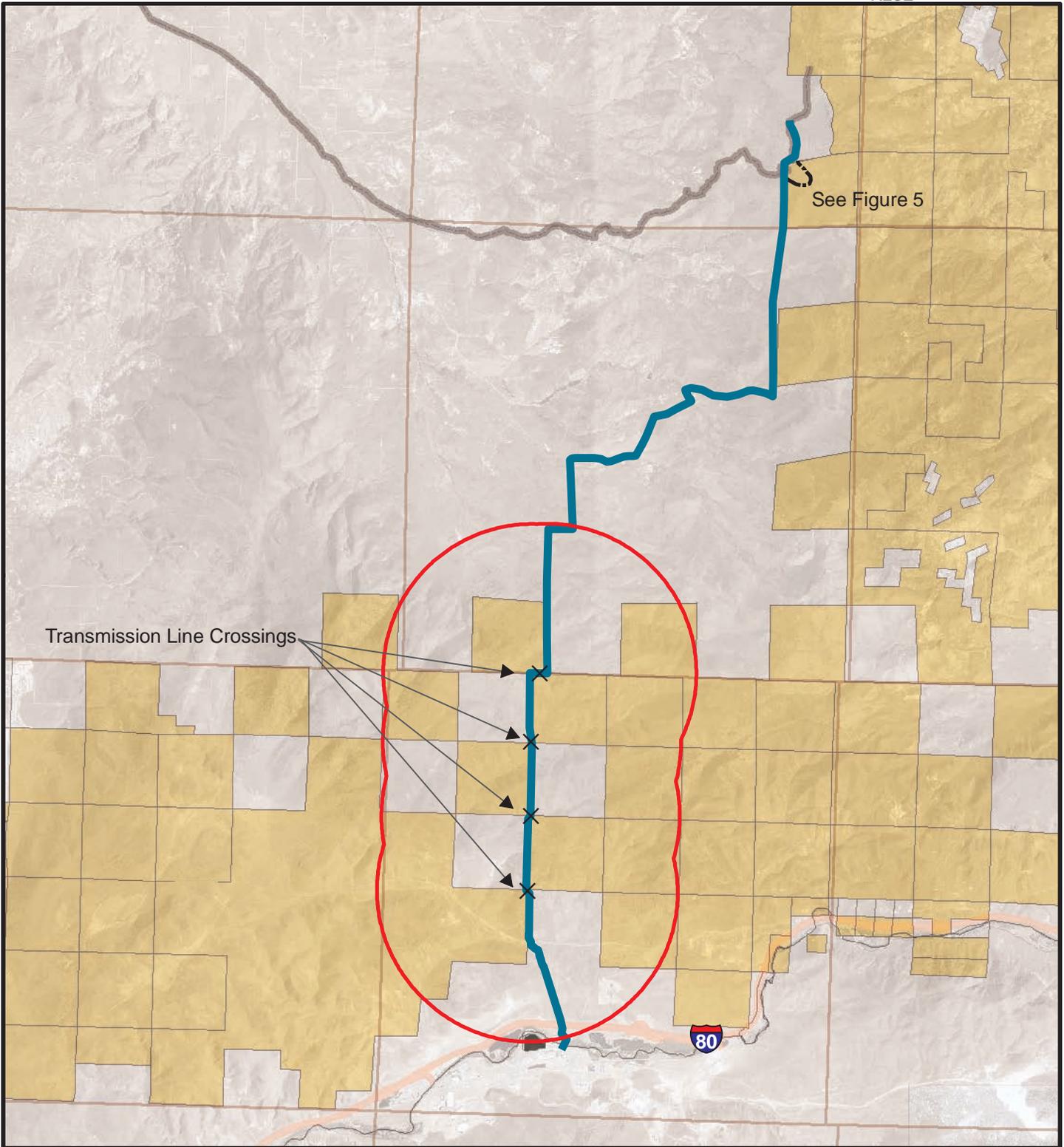
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R22E R23E

T21N T22N

T20N T21N

T19N T20N



BASE IMAGE: 2006 NAIP IMAGRY

MAP DATE: August 18, 2010

--- Proposed Bypass Road

— Proposed Transmission Line

--- Quaking Aspen/Microwave Raod

□ Study Area - 2 Mile From Line

**Land Status**

Public

Private

Affected Resources:

