PRELIMINARY
ENVIRONMENTAL ASSESSMENT

DOI-BLM-NV-W010-2012-0024-EA

Grass Valley 120kV Transmission Line ROW Project

May 2012

U.S. Bureau of Land Management
Winnemucca District Office
Humboldt River Field Office
5100 E. Winnemucca Blvd.
Winnemucca, NV 89445-2921

BLM
Humboldt River Field Office/Winnemucca, Nevada

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DOI-BLM-NV-W010-2012-0024-EA

GRASS VALLEY 120kV TRANSMISSION LINE RIGHT-OF-WAY PROJECT
HUMBOLDT COUNTY, NEVADA

Preliminary Environmental Assessment
DOI-BLM-NV-W010-2012-0024-EA

May 2012

U.S. Department of the Interior
Bureau of Land Management
Winnemucca District Office
Humboldt River Field Office

NV ENERGY
GRASS VALLEY 120kV TRANSMISSION LINE RIGHT-OF-WAY PROJECT
HUMBOLDT COUNTY, NEVADA
PRELIMINARY ENVIRONMENTAL ASSESSMENT

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ACRONYMS

ac-ft/yr	acre-feet per year
amsl	above mean sea level
APLIC	Avian Power Line Interaction Committee
AUM	animal unit month
BAPC	Bureau of Air Pollution Control
BLM	Bureau of Land Management
BMPs	Best Management Practices
CESA	Cumulative Effects Study Area
CFR	Code of Federal Regulations
°F	Degrees Fahrenheit
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FWARG	Far Western Anthropological Research Group, Inc.
GBBO	Great Basin Bird Observatory
I-80	Interstate 80
ID	Interdisciplinary
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MDB&M	Mount Diablo Base and Meridian
MFP	Management Framework Plan
MOU	Memorandum of Understanding
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NDOW	Nevada Department of Wildlife
NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act
NNHP	Nevada Natural Heritage Program
NRHP	National Register of Historic Places
NRS	Nevada Revised Statutes
NSAAQS	Nevada State Ambient Air Quality Standards
NSPL	National System of Public Lands
NVE	NV Energy
PFYC	Potential Fossil Yield Classification
Project	Grass Valley 120 kilovolt Transmission Line Project
PSD	Prevention of Significant Deterioration
RFFA	reasonably foreseeable future actions
ROW	right-of-way
RR	Rural Ranchette
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
U.S.	United States
USFWS	United States Fish and Wildlife Service
WUI	Winnemucca Urban Interface

1 INTRODUCTION / PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

The Grass Valley 120 kilovolt (kV) Transmission Line Right-of-Way (ROW) Project (Project) would be located south of Winnemucca in Humboldt County, Nevada. The Project would be located in the northern extent of Grass Valley, less than two miles southeast of the Humboldt River. The Project would be located on public lands in Township 35 North, Range 38 East (T35N, R38E), section 6 Mount Diablo Base and Meridian (MDB&M) in Humboldt County, Nevada (Project Area). The Project Area would encompass approximately 19.4 acres on National System of Public Lands (NSPL) administered by the Bureau of Land Management Winnemucca District Office, Humboldt River Field Office (BLM). The proposed Project Area ranges in elevation from 4,330 feet to 4,528 feet above mean sea level (amsl). Figure 1.1.1 shows the proposed Project Area, access, and land status.

NV Energy (NVE) currently has authorized ROWs within the Project Area under NVN-046290, NVN-046291, NVN-052751, NVN-042767 (now authorized under N-90792), and NVN-057840. These ROWs include existing infrastructure within the Project Area that consists of a 60kV transmission line that is connected from the Grass Valley substation to an existing 120kV transmission line.

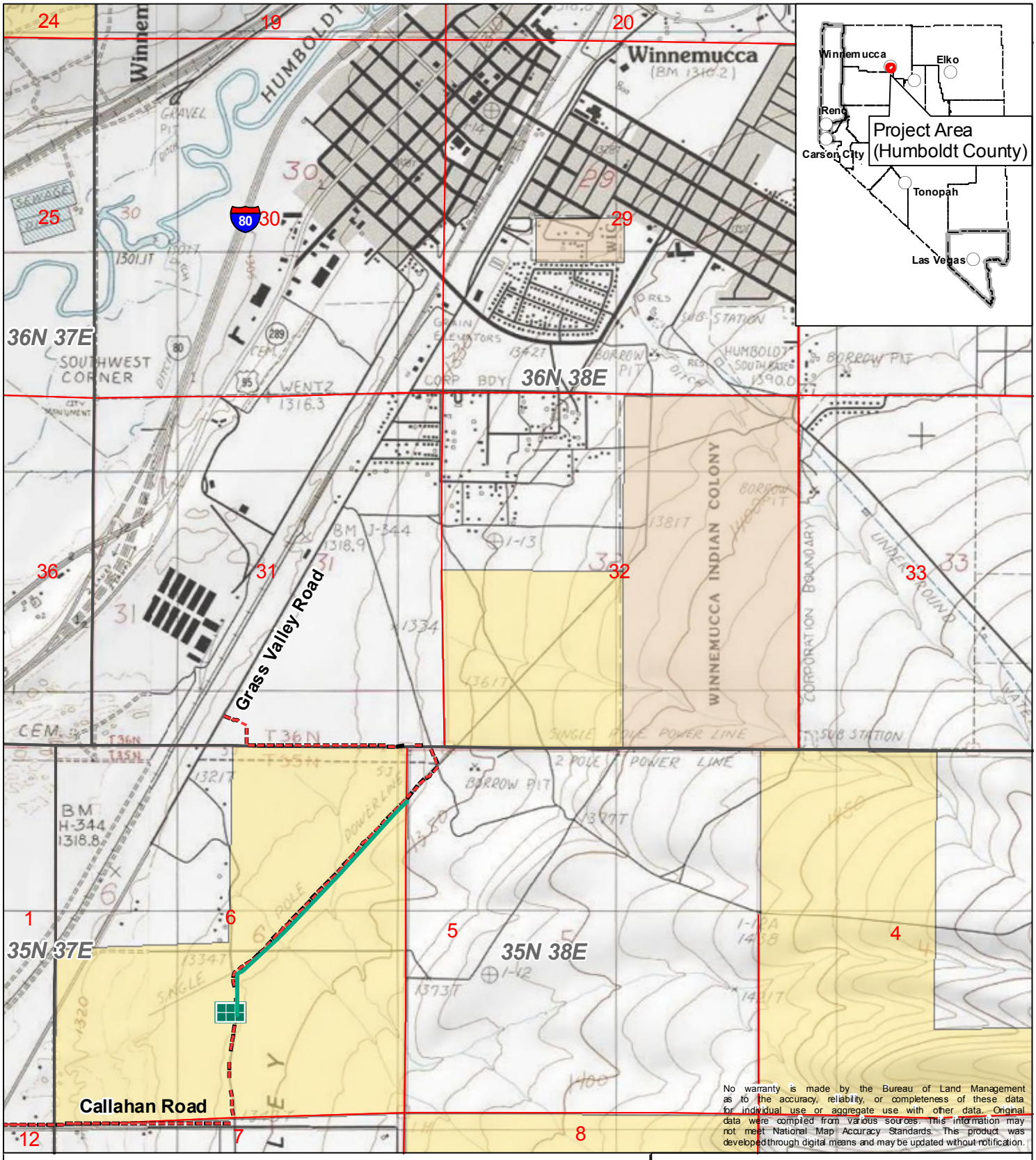
In October 2008, the Grass Valley 120kV Transmission Line Project Plan of Development was submitted at the same time as a complete BLM Form 299 (1/2006) Application for Transportation and Utility Systems and Facilities on Federal Lands.