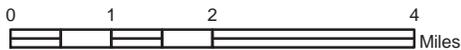
Wildlife

BLM Special Status Species

Migratory Birds



IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED



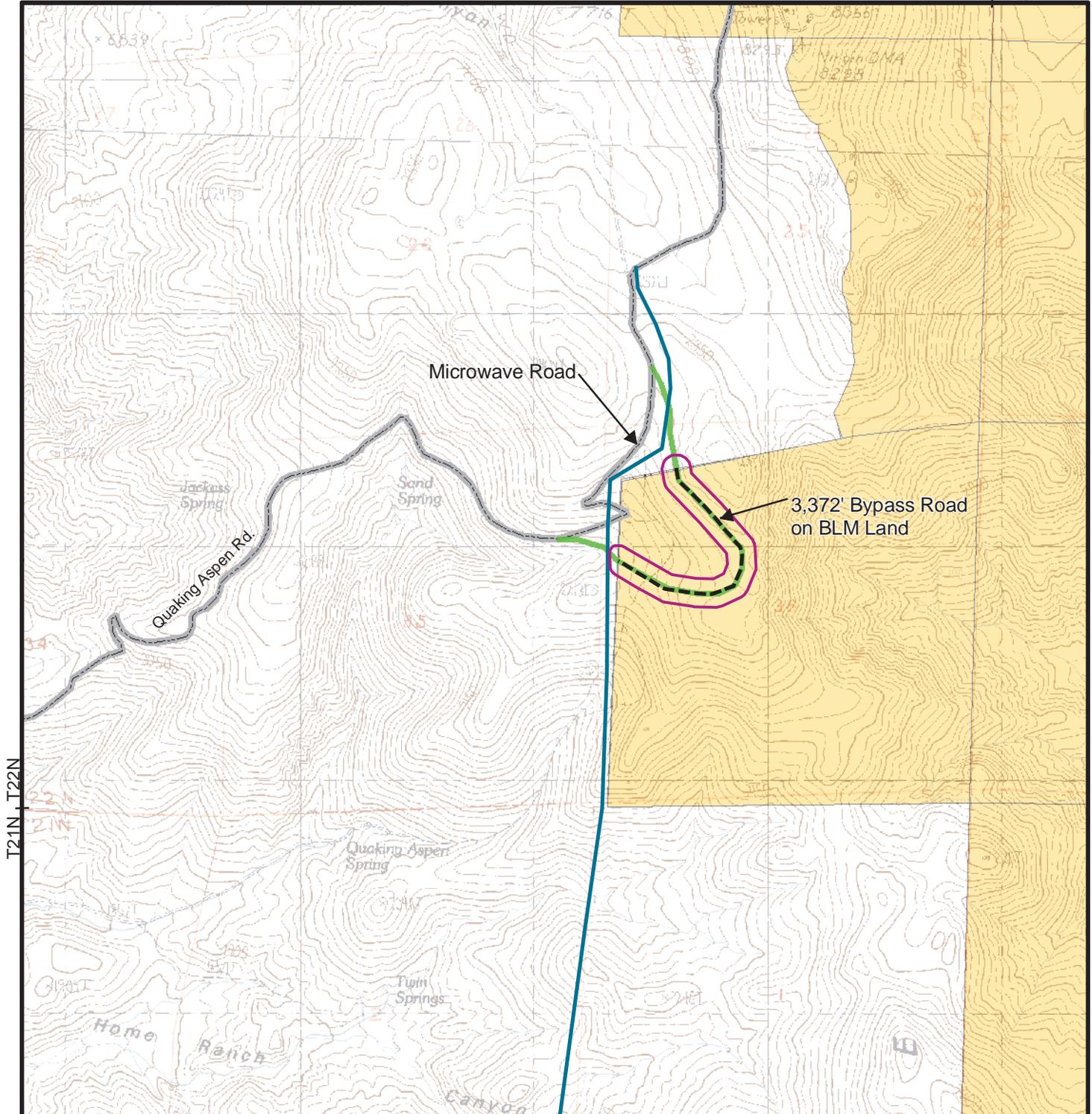
**VIRGINIA PEAK WIND COMPANY  
RIGHT-OF-WAY APPLICATION**

**FIGURE 4  
TRANSMISSION LINE  
CUMULATIVE EFFECTS STUDY AREA**



BLM Carson City District  
Sierra Front Field Office  
5665 Morgan Mill Road  
Carson City, NV 89701

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.



T21N, T22N

BASE IMAGE: USGS 1:24,000-Scale Topographic Maps: Olinghouse, Pah Rah Mountain

MAP DATE: August 18, 2010

- Study Area - 200' From Centerline
- Proposed Bypass Road ROW
- Proposed Transmission Line
- Proposed Bypass Road
- Existing Access Road

- Land Status**
- Public
  - Private

Affected Resources:

- Vegetation
- Noxious Weeds
- Wildlife
- BLM Special Status Species
- Migratory Birds



IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED

## VIRGINIA PEAK WIND COMPANY RIGHT-OF-WAY APPLICATION

### FIGURE 5 BYPASS ROAD CUMULATIVE EFFECTS STUDY AREA



BLM Carson City District  
Sierra Front Field Office  
5665 Morgan Mill Road  
Carson City, NV 89701

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.

# **APPENDIX A**

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Photographs

**Site Photographs**  
**June 14, 2010**



Bypass Road ROW. Pinyon-Juniper Woodland vegetation cover type. The project ROW contains juniper trees, but not pinyon pine.



Bypass Road ROW

# **APPENDIX B**

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Agency Correspondence



# United States Department of the Interior

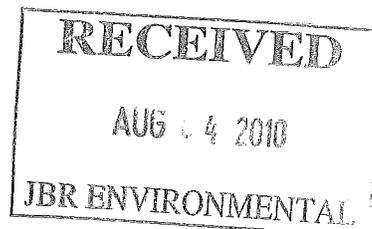
## Pacific Southwest Region FISH AND WILDLIFE SERVICE

Nevada Fish and Wildlife Office  
1340 Financial Blvd., Suite 234  
Reno, Nevada 89502  
Ph: (775) 861-6300 ~ Fax: (775) 861-6301



July 30, 2010  
File No. 2009-FA-0039

Mr. George Dix  
JBR Environmental Consultants, Incorporated  
595 Double Eagle Court, Suite 2000  
Reno, Nevada 89521



Dear Mr. Dix:

Subject: Species List Request for Access Road and Electric Transmission Line Project,  
Washoe County, Nevada

This responds to your letter received on June 10, 2010, requesting a species list for the Bureau of Land Management's (BLM) proposed access road and electric transmission line project located in section 36 T22N, R22E, in the Pah Rah Range. My staff contacted your office on July 26, 2010, to clarify information in your letter. We now understand that the proposed access road and transmission line are associated with NV Wind's Virginia Peak Wind Project also located in the Pah Rah Range. The access road and transmission line are located on BLM managed lands; however, the associated wind power facility will be located on private lands. Your company, on behalf of the BLM, is preparing an Environmental Assessment for the proposed access road and transmission line only.