This Environmental Assessment (EA) has been prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) to examine the effects of the issuance of a ROW for the Project (Proposed Action). The proposed ROW would be used for the construction, operation, and maintenance of a 120kV transmission line with a 25kV distribution line underbuild.

1.2 Purpose and Need

The purpose of the Proposed Action is to provide NVE the opportunity to construct a new transmission line with a distribution line underbuild system on public lands. Issuance of a ROW would allow NVE to construct, operate, and maintain a new transmission line and distribution line underbuild and associated structures, increasing the reliability and capacity of the existing transmission system.

The need for the Proposed Action is established by the BLM's responsibility under the Federal Land Policy and Management Act of 1976 (FLPMA), the BLM Manual MS-2800 through MS-2809, and BLM ROW Regulations at 43 Code of Federal Regulations (CFR) 2800 to process ROW applications and to take any action necessary to prevent unnecessary or undue degradation of the lands.



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Explanation

- Grass Valley Substation
- Proposed Construction Access
- Proposed 120kV Transmission Line

Land Status

- Bureau of Indian Affairs
- Bureau of Land Management
- Private

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0 1,000 2,000 Feet

Projection: UTM Zone 11 North, NAD83

N

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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Project Location, Access, and Land Status

Figure 1.1.1

04/12/2012

1.3 Land Use Conformance Statement

The Proposed Action described in this EA is in conformance with the Sonoma-Gerlach Management Framework Plan (MFP) (BLM 1982), which states that ROW applications not found within existing ROW corridors would be examined on a case by case basis for the specific proposal. Also, the MFP states that public lands should be made available for ROWs to benefit the surrounding community and isolated ranches that require electrical powerlines.

1.4 Relationship to Laws, Regulations, and Other Plans

Authorized ROWs on BLM administered land are granted through the FLMPA, BLM ROW Regulations at 43 CFR 2800, and the BLM Manual MS-2800 though MS-2809. BLM ROW policy is extracted and implemented from these affecting regulations.

Although the Project is located on public lands, the Project Area is zoned according to the Humboldt County Regional Master Plan (Humboldt County 2002) and is primarily classified as Rural Ranchette (RR)-2.5, and partially within zone RR-5.

1.5 Issues

An interdisciplinary (ID) team meeting was held at the BLM office in Winnemucca on June 20, 2011. During the meeting, the ID team identified the resources to be addressed in this document as outlined in Chapter 3.

The following issues related to the Proposed Action were identified by the BLM in the following areas:

- What potential effect would the Project have on land uses within the Project Area?
- What are the potential effects on raptor use within the Project Area?
- What are the potential impacts of the Project on public access and safety?