According to your letter, the project on BLM land, consists of approximately 2,000 feet of access road and several miles of overhead transmission line. My staff has also reviewed the 2008 Plan of Development (POD) for the Virginia Peak Wind Project which indicates that NV Wind proposes to construct a 150 megawatt wind facility on 3,733 acres in the Pah Rah Range. Based on the above information and our knowledge of the area, no listed or proposed species occur in the proposed project area or wind facility site. Therefore, this fulfills the requirement of the U.S. Fish and Wildlife Service (Service) to provide information regarding listed species pursuant to section 7(c) the Endangered Species Act of 1973, as amended (Act) for projects that are authorized, funded, or carried out by a Federal agency. Although no listed species occur at the above discussed sites, we are providing the following information to be considered in project planning.

### **Candidate Species**

Greater sage-grouse (*Centrocercus urophasianus*) are known to occur in and near the project area and may be impacted by the access road and transmission line on BLM land, and the proposed wind facility on private land. The greater sage-grouse is a candidate for listing under the Act. Though candidate species receive no legal protection under the Act, they could be proposed for listing in the near future. We recommend that you analyze potential impacts from the entire scope of this project on greater sage-grouse to ensure that the proposed action does not exacerbate further decline of the species. On March 23, 2010, the Service's 12-month status review finding for the species was published in the Federal Register (75 FR 13910). We determined that the greater sage-grouse warrants the protection of the Act but that listing the species at this time is precluded by the need to address higher priority species first. The greater sage-grouse has been placed on the candidate list for future action, and States will continue to be responsible for managing the species. The Western States Sage and Columbian Sharp-tailed Grouse Technical Committee, under direction of the Western Association of Fish and Wildlife Agencies, has developed and published guidelines to manage and protect greater sage-grouse and their habitats in the Wildlife Society Bulletin (Connelly *et al.* 2000). We ask that you consider incorporating these guidelines (<http://www.ndow.org/wild/conservation/sg/resources/guidelines.pdf>) into the proposed project. On a more local level, the Sage Grouse Conservation Plan for Nevada and Portions of Eastern California (2004) and the Energy and Infrastructure Developments Standards to Conserve Greater Sage-grouse (2010) are available online at: <http://www.ndow.org/wild/conservation/sg/>. We encourage you to adopt all appropriate management guidance from these plans as you analyze and implement your proposed action and to engage your local State and Federal wildlife biologists early in the project planning process.

### **Migratory Birds**

Golden eagles (*Aquila chrysaetos*) are known to occur in the project area and recent data indicate relatively high nesting densities in the Pah Rah Range. Furthermore, there is a high likelihood of bald eagles (*Haliaeetus leucocephalus*) moving through the area given the project site's location between Pyramid Lake and the Truckee River. We strongly recommend you analyze project impacts to the affected individuals, their habitats and regional populations. While the bald eagle has been removed from the Federal list of threatened and endangered species (August 8, 2007; 72 FR 37346), it remains classified as endangered by the States of Nevada. Further, the bald eagle along with the golden eagle continue to be protected under the Bald and Golden Eagle Protection Act (BGEPA) of 1940, as amended (16 U.S.C. 668-668d) and the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*). Both the MBTA and the BGEPA prohibit take as defined as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, disturb, or otherwise harm eagles, their nests, or their eggs. Under the BGEPA, "disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding,

feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. On September 11, 2009 (74 FR 43686), the Service set in place rules establishing two new permit types: 1) authorizes take of bald and golden eagles that is associated with, but not the purpose of, the activity; and 2) authorizes purposeful take of eagle nests that pose a threat to human or eagle safety. We recommend you coordinate with State and Federal wildlife officials early in the planning process to ensure compliance with State and Federal regulations and to develop a survey protocol to evaluate the potential risk and the likelihood of take of eagles.

Based on the Service's conservation responsibilities and management authority for migratory birds under the MBTA, we are concerned about potential impacts the proposed project may have on migratory birds in the area. Given these concerns, we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

### **Wind Power Projects**

Advances in wind turbine technologies and increased interest in renewable energy sources have resulted in rapid expansion of the wind energy industry in the United States. Although wind energy is renewable and is generally an environmentally clean technology, the Service has concerns about the adverse impact of this technology on wildlife, especially birds and bats, and their habitats. As more facilities with larger turbines are built, the cumulative effects of this rapidly growing industry may initiate or contribute to the decline of some wildlife populations. The potential harm to these populations from an additional source of mortality makes careful evaluation of proposed facilities essential. Due to local differences in wildlife concentration and movement patterns, habitats, area topography, facility design, and weather, each proposed development site is unique and requires detailed, individual evaluation.

In an effort to reduce the impacts of wind energy projects to migratory birds and bats, the Service's Pacific Southwest Region developed *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (2010) as a means to provide energy project developers a tool for assessing the risk of potential impacts, designing, and then operating a bird- and bat-friendly wind facility. These guidelines are available upon

request from the Nevada Fish and Wildlife Office. An Avian and Bat Protection Plan (ABPP) outlines the project development process and includes conservation measures that will be implemented to avoid and minimize impacts to birds and bats. Based on site specific wildlife resources, however, not all site locations will be amenable to development as any available avoidance, minimization, and mitigation measures will not be sufficient to reduce potential impacts. In these instances, the Service recommends that alternative site locations be sought for development. Recent aerial surveys performed in the Pah Rah Range suggest that the nesting densities of golden eagles are substantial. This species is known to be susceptible to nest abandonment caused by human disturbance and further direct mortality from collision with wind turbines. Based on best available information, the Service submits this species may be in decline and as such has adopted a management objective of "no net loss." Based upon nesting densities in the area and known susceptibility to collision with wind turbines, we consider the likelihood of golden eagle "take" as defined by BGEPA to be high with a high probability this take will be realized as direct mortality. Given these concerns, we are concerned that wind power development in the Pah Rah Range is incompatible with known golden eagle resources in the area.

### **Sensitive Species**

The Nevada Fish and Wildlife Office no longer provides species of concern lists. Most of these species for which we have concern are also on the sensitive species list for Nevada maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we are adopting Heritage's sensitive species list and partnering with them to provide distribution data and information on the conservation needs for sensitive species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. Consideration of these sensitive species and exploring management alternatives early in the planning process can provide long-term conservation benefits and avoid future conflicts.

For a list of sensitive species by county, visit Heritage's website at [www.heritage.nv.gov](http://www.heritage.nv.gov). For a specific list of sensitive species that may occur in the project area, you can obtain a data request form from the website or by contacting Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the Act. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address. Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (see <http://www.leg.state.nv.us/NAC/NAC-503.html>). Before a person can hunt, take, or possess any parts of wildlife species classified as protected, they must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (visit <http://www.ndow.org> or call 775-688-1500).

We appreciate the opportunity to provide technical assistance for this proposed project and look forward to working with you throughout project planning. Please reference File No. 2009-FA-0039 in future correspondence concerning this species list. If you have any questions regarding this correspondence or require additional information, please contact me or Steve Abele at (775) 861-6300.

Sincerely,



*for* Robert D. Williams  
State Supervisor

cc:

Project Manager (Energy), Bureau of Land Management, Carson City District Office,  
Carson City, Nevada (C. Sievers)

Wildlife Biologist, Bureau of Land Management, Sierra Front Field Office,  
Carson City, Nevada (P. Ziegler)

Trevor Lloyd, Washoe County Community Development, Reno, Nevada



STATE OF NEVADA

DEPARTMENT OF WILDLIFE

Winnemucca Office 815 East 4<sup>th</sup> St.,  
Winnemucca, NV 89445 (775-623-6505)

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**To:** Nancy Kang  
JBR Environmental Consultants Inc.  
595 Double Eagle Court, Suite 2000  
Reno, Nevada 89521

**From:** Kenny Pirkle  
Nevada Department of Wildlife (NDOW)  
Winnemucca Field Office

**Re:** NV Wind – Virginia Peak

Nancy,

Thank you for contacting the Nevada Department of Wildlife (NDOW) for information pertaining to the environmental assessment for the proposed wind energy project in Washoe County, Nevada in the Pah Rah Range. Below are NDOW's findings, concerns and recommendations to be included in the environmental assessment.

**Big Game**

The entire project area is within occupied Pronghorn Antelope habitat and distribution. The Pronghorn population in this area has been increasing over the past few years, thus expanding the Pronghorn's distribution and habitat use. The entire project area is within identified potential Bighorn Sheep habitat and distribution. However, there is documented Bighorn Sheep in the area from time to time, and although, there are no resident Bighorn Sheep that currently occupy this area, the potential exists that self-pioneering Bighorn Sheep could establish a viable population in this area, as adequate habitat needs have been identified by NDOW. Almost the entire project area is within occupied year round Mule deer habitat and distribution. The middle ¼ and the southern ¼ of the project area is within crucial Mule Deer winter range habitat and distribution. The entire project area is within identified potential Black Bear habitat and distribution. Special consideration should be taken to help minimize any negative affects to Pronghorn Antelope, Mule Deer and California Bighorn Sheep or their habitat.

**Raptors**

Almost the entire project area is within Red Tailed Hawk habitat and distribution. The northern 1/3 of the project area is within Prairie Falcon habitat and distribution. The southern most portion of the project area is within Osprey habitat and distribution. The southern ¼ of the project area is within Northern Harrier habitat and distribution. Almost the entire project area is within Merlin habitat and distribution. The southern ¼ of the project area is within Long Eared Owl habitat and distribution. The entire project area is within Great Horned Owl habitat and distribution. The southern ¼ of the project area is within Golden Eagle habitat and distribution. The northern 1/3 of the project area is within Coopers Hawk habitat and distribution. The southern ½ of the project area is within Burrowing owl habitat and distribution. The southern 2/3 of the project area is within Barn Owl habitat and distribution. Almost the entire project area is within American Kestrel habitat and distribution. There are two (2) Red Tailed Hawk nests that are to the west of the project area. Both nests are located at TRS: 21N 22E Section 2.