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

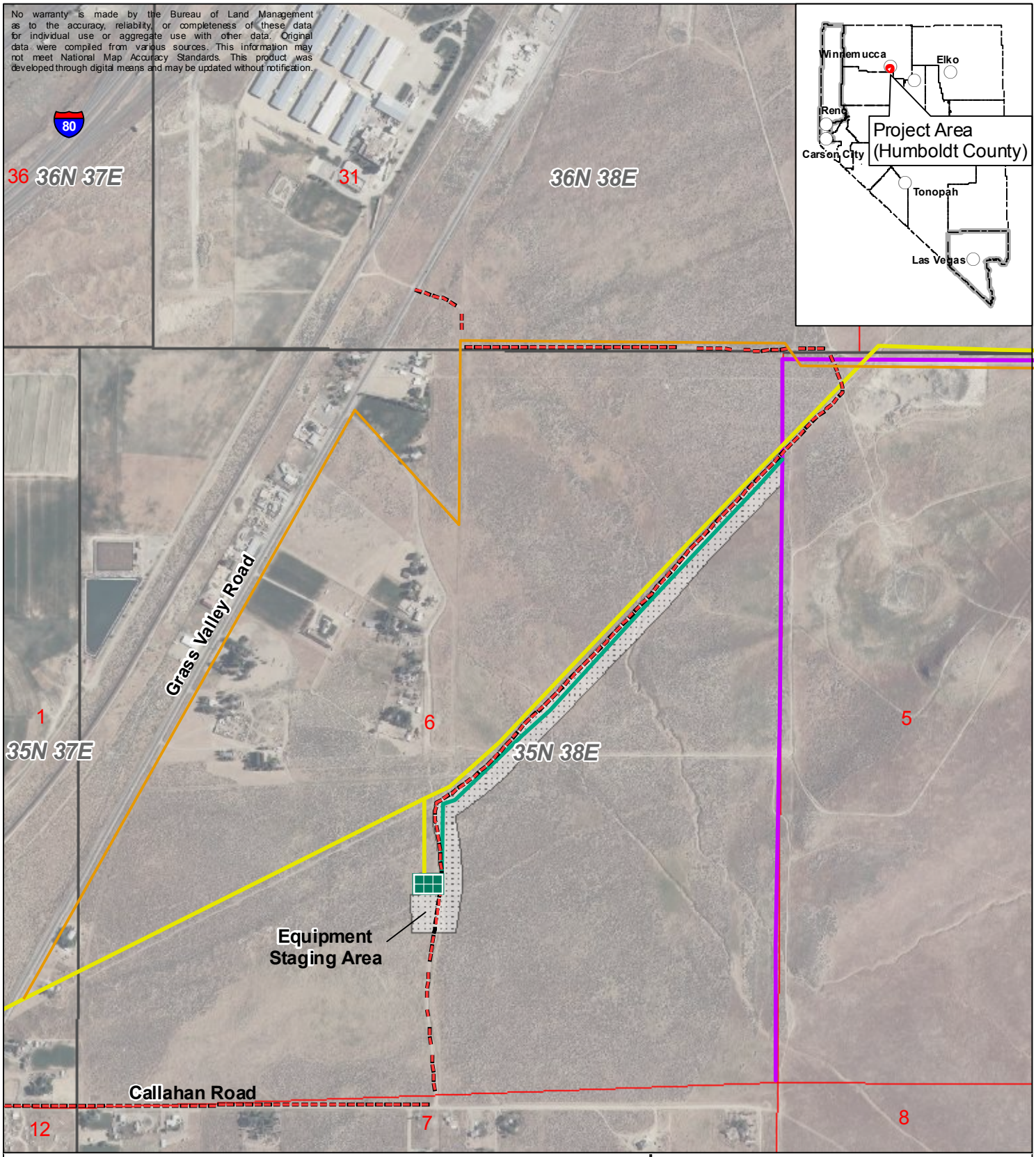
2.1 Proposed Action

The Project would consist of the construction of approximately 4,000 feet of a 120kV transmission line between the existing Grass Valley Substation and the existing 120kV transmission line (#162) within the 19.4-acre Project Area (Figure 2.1.1). The proposed transmission line would be immediately adjacent to the existing 60kV transmission line (#620). The new construction would include a 120kV transmission line and structures, 25kV distribution line underbuild on the same poles as the 120kV line, temporary work areas, and improvements of the existing access roads. In addition to the new segment of line, the north side of the Grass Valley Substation would require a 30-foot expansion to accommodate the connection to the new line. Construction activities would occur within an approximately 170-foot corridor (approximately 150 feet to the east and southeast and approximately 20 feet on the west and northwest) from the centerline of the proposed transmission line and underbuild, not to extend beyond the western or northern edge of the access road. Wire stringing would occur at either end of the transmission line and underbuild and at the angle structure located approximately 600 feet north of the Grass Valley Substation. The Project would utilize existing access roads, which may be widened from 12 to 15 feet to improve access for line tracks. The surface disturbance associated with the Project would be approximately 19.4 acres with the majority of disturbance occurring adjacent to pole locations, the substation expansion area, as well as the temporary construction area located to the south of the substation. This disturbance would be implemented with environmental protection measures outlined in Section 2.1.11 to prevent environmental degradation during construction, operation, and reclamation activities for the Project. The construction activities associated with the Project would take place over approximately eight weeks.

The Proposed Action would create a higher voltage transmission line within a 40-foot wide ROW. The new ROW would be adjacent to an authorized transmission ROW (serial number NVN-042767 now authorized under N-90792) within the Project Area. The interconnection between the proposed transmission line and distribution line underbuild and the existing 120kV transmission line would occur on private land.

2.1.1 Location and Access

The Project is located on public lands administered by the BLM in T35N, R38E, section 6, MDB&M in Humboldt County, Nevada (Figure 1.1.1). The Project would be located on the United States Geological Survey Winnemucca East 7.5-minute topographic quadrangle. Access to the Project would occur by traveling south from Winnemucca, Nevada on State Route 294/South Grass Valley Road approximately 1.5 miles, then left on Callahan Road, and then left on the existing access road that leads into the Project Area. Authorized vehicles would access the proposed transmission line and distribution line underbuild from Grass Valley Road and Callahan Road, and then travel along the existing #620 line access road. The majority of the activities would be conducted from the existing access road; however, the auger truck and other equipment needed to access the new alignment would use overland travel; therefore, no new roads would be constructed for the Project.



Explanation

- Project Area (Temporary Construction Area)
- Grass Valley Substation
- Proposed Construction Access
- Proposed 120kV Transmission Line
- Existing 120kV Transmission Line
- Existing 60kV Transmission Line
- Existing Distribution Line

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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Proposed and Existing Facilities

Figure 2.1.1

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2.1.2 Facilities

The proposed transmission line and underbuild would include 15 new wood single-pole structures, which would be approximately 65 feet tall. A typical single pole structure is depicted in Figure 2.1.2. The eastern end of the transmission line and distribution line underbuild would tie into the existing 120kV (#162) transmission line. A tap structure would be constructed at this tie location. A typical tap structure is depicted in Figure 2.1.3. The permanent ROW width of the proposed 120kV transmission line and distribution line underbuild would be approximately 40 feet.

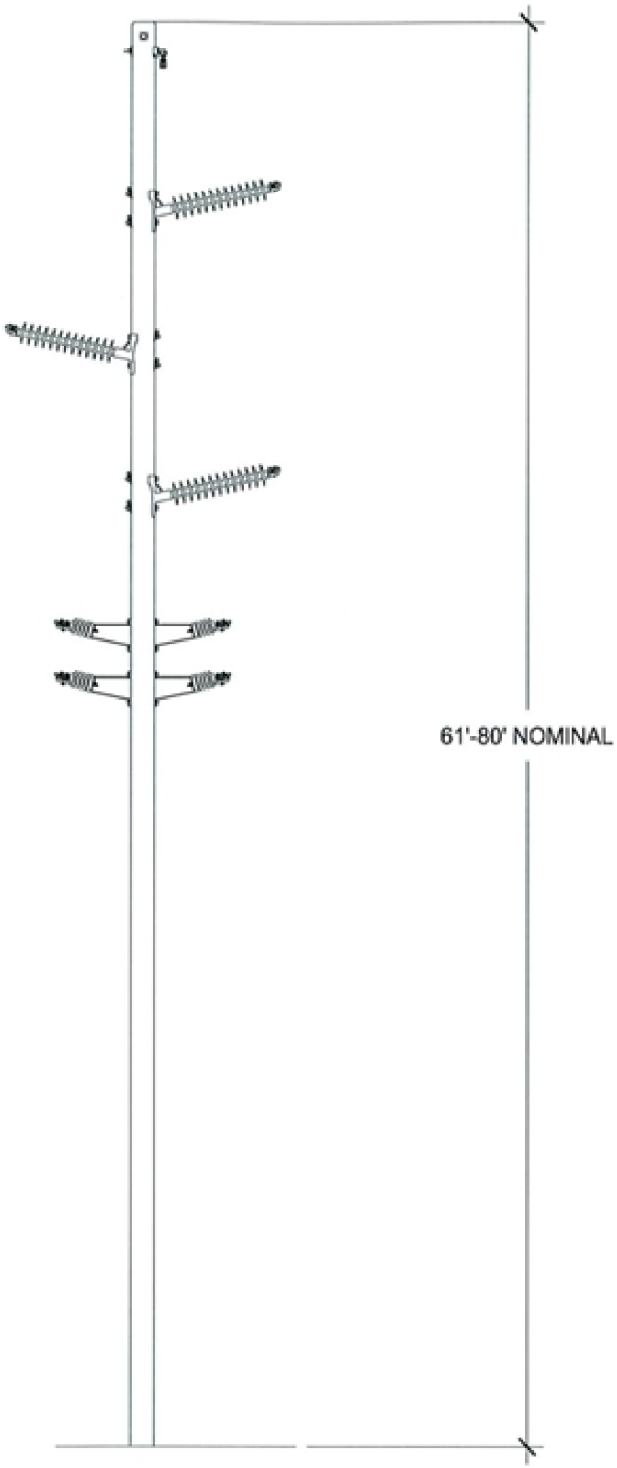
Angle structures may be supported by guy wires and soil anchors, if required. The poles would be set in holes that would be backfilled with native or imported material to support the structure. If the native material is unsuitable due to the size and quantity of rock present in the soils and the soil compaction capabilities, then NVE would import a type of bedding sand from either a local quarry, if available, or a quarry based in Reno, Nevada. Imported material would be certified weed free. Single-pole wood angle structures would have guy wires that attach the angle poles to the anchors to provide structural support. A typical single pole angle with underbuild is depicted in Figure 2.1.4.