**Sage Grouse**

Almost the entire project area is within Sage Grouse winter habitat and distribution. The northern 2/3 of the project area is within Sage Grouse summer habitat and distribution. The northern 2/3 of the project area is within Sage Grouse nesting and early brood rearing habitat and distribution. The closest Sage Grouse breeding habitat is approximately ½ mile to the west of the project area. There is known Sage Grouse activity in the following TRS locations.

<b>Township</b>	<b>Range</b>	<b>Section</b>
22N	22E	35
21N	22E	11
21N	22E	7
21N	22E	17
21N	22E	19
21N	22E	23
21N	22E	26
21N	21E	25
21N	21E	24
21N	21E	13

There is one Sage Grouse Lek that is approximately 2.25 miles to the west of the project area located at 21N 21E section 13. The entire project area is within the Pah Rah Sage Grouse population management unit (PMU). Special consideration should be taken to help minimize any negative affects to Sage Grouse or its habitat.

**Water Developments**

There are two (2) small game water developments that are in close proximity to the project, which are located at the following TRS: 20N 22E section 4, and 20N 22E section 8. Under no circumstance should these water developments be tampered with, altered, removed, or destroyed for any reason.

Once again thank you for taking the time to read our comments, and allowing NDOW the opportunity to provide comments for the environmental assessment for the NV Wind

Virginia Peak project. If there are any questions or need for clarification, please contact me at the number below.

Kenny Pirkle  
Biologist, Habitat Division  
Nevada Department of Wildlife  
815 East 4<sup>th</sup> Street  
Winnemucca, NV 89445  
(775) 623-6505  
[kpirkle@ndow.org](mailto:kpirkle@ndow.org)

Cc: Chris Hampson, Game Biologist  
Mark Freese, Supervising Habitat Biologist  
Clint Garrett, Water Development Biologist



## STATE OF NEVADA

# DEPARTMENT OF WILDLIFE

Winnemucca Office 815 East 4<sup>th</sup> St.,  
Winnemucca, NV 89445 (775-623-6505)

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**To:** George Dix  
Environmental Analyst  
JBR Environmental Consultants Inc.  
595 Double Eagle Court, Suite 2000  
Reno, Nevada 89521

**From:** Kenny Pirkle  
Nevada Department of Wildlife (NDOW)  
Winnemucca Field Office

**Re:** NV Wind – Virginia Peak

George,

Thank you for contacting the Nevada Department of Wildlife (NDOW) for information pertaining to the environmental assessment for the proposed wind energy project near Warm Springs in Washoe County, Nevada in the Pah Rah Range. Below are NDOW's findings, concerns and recommendations to be included in the environmental assessment.

### **Big Game**

The entire project area is within occupied Pronghorn Antelope habitat and distribution. The Pronghorn population in this area has been increasing over the past few years, thus expanding the Pronghorn's distribution and habitat use. The entire project area is within identified potential Bighorn Sheep habitat and distribution. However, there is documented Bighorn Sheep in the area from time to time, and although, there are no resident Bighorn Sheep that currently occupy this area, the potential exists that self-pioneering Bighorn Sheep could establish viable population in this area, as adequate habitat needs have been identified by NDOW. The entire project area is within occupied year round Mule deer habitat and distribution. The entire project area is within identified potential Black Bear habitat and distribution. Special consideration should be taken to help minimize any negative affects to Pronghorn Antelope, Mule Deer and California Bighorn Sheep or their habitat.

### **Raptors**

The entire project area is within Prairie Falcon habitat and distribution. The entire project area is within Great Horned Owl habitat and distribution. The entire project area is within Coopers hawk habitat and distribution. The entire project area is within American Kestrel habitat and distribution. There are two (2) Red Tailed Hawk nests that are to the south east of the project area. Both nests are located at TRS 21N 22E Section 2.

### **Sage Grouse**

The entire project area is within Sage Grouse winter habitat and distribution. The entire project area is within Sage Grouse summer habitat and distribution. The entire project area is within Sage Grouse nesting and early brood rearing habitat and distribution. There is known Sage Grouse activity in section 35 of township 22N and range 22E. The entire project area is within the Pah Rah Sage Grouse population management unit (PMU). Special consideration should be taken to help minimize any negative affects to Sage Grouse or its habitat.

Once again thank you for taking the time to read our comments, and allowing NDOW the opportunity to provide comments for the environmental assessment for the NV Wind Virginia Peak project. If there are any questions or need for clarification, please contact me at the number below.

Kenny Pirkle  
Biologist, Habitat Division  
Nevada Department of Wildlife  
815 East 4<sup>th</sup> Street  
Winnemucca, NV 89445  
(775) 623-6505  
[kpirkle@ndow.org](mailto:kpirkle@ndow.org)

Cc: Chris Hampson, Game Biologist  
Steve Siegel, Habitat Staff Specialist

Leo Drozdoff  
Acting Director

Department of Conservation  
and Natural Resources

JENNIFER E. NEWMARK  
Administrator

JIM GIBBONS  
Governor



Nevada Natural Heritage Program  
Richard H. Bryan Building  
901 S. Stewart Street, suite 5002  
Carson City, Nevada 89701-5245  
U.S.A.

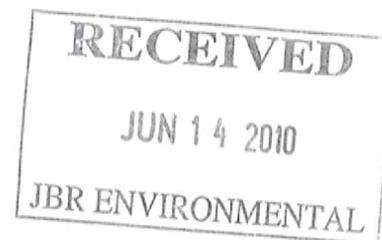
tel: (775) 684-2900  
fax: (775) 684-2909



STATE OF NEVADA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
**Nevada Natural Heritage Program**  
<http://heritage.nv.gov>

10 June 2010

George Dix  
JBR Environmental Consultants, Inc.  
595 Double Eagle Parkway, Suite 2000  
Reno, NV 89521



RE: Data request received 10 June 2010

Dear Mr. Dix:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At Risk plant and animal taxa recorded within or near the Nevada Wind-Virginia Peak Project area. We searched our database and maps for the following, a five kilometer radius including:

Township 22N Range 22E Section 36

There are no at risk taxa recorded within the given area. However, habitat may be available for, the western small-footed myotis, *Myotis ciliolabrum*, a Nevada Bureau of Land Management (BLM) Sensitive Species, and the Townsend's big-eared bat, *Corynorhinus townsendii*, a Nevada BLM Sensitive Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Chet VanDellen, Nevada Department of Wildlife at (775) 688-1565. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

A blue ink signature of Eric S. Miskow.

Eric S. Miskow  
Biologist /Data Manager

# **APPENDIX C**

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USFWS Species List for Nevada



# Nevada Fish & Wildlife Office

Pacific Southwest Region

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## Nevada's Protected Species

U.S. FISH AND WILDLIFE SERVICE  
 NEVADA FISH AND WILDLIFE OFFICE

ENDANGERED, THREATENED, PROPOSED, and CANDIDATE SPECIES within the GEOGRAPHIC AREA (NV and part of CA) covered by the NEVADA FISH AND WILDLIFE OFFICE  
 (Updated March 18, 2010)

SPECIES	FEDERAL STATUS	CRITICAL HABITAT IN NV/CA	LEAD OFFICE	STATE CA/NV
<b>Mammals</b>				
Bighorn sheep, <i>Ovis canadensis californiana</i> ( Sierra Nevada DPS)	E	P	VFWO	CA
Fisher, <i>Martes pennanti</i> (West Coast DPS)	C	N/A	YFWO	CA
Gray Wolf, <i>Canis lupus</i>	E	N/A	MPR	NV
<b>Birds</b>				
Greater sage-grouse, <i>Centrocercus urophasianus</i>	C	N/A	WESFO	NV/CA
Southwestern willow flycatcher, <i>Empidonax traillii extimus</i>	E		AESFO	NV
Yellow-billed cuckoo, <i>Coccyzus americanus</i> (Western U.S. DPS)	C	N/A	SFWO	NV/CA
Yuma clapper rail, <i>Rallus longirostris yumanensis</i>	E		AESFO	NV
	Y			
<b>Reptile</b>				
Desert tortoise, <i>Gopherus agassizii</i> (Mojave population)	T N	Y	NFWO	NV/CA
<b>Amphibians</b>				
Columbia spotted frog, <i>Rana luteiventris</i> (Great Basin DPS)	C	N/A	NFWO	NV
Mountain yellow-legged frog, <i>Rana muscosa</i> ( Sierra Nevada DPS)	C	N/A	SFWO	NV/CA
Relict leopard frog. <i>Rana onca</i>	C	N/A	SNFO	NV