The transmission line and distribution line underbuild would be designed to meet or exceed the requirements of the National Electric Safety Code. The poles would support three aluminum conductors and all conductor wires would be at least 22 feet from the ground surface. A shield wire would be placed along the top of each pole to provide protection during thunder and lightning storms. The shield wire would be connected to copper ground wires buried within the excavation for when installing each pole that would electrically ground all of the poles.

In addition to the new segment of transmission line and distribution line underbuild, the north side of the Grass Valley Substation would require a 30-foot expansion of the substation to accommodate the connection to the new line.

2.1.3 Construction Activities

Construction activities along the transmission line and distribution line underbuild would occur within an approximately 170-foot corridor (approximately 150 feet to the east and southeast and approximately 20 feet on the west and northwest) from the centerline of the proposed transmission line and underbuild, not to extend beyond the western or northern edge of the access road. No construction disturbance would occur within the existing ROW for the 60kV line (#620). Wire stringing would occur at either end of the transmission line and underbuild and at the angle structure located approximately 600 feet north of the Grass Valley Substation. An equipment and materials staging area would be located adjacent to and south of the Grass Valley Substation and would measure approximately 300 feet by 300 feet. The temporary construction area would be considered the extent of the Project Area and measures approximately 19.4 acres as shown on Figure 2.1.1. As outlined in Section 2.1.11, NVE would limit construction in residential areas to between daylight and dusk, seven days a week.



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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Typical Single Pole Tangent with Underbuild

Figure 2.1.2

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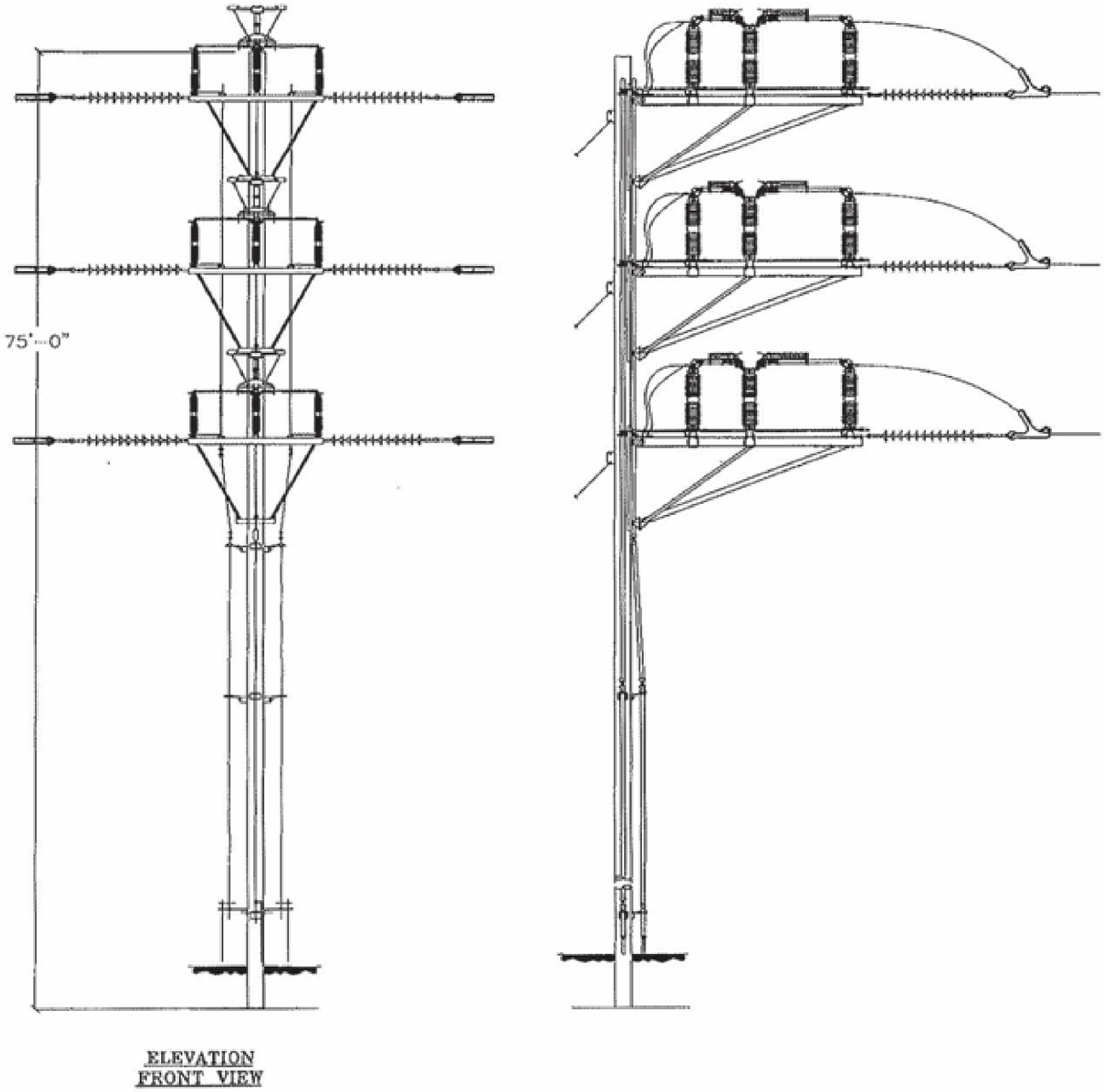

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Typical Tap Structure

Figure 2.1.3

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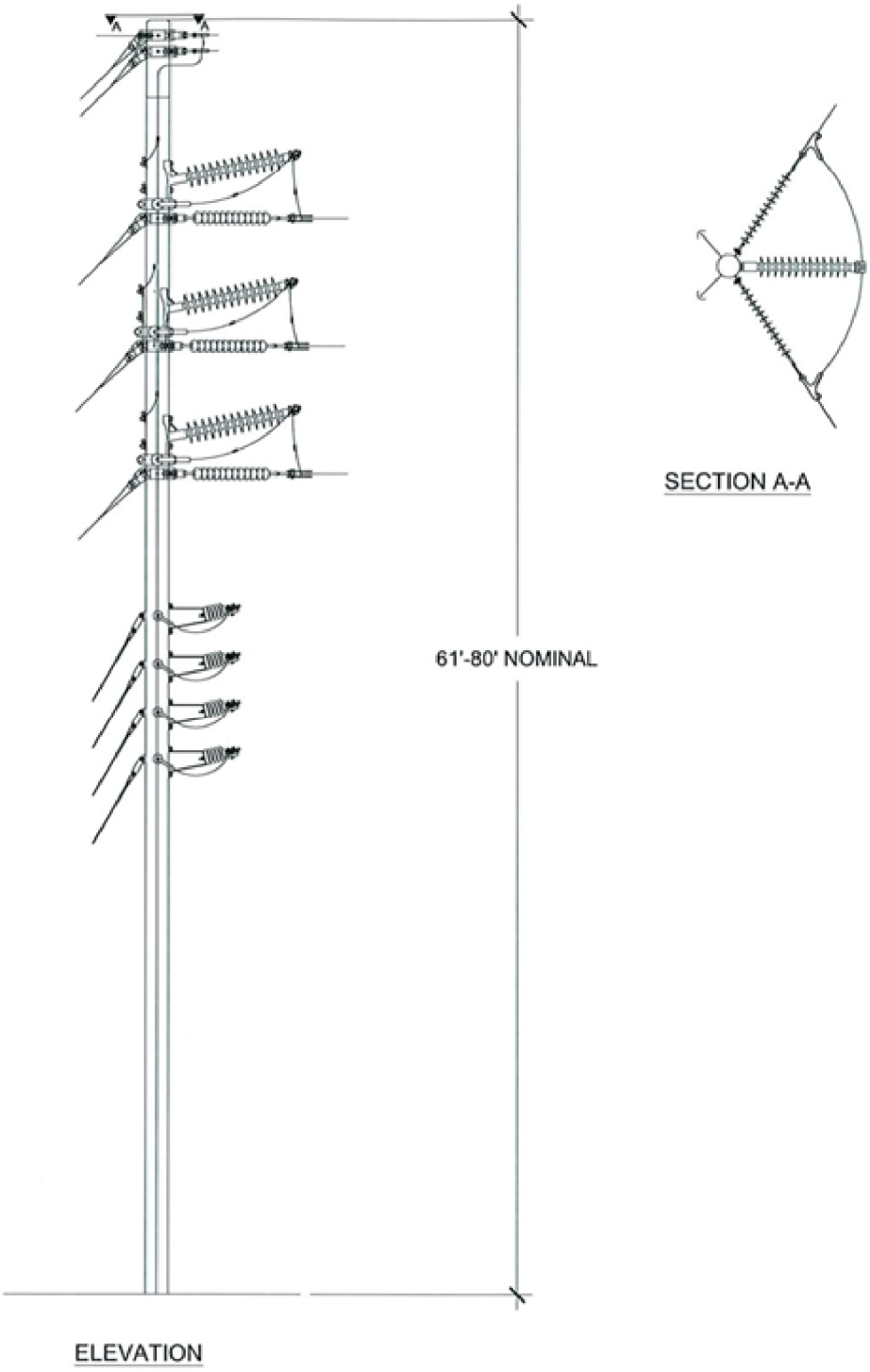

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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Typical Single Pole Angle with Underbuild

Figure 2.1.4

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2.1.4 Methods

Poles would be delivered to and assembled (if necessary) at the equipment and materials staging area located south of the substation. From this area, the poles would be delivered to each pole site location. Holes for the structure poles and guy wire soil anchors would be excavated to depths of approximately seven to ten feet. Utilizing a truck-mounted auger is the preferred method of excavation. However, backhoe excavation may be used as an alternative excavation method depending on geological conditions.

At wire stringing sites, the lead-line would be installed in the travelers on each structure by ground crews. The lead-line would be spooled out from a large motorized drum at one wire site and threaded through the travelers on each structure by ground crews traveling to the next wire site. There, the lead-line would be attached to the conductors and shield wires, which would then be pulled back through to the first wire site. After the conductors and shield wires reach the pulling site, they would be correctly sagged and tensioned, then permanently clipped into the clamps at each structure.

Surplus materials, equipment, and construction debris would be removed at the completion of construction activities. All man-made construction debris would be removed and disposed of, as appropriate, at permitted landfill sites. Native vegetation that is cleared as a result of Project activities would be spread over the ROW for mulch. Nonnative, invasive vegetation would be hauled off to an approved landfill. Clearing of vegetation would occur around the pole sites and measure approximately 14 feet in diameter.

2.1.5 Road Improvements and Overland Travel

Existing access roads would be used for the Project and may need improvement for the safe access of heavy equipment and construction vehicles. Road maintenance and improvement activities may include smoothing out ruts and potholes, repairing erosion damage, blading, regrading, clearing debris and vegetation that has grown in the road, and potential gravelling in areas to reduce erosion and prevent the formation of finely powdered ruts in the road (bug dust). This road may be widened to a width between 12 and 15 feet. The secondary access route that connects with Grass Valley Road would potentially require road improvement to a width between 12 and 15 feet. Travel routes needed to access the pole locations would be overland, requiring drive and crush techniques. If vegetation is too large to be safely driven over, hydro-axes may be used to cut vegetation to ground level.

2.1.6 Equipment

Table 2.1-1 includes a list of the equipment expected to be used during the Project.

Table 2.1-1: Expected Equipment for Project

Type of Equipment	Use
¾-ton and one-ton pickup trucks	Transport construction personnel
Two-ton flat bed trucks; flat bed boom truck	Haul and unload materials
Rigging truck	Haul tools and equipment
Mechanic truck	Service and repair equipment

Type of Equipment	Use
Aerial bucket trucks	Access poles, string conductor, and other uses
Shop vans	Store tools
Bulldozer	Grade, access roads and pole sites, reclamation
Truck mounted digger or backhoe	Excavate
Small mobile cranes	Load and unload materials
Transport	Haul poles and equipment
Drill rig with augers	Excavate and install poles
Excavator	Excavate and install poles
Puller and tensioner	Pull conductor and wire
Cable reel trainers	Transport cable reels and feed cables into conduit
Semi tractor-trailers	Haul structures and equipment
Splice trailer	Store splicing supplies/air condition manholes
Take-up trailers	Install conductor
Air compressors	Operate air tools
Air tampers	Compact soil around structure foundations
Concrete truck	Pour concrete
Dump truck	Haul excavated materials/import backfill
Fuel and equipment fluid truck	Refuel and maintain vehicles
Water truck	Suppress dust and fire
Winch truck	Install and pull sock line and conductors into position

2.1.7 Work Force

The construction workforce would consist of approximately 11 personnel. Project construction would also require additional support personnel, including construction inspectors, surveyors, and Project managers.

2.1.8 Solid Waste and Hazardous or Regulated Materials

All refuse generated by the Project would be disposed of at an authorized, off-site landfill facility. No refuse would be disposed of within the Project Area. Portable toilets would be available in the Project Area for use by Project personnel. Hazardous materials utilized within the Project Area are shown in Table 2.1-2.

Table 2.1-2: Project Hazardous and Regulated Materials

Project Hazardous and Regulated Materials	
Two-cycle Oil	Lubricating Grease
ABC Fire Extinguishers	Mastic Coating
Acetylene Gas	Insulating Oil
Air Tool Oil	North Wasp and Hornet Spray (1,1, 1-Trichloro-ethane)
Diesel Fuel	Oxygen
Antifreeze	Paint
Automatic Transmission Fluid	Paint Thinner
Battery Acid	Excavate
Bee Bop Inspect Killer	Prestone II Antifreeze

Project Hazardous and Regulated Materials	
Canned Spray Paint	Puncture Seal Tire Inflator
Chain Lubricant (Methylene Chloride)	Safety Fuses
Connector Grease	Safety Solvent
Contact Cleaner 2000	Starter Fluid
Eye Glass Cleaner (Methylene Chloride)	WD-40
Gas Treatment	Wagner Brake Fluid
Gasoline	

In the event that hazardous or regulated materials are spilled, measures would be taken to control the spill, and the BLM and the Nevada Department of Environmental Protection (NDEP) would be notified as required. Any hazardous substance spills would be handled in accordance with all applicable federal, state, and local regulations.

2.1.9 Operations and Maintenance Activities

Once the transmission line and distribution line underbuild are operational, NVE operations and maintenance personnel would conduct annual inspections of the line and switching station. Annual inspections would be conducted by helicopter or line trucks. The inspections would include a visual review of the line along a course generally parallel to the centerline and along the existing access roads shown on Figure 2.1.1.

Approximately every ten years, NVE personnel would conduct structure-climbing inspections. These inspections consist of accessing the structure using four-wheel drive vehicles on the existing access roads and the ROW. NVE personnel would then climb the structure to inspect the hardware, condition of the structures, and insulators.

Aside from annual inspections, NVE personnel would also need to access the line and substation in the event that maintenance of a structure is required, or under emergency conditions. In those cases, the line or station would be accessed by line trucks using existing access roads or by traveling along the ROW. Existing access roads would be improved for safe passage. Access road improvements would be limited to vertical grading as needed, to remove ruts, boulders, or other impediments to large trucks needed for construction.

2.1.10 Reclamation

Overland travel routes and other areas within the ROW disturbed by construction activities would be recontoured, decompacted, and seeded. BLM-approved seed mixes would be applied to these disturbed areas. NVE would attempt to close or restrict vehicle access to areas that have been seeded until the reclamation success criteria have been met. To restrict vehicle access, areas above road grade would have boulders placed at the most probable ingress/egress points along the access road. For areas at the same elevation as the road, NVE would install signage, flagging, and temporary fencing.

2.1.11 Environmental Protection Measures

As part of the Proposed Action, NVE has committed to the following environmental protection measures to prevent environmental degradation during construction, operation, and reclamation activities of the Project. These environmental protection measures are divided into the following ten categories: General Measures; Soils; Noxious Weeds, Invasive and Nonnative Species; Vegetation; Surface Water Quality; Wildlife and Sensitive Species; Cultural and Paleontological Resources; Hazardous and Regulated Materials and Solid Waste; Air Quality; and Fire Prevention and Response.

General Measures

- The limits of the temporary construction ROW would be marked with staking or flagging. All environmentally sensitive areas would be flagged or fenced for avoidance;
- Prior to construction, all construction personnel would be instructed on the protection of sensitive resources that have the potential to occur on site;
- NVE would limit construction in residential areas to between daylight and dusk, seven days a week;
- All construction vehicle movement would be restricted to the ROW, pre-designated access roads, and public roads;
- Smoking would only be permitted in paved or cleared areas. All cigarettes would be thoroughly extinguished and disposed of in a trash receptacle;
- Non-specular conductors would be installed to reduce visual impacts;
- Fences and gates, if damaged or destroyed by construction activities, would be repaired or replaced to their original preconstruction condition as required by the landowner or the land management agency; and
- All existing roads would be left in a condition equal to or better than their preconstruction condition.

Soils

- In areas where extensive grading would be required, topsoil (where present) would be stockpiled and segregated for later reapplication;
- Erosion control Best Management Practices (BMPs), such as straw bales (certified weed-free) and waddles, would be implemented to control erosion and sedimentation in ephemeral drainages on site; and
- Construction would be prohibited when the soil is too wet to adequately support construction equipment.

Noxious Weeds, Invasive and Nonnative Species

- Prior to preconstruction activities, NVE personnel would identify all noxious weeds present on the land to be included in the ROW Grant and provide this information to the BLM. A determination would be made by the BLM of any noxious weeds that require flagging for treatment and NVE would treat the noxious weeds as required by the BLM;

- All gravel and/or fill material would be certified as weed-free; and

- All off-road equipment would be cleaned (power or high-pressure cleaning) of all mud, dirt, and plant parts prior to initially moving equipment onto public land. Equipment would be cleaned again if it leaves the Project site prior to reentry. Personnel trucks leaving the site and travelling on paved roads to commute to the worksite would not require cleaning every morning.

Vegetation

- Wherever possible, vegetation would be left in place. Where vegetation must be removed, it would be cut at ground level to preserve the root structure and allow for potential resprouting; and

- All temporary construction areas, including stringing sites that have been disturbed, would be recontoured and restored as required by the landowner or land management agency. The method of restoration typically would consist of seeding or revegetating with native plants (if required), installing cross drains for erosion control, and placing water bars in the road. Seed would be certified as weed-free.

Surface Water Quality

- All construction vehicles and equipment staging or storage would be located at least 100 feet away from any ephemeral drainages; and

- Erosion control BMPs, such as straw bales (certified weed free) and waddles, would be implemented to control erosion and sedimentation in ephemeral drainages on site.

Wildlife and Sensitive Species

- The migratory bird breeding season runs from March 1 through August 31. Peak nesting season occurs from April 15 through July 15. Nesting surveys for migratory birds would be conducted by a qualified biologist for any surface disturbing activities occurring between March 1 and August 31. Nesting surveys for migratory birds would be conducted no less than three days and no more than ten days prior to initiation of surface disturbance and results reported to the BLM biologist before proceeding with surface disturbance. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer would be delineated after consultation with the BLM biologist and the buffer area avoided preventing destruction or disturbance to nests or birds until they are no longer actively breeding or rearing young. The site characteristics to be used to determine the

size of the buffer area are as follows: a) topographic screening; b) distance from disturbance to nest; c) the size and quality of foraging habitat surrounding the nest; d) sensitivity of the species to nest disturbances; and e) the protection status of the species;

- During burrowing owl nesting season (March 1 to August 31), a burrowing owl survey following the Winnemucca BLM's survey protocol would be conducted prior to surface disturbance in the areas identified as potential burrowing owl habitat within the Project Area. A burrowing owl survey would be conducted no less than three, and no more than ten days prior to initiation of surface disturbance and results reported to the BLM biologist before proceeding with surface disturbance;

- Excavations left open overnight would be covered or fenced, secured in place, and strong enough to prevent wildlife from falling in;

- If a sensitive plant or animal species is identified during construction, work near the sensitive species would be halted, and the BLM biologist would be notified immediately to determine appropriate protection measures; and

- Structures would be constructed to conform to those practices described in the *Suggested Practices for Avian Protection on Power Lines* developed by the Avian Power Line Interaction Committee (APLIC) (2006). Design features would consist of APLIC construction standards. APLIC standards prevent avian electrocution through proper spacing between transmission line features. In addition, all practices and procedures in the Edison Electric Institute's APLIC and United States Fish and Wildlife Service (USFWS) *Avian Protection Plan Guidelines* (APLIC and USFWS 2005) would be followed.

Cultural and Paleontological Resources

- Prior to construction, NVE would provide training for contractors, workers, and individuals involved with the Project regarding the potential to encounter historic or prehistoric sites and objects, proper procedures in the event that cultural items or human remains are encountered, prohibitions on artifact collection, and respect for Native American religious concerns. As part of this training, all construction personnel would be instructed to inspect for cultural objects when excavating or conducting other ground-disturbing activities;

- Any cultural or paleontological resource discovered by the permit holder, or any persons working on their behalf, during the course of activities on federal land would be immediately reported to the authorized officer by telephone, with written confirmation. The permit holder would suspend all operations in the immediate area of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. This evaluation would determine the significance of the discovery and what mitigation measures are necessary to allow activities to proceed. The holder is responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer; and

- If human remains are encountered during Project construction, all work within 300 feet of the remains would cease, and the remains would be protected. If the remains are on land managed by the BLM, BLM representatives would be immediately notified. If the remains are Native American, the BLM would follow the procedures set forth in 43 CFR 10, Native American Graves Protection and Repatriation Regulations. If the remains are located on state or private lands, the Nevada State Historic Preservation Office (SHPO) and the BLM would be notified immediately. Native American human remains discovered on state or private lands would be treated under the provisions of the Protection of Indian Burial Sites section of the Nevada Revised Statutes (NRS) in Chapter 383. The Nevada SHPO would consult with the Nevada Indian Commission and notify the appropriate Native American tribe. Procedures for inadvertent discovery are listed under NRS 383.170.

Hazardous and Regulated Materials and Solid Waste

- All construction vehicles would be maintained in accordance with the manufacturers' recommendations. All vehicles would be inspected for leaks prior to entering the jobsite. All discovered leaks would be contained with a bucket of absorbent materials until repairs can be made;

- All hazardous waste materials would be properly labeled in accordance with Title 40 of CFR 262. A list of hazardous materials expected to be used during construction of the Project is presented in Table 2.1-1;

- Hazardous material storage, equipment refueling, and equipment repair would be conducted at least 100 feet away from ephemeral drainages;

- Spilled materials of any type would be cleaned up immediately. A shovel and spill kit would be maintained on site at all times to respond to spills; and

- All sanitary wastes would be collected in portable, self-contained toilets at all construction staging areas and other construction operation areas and managed in accordance with local requirements.

Air Quality

- Project vehicle speeds would be limited to 20 miles per hour (mph) in the Project Area;

- All areas subject to ground disturbance would be watered using water trucks, as needed, to control dust;

- Paved public streets would be swept if visible soil material is tracked on by construction vehicles; and

- Excavation and grading activities would be suspended when winds (instantaneous gusts) exceed 25 mph and visible dust persists that create a health hazard to neighboring property owners or visibility impacts to vehicular traffic.

Fire Prevention and Response

- In the event of a fire, the field crew would evacuate and immediately call "911" or the Central Nevada Interagency Dispatch Center at (775) 623-3444. All fires would be reported to the jurisdictional fire agency, regardless of size and actions taken.

- NVE would designate a Fire Marshal (NVE Fire Marshal), who would coordinate with a Fire Marshal to be designated by the prime contractor (Contractor Fire Marshal) and the BLM's fire management representative, as necessary. The Contractor Fire Marshal would be responsible for the following tasks:

    - Conducting regular inspections of tools, equipment, and first aid kits for completeness;

    - Conducting regular inspections of storage areas and practices for handling flammable fuels to confirm compliance with applicable laws and regulations;

    - Posting smoking and fire rules at centrally visible locations on site;

    - Coordinating initial response to contractor-caused fires within the ROW;

    - Conducting fire inspections along the ROW;

    - Ensuring that all construction workers and subcontractors are aware of all fire protection measures;

    - Remaining on duty and on site when construction activities are in progress and during any additional periods when fire safety is an issue, or designating another individual to serve in this capacity when absent;

    - Reporting all wildfires in accordance with the notification procedures described below:

        - Initiating and implementing fire suppression activities until relieved by agency or local firefighting services in the event of a Project-related fire. Project fire suppression personnel and equipment, including water tenders, would be dispatched within 15 minutes from the time that a fire is reported; and

        - Coordinating with the NVE Project Manager regarding current fire conditions potential and fire safety warnings from the BLM and communicating these conditions to the contractor's crew.

- The NVE Construction Forman or Contractor Fire Marshal would immediately notify firefighting services of any fires on site;

- Contractors would be notified to stop or reduce construction activities that pose a significant fire hazard until appropriate safeguards are taken;

- If an accidental fire occurs during construction, immediate steps to extinguish the fire (if it is manageable and safe to do so) would be taken using available fire suppression equipment and techniques. Fire suppression activities would be initiated by NVE or its contractor until relieved by agency or local firefighting services;

- Smoking would only be permitted in designated cleared areas and would be prohibited while walking or working in areas with vegetation or while operating equipment. In areas where smoking is permitted, all burning tobacco and matches would be completely extinguished and discarded in ash trays, not on the ground;

- "NO SMOKING" signage and fire rules would be posted at the construction staging area during the fire season;

- Fire suppression equipment would be present in areas where construction tools or equipment have the potential to spark a fire;

- Extra precautions would be taken when fire danger is considered to be high;

- All field personnel would be instructed regarding emergency fire response. The contractors would receive training on the following: initial fire suppression techniques; fire event reporting requirements; methods to determine if a fire is manageable; fire control measures to be implemented by field crews on site; when the worksite should be evacuated; how to respond to wildfires in the vicinity; and how to maintain knowledge of and plans for evacuation routes;

- No open burning, campfires, or barbeques would be allowed along the ROW, at construction staging areas, substations, on access roads, or in any other Project-related construction areas;

- All welding or cutting of powerline structures or their component parts would be approved by the NVE Construction Foreman. Welding or cutting activities would cease one hour before all fire response personnel leave a construction area to reduce the possibility of material associated with welding activities smoldering and starting a fire. Welder vehicles would be equipped with fire suppression equipment;

- All internal combustion engines, both stationary and mobile, would be equipped with approved spark arresters that have been maintained in good working condition. Light trucks and cars with factory-installed (type) mufflers in good condition would be used on roads cleared of all vegetation with no additional equipment required. Vehicles equipped with catalytic converters are potential fire hazards and would be parked on cleared areas only;

- The use of torches, fuses, highway flares, or other warning devices with open flames would be prohibited. NVE and its contractors would only use electric or battery-operated warning devices on site;

- Equipment parking areas, small stationary engine sites, and gas and oil storage areas would be cleared of all extraneous flammable materials. "NO SMOKING" signs would be posted in these areas at all times;

- Fuel tanks would be grounded;

- NVE and the contractors would provide continuous access to roads for emergency vehicles during construction;

- All motorized vehicles and equipment would be equipped with the following fire protection items: one long-handled round-point shovel; one ax or Pulaski fire tool; one five-pound ABC Dry Chemical Fire Extinguisher; one five-gallon water backpack (or other approved container) full of water or other extinguishing solution; and a hard hat, work gloves, and eye protection;

- Project construction worksites would include the following equipment: power saws, if required by construction, equipped with an approved spark arrester and accompanied by one five-pound ABC Dry Chemical Fire Extinguisher and a long-handled, round-point shovel when used away from a vehicle; fuel service trucks with one 35-pound capacity fire extinguisher charged with the necessary chemicals to control electrical and fuel fires; at least two long-handled, round-point shovels and two five-pound ABC Dry Chemical Fire Extinguishers at wood cutting, welding, or other construction work sites that have a high risk of starting fires; at least one radio and/or cellular telephone to contact fire suppression agencies or the Project management team; and backpumps filled with water (two at each wood-cutting site, one at each welding site, and two at each tower installation or construction site, or any activity site at risk of igniting fires; and

- During periods of increased fire danger, a fire suppression vehicle would be available in the construction area or stationed near high-risk construction work sites and would be equipped with the following items: One water tank with a minimum capacity of 500 gallons; 250 feet of 0.75-inch heavy-duty rubber hosing; one pump with a discharge capacity of at least 20 gallons per minute (the pump would have fuel capacity to operate for at least a two-hour period; and one tool cache (for fire use only) containing a minimum of two long-handled round-point shovels, two axes or Pulaski fire tools and one chainsaw of 3.5 (or more) horsepower with a cutting bar of at least 20 inches in length.

2.2 No Action Alternative

Under the No Action Alternative, the BLM would not grant the ROW and the Project would not be constructed. Existing ROWs in the Project Area would continue to be maintained.

2.3 Alternatives Considered but Eliminated from Detailed Study

2.3.1 Alternate Route Segment Alternative

Under this alternative, NVE would apply for a ROW that allows for the direct connection between the Grass Valley Substation and the existing 120kV transmission line (NVN-001932) directly east of the substation that would require approximately 2,000 feet of new

120kV transmission line. This alternative would reduce the amount of new transmission line from 4,000 feet to approximately 2,000 feet and further reduce the overall level of surface disturbance associated with the construction of the line by co-locating the new line with the existing powerlines. However, there are no existing roads associated with this route, or existing transmission lines. This alternative would create unnecessary new road and surface disturbance, creating increased and avoidable impacts to noxious weeds, invasive and nonnative species, soils, vegetation, visual resources, and wildlife resources.

2.3.2 Double Circuit Alternative

Under this alternative, NVE would utilize the existing authorized 60kV transmission line (NVN-042767 now authorized under N-90792), and "double circuit" the line with the needed 120kV transmission line from the Grass Valley Substation to the existing 120kV transmission line (NVN-001932). This alternative would not require any additional ROW. Double-circuiting the line would require the removal of the existing 60kV transmission line from service during construction of the 120kV line. This would not meet the demand of the Grass Valley Substation. This alternative is not preferable because of safety concerns resulting from the potential event of a flash-over. In addition, the existing 60kV line and structures are in good condition and it would be unnecessary to decommission this line. Additionally, double circuiting is not a recommended practice within fire prone areas as it may result in the simultaneous loss of primary and redundant circuits. This does not meet the purpose of the Project to provide reliable back-up power.

3 AFFECTED ENVIRONMENT

3.1 Introduction

The Project would occur on public lands administrated by the BLM. Public lands under BLM jurisdiction are managed for the multiple uses of range, forestry, watershed, mineral extraction, recreation, wilderness, and wildlife habitat. Land uses within the Project Area and vicinity include existing and authorized ROWs, livestock grazing, and wildlife habitat. No wildland fires have been recorded in the Project Area between 1901 and 2008. The nearest wildland fire occurred recently and was located approximately 500 feet east of the Project Area within the ROW of the existing 120kV transmission line.

The Project is located within the Grass Valley Hydrographic basin (Basin #71) of the Humboldt River Region (Hydrographic Region 4). Designated ground water basins are basins where permitted ground water rights approach or exceed the estimated average annual recharge and the water resources are being depleted or require additional administration. The Grass Valley Hydrographic Basin is designated for the entire basin. The annual system yield is estimated to be 20,000 acre-feet per year (ac-ft/yr) for the Grass Valley Hydrographic Basin with a water budget of 13,000 ac-ft/yr (Nevada Division of Water Resources [NDWR] 1971). The Nevada State Engineer, NDWR, is authorized and directed by NRS 534.120 to designate ground water basins and declare preferred uses within each designated basin.

The mean annual precipitation at the Winnemucca Airport, located approximately 3.5 miles southeast of the Project, is 8.3 inches, and the mean annual snowfall is 16.5 inches (WRCC 2008). Most precipitation in central Nevada is from frontal storms mainly from the north and west during the winter months and convectional storms during the summer months. Frontal storms are generally low-intensity, short-duration events covering large areas. Convective storms are generally high-intensity thunderstorms, and are brief and have limited aerial extent.

Table 3.1-1 identifies the supplemental authorities and whether each is not present, present and not affected, or present and potentially affected. Table 3.1-2 identifies additional affected resources that are present and potentially affected within the Project Area.

Table 3.1-1: Supplemental Authorities

Supplemental Authority	Not Present	Present, Not Affected	Present, Potentially Affected	Reference Section/Rationale
Air Quality			X	See Section 3.2.
Areas of Critical Environmental Concern	X			Element is not present.
Cultural Resources		X		See Section