Public Comments/Notices	Yosemite toad, <i>Bufo canorus</i>	C	N/A	SFWO	CA
<b>Fishes</b>					
	Ash Meadows Amargosa pupfish, <i>C. nevadensis mionectes</i>	E	Y	SNFO	NV
	Ash Meadows speckled dace, <i>R. osculus nevadensis</i>	E	Y	SNFO	NV
	Big Spring spinedace, <i>Lepidomeda mollispinis pratensis</i>	T	Y	SNFO	NV
	Bonytail chub, <i>Gila elegans</i>	E	Y	AESFO	NV
	Bull trout, <i>Salvelinus confluentus</i> (Jarbidge River DPS)	T	N	NFWO	NV
	Clover Valley speckled dace, <i>R. osculus oligoporus</i>	E	N	NFWO	NV
	Colorado pikeminnow, <i>Ptychocheilus lucius</i> *	E	N	CESFO	NV
	Cui-ui, <i>Chasmistes cujus</i>	E	N	NFWO	NV
	Desert dace, <i>Eremichthys acros</i>	T	Y	NFWO	NV
	Devils Hole pupfish, <i>Cyprinodon diabolis</i>	E	N	SNFO	NV
	Hiko White River springfish, <i>Crenichthys baileyi grandis</i>	E	Y	SNFO	NV
	Humpback chub, <i>Gila cypha</i> *	E	N	CESFO	NV
	Independence Valley speckled dace, <i>Rhinichthys osculus lethoporus</i>	E	N	NFWO	NV
	Lahontan cutthroat trout, <i>Oncorhynchus clarkii henshawi</i>	T	N	NFWO	NV/CA
	Moapa dace, <i>Moapa coriacea</i>	E	N	SNFO	NV
	Pahrnagat roundtail chub, <i>Gila robusta jordani</i>	E	N	SNFO	NV
	Pahrump poolfish, <i>Empetrichthys latos</i>	E	N	SNFO	NV
	Paiute cutthroat trout, <i>Oncorhynchus clarkii seleniris</i>	T	N	NFWO	CA
	Railroad Valley springfish, <i>Crenichthys nevadae</i>	T	Y	NFWO	NV
	Razorback sucker, <i>Xyrauchen texanus</i>	E	Y	AESFO	NV
	Virgin River chub, <i>Gila seminuda</i> ‡	E	Y	UFOSLC	NV
	Warm Springs pupfish, <i>Cyprinodon nevadensis pectoralis</i>	E	N	SNFO	NV
	Warner sucker, <i>Catostomus warnerensis</i>	T	N	BFO	NV/CA
	White River spinedace, <i>Lepidomeda albivallis</i>	E	Y	NFWO	NV
	White River springfish, <i>Crenichthys baileyi baileyi</i>	E	Y	SNFO	NV
	Woundfin, <i>Plagopterus argentissimus</i>	E	Y	UFOSLC	NV
<b>Invertebrates</b>					
	Ash Meadows naucorid, <i>Ambrysus amargosus</i>	T	Y	SNFO	NV
	Carson wandering skipper, <i>Pseudocopaedodes eunus obscurus</i>	E	N	NFWO	NV/CA
	Elongate mud meadows springsnail, <i>Pyrgulopsis notidicola</i>	C	N/A	NFWO	NV
<b>Plants</b>					
	Amargosa niterwort, <i>Nitrophila mohavensis</i>	E	N	SNFO	NV
	Ash Meadows blazing star, <i>Mentzelia leucophylla</i>	T	Y	SNFO	NV
	Ash Meadows gumplant, <i>Grindelia fraxinopratensis</i>	T	Y	SNFO	NV

Ash Meadows ivesia (mousetail) <i>Ivesia eremica</i> (= <i>I. kingii</i> var. <i>eremica</i> )	T	Y	SNFO	NV
Ash Meadows milk-vetch, <i>Astragalus phoenix</i>	T	Y	SNFO	NV
Ash Meadows sunray, <i>Enceliopsis nudicaulis</i> var. <i>corrugata</i>	T	Y	SNFO	NV
Churchill Narrows buckwheat, <i>Eriogonum diatomaceum</i>	C	N/A	NFWO	NV
Goose Creek Milkvetch, <i>Astragalus Anserinus</i>	C	N/A	UFOWVC	NV
Las Vegas Buckwheat, <i>Eriogonum corymbosum</i> var. <i>nilesil</i>	C	N/A	SNFO	NV
Soldier Meadows cinquefoil, <i>Potentilla basaltica</i>	C	N/A	NFWO	NV
Spring-loving centaury, <i>Centaurium namophilum</i>	T	Y	SNFO	NV
Steamboat buckwheat, <i>Eriogonum ovalifolium</i> var. <i>williamsiae</i>	E	N	NFWO	NV
Tahoe yellow cress, <i>Rorippa subumbellata</i>	C	N/A	NFWO	NV/CA
Ute lady's tresses, <i>Spiranthes diluvialis</i>	T	N	UFOSLC	NV
Webber's ivesia, <i>Ivesia webberi</i>	C	N/A	NFWO	NV/CA

E = Endangered; T = Threatened; C=Candidate;  
 Y = Yes; N = No; P = Proposed; N/A = Not Applicable  
 \* = Believed extirpated from Nevada ; ‡ Endangered only in the Virgin River; population in Muddy River is species of concern.

AESFO = Arizona Ecological Services Field Office, BFO = Bend Field Office, CESFO = Colorado Ecological Services Field Office, KFFWO = Klamath Falls Fish and Wildlife Office, NFWO = Nevada Fish and Wildlife Office, SFWO = Sacramento Fish and Wildlife Office, SNFO = Southern Nevada Field Office, UFOSLC = Utah Field Office Salt Lake City, UFOWVC = Utah Field Office West Valley City, VFWO = Ventura Fish and Wildlife Office, YFWO = Yreka Fish and Wildlife Office, WESFO = Wyoming Ecological Services Field Office, MPR = Mountain Prairie Region

Last updated: April 2, 2010

[Site Map](#) | [Contact Us](#) | [Nevada Fish & Wildlife Home](#) | [Lahontan National Fish Hatchery Complex](#) | [Regional Office](#)

## **APPENDIX D**

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BLM Sensitive Species with Potential to Occur in the Project Area

**Wildlife Sensitive Species Review for the Virginia Peak Wind Company ROW  
Pah Rah Mountains, Washoe County, Nevada**

Species list is condensed from 2003 Nevada State BLM Sensitive Species List. Species with no potential to occur in the area due to identified range (i.e., phainopepla, *Phainopepla nitens*; Crissal or LeConte's thrasher, *Toxostoma crissale* and *T. lecontei*, respectively, as well as a number of hot desert bat and reptile species, all of which occur only well south of the project area) are not included in this list.

Species	Habitat	Presence in Project Area
<b>Mammals</b>		
Pallid bat <i>Antrozous pallidus</i>	Most common in lower-elevation areas.	Potential
Pygmy rabbit <i>Brachylagus idahoensis</i>	Dense sagebrush with friable soils.	Potential
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	Roosts in caves and mines in a variety of habitats, particularly pinyon-juniper.	Probable. Recorded at Olinghouse Mine on eastern side of Pah Rahs.
Big brown bat <i>Eptesicus fuscus</i>	Variety of habitats. Hibernates in caves. May roost in buildings.	Potential
Spotted bat <i>Euderma maculatum</i>	Roost in crevices on tall cliffs in a variety of habitats.	Unlikely due to lack of tall cliffs.
Western red bat <i>Lasiurus blossevilli</i>	Riparian areas and deciduous woodlands. Migratory.	Potential migrant. Little riparian or deciduous woodland in project area.
Hoary bat <i>Lasiurus cinereus</i>	Forested and woodland habitats, riparian. Migratory.	Potential
California myotis <i>Myotis californicus</i>	Variety of habitats including pinyon-juniper habitats.	Potential
Small-footed myotis <i>Myotis ciliolabrum</i>	Variety of habitats but most common in pinyon-juniper habitats	Probable
Long-eared Myotis <i>Myotis evotis</i>	Coniferous forest habitats.	Unlikely
Little brown myotis <i>Myotis lucifugus</i>	Variety of habitats. Often roosts in man-made structures.	Potential
Fringed myotis <i>Myotis thysanodes</i>	Variety of habitats. May be most common in montane situations. Apparently not common in Nevada.	Potential
Long-legged myotis <i>Myotis volans</i>	Typically in forested habitats, but occurs in drier situations as well.	Potential
Yuma myotis <i>Myotis yumanesis</i>	Variety of habitats but usually near water.	Potential. Historically, a large colony was reported to have roosted in a building near the Truckee River in the Wadsworth area.
Desert bighorn sheep <i>Ovis canadensis nelsoni</i>	Desert mountains, cliffs, canyons, high elevation areas.	Mapped range south of project area.
Western pipistrelle <i>Pipistrellus hesperus</i>	Variety of habitats, particularly arid areas.	Potential
Brazilian free-tailed bat <i>Tadarida brasiliensis</i>	Highly colonial. Ranges widely to feed. Migratory.	Potential forager

Species	Habitat	Presence in Project Area
<b>Birds</b>		
Northern goshawk <i>Accipiter gentilis</i>	Coniferous forest, mixed forest. Most Nevada nests in aspen.	Potential migrant.
Golden eagle <i>Aquila chrysaetos</i>	Mountains, deserts, plains.	Probable nester in Pah Rah Range.
Short-eared owl <i>Asio flammeus</i>	Open country; ground nester.	Potential
Long-eared owl <i>Asio otus</i>	Forested habitats. Forages in more open areas.	Potential
Burrowing owl <i>Athene cunicularia</i>	Open country, nest sites usually include elevated perch.	Potential in lower-elevation flats; unlikely in mountains.
Juniper Titmouse <i>Baeolophus griseus</i>	Pinyon and juniper forest	Potential in juniper habitat in area.
Ferruginous hawk <i>Buteo regalis</i>	Open country; nest on cliffs, trees, juniper fringe overlooking open habitat.	Possible migrant. Rare on western side of state; more common in eastern and central Nevada.
Swainson's hawk <i>Buteo swainsoni</i>	Open country, plains, prairie, agricultural areas.	Potential
Greater sage-grouse <i>Centrocercus urophasianus</i>	Sagebrush habitats. Rears broods in meadows, wet areas.	Probable. Known to occur in area.
Snowy plover <i>Charadrius alexandrinus</i>	Beaches, playas, playa margins.	Unlikely; very low potential.
Prairie falcon <i>Falco mexicanus</i>	Open country. Nests on cliffs and outcrops.	Potential nester in Pah Rah Range
Peregrine falcon <i>Falco peregrinus</i>	Forests, often near water.	Potential migrant
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	Pinyon pine forest, including mixed pinyon-juniper.	Potential
Yellow-breasted chat <i>Icteria virens</i>	Dense riparian.	Unlikely in mountainous habitats of project area.
Loggerhead shrike <i>Lanius ludovicianus</i>	Open country in greasewood, sagebrush, agricultural areas.	Probable
Black rosy finch <i>Leucoticte atrata</i>	High elevations in mountains of central and eastern Nevada east.	Unlikely; typically east of project area may occur during winter.
Lewis woodpecker <i>Melanerpes lewis</i>	Deciduous trees, open forest. Often forages by flycatching.	Possible if deciduous trees (cottonwoods, aspen) present.
Long-billed curlew <i>Numenius americanus</i>	Wet and dry uplands, wetlands, agricultural fields.	Unlikely in mountainous habitats of project area.
Mountain quail <i>Oreortyx pictus</i>	Mountain brush habitats, forest edges.	Unlikely. Occurrence in area appears to be largely historic.
Vesper sparrow <i>Pooecetes gramineus</i>	Grasslands, farmlands, forest clearings, sagebrush.	Potential
Red-naped sapsucker <i>Sphyrapicus nuchalis</i>	Coniferous forest, riparian (particularly aspen).	Potential if aspen groves present.
<b>Reptiles</b>		
Sierra alligator lizard <i>Elgaria coerulea palmeri</i>	Forest, woodlands, grasslands, rocky area.	Unlikely; range primarily west of project area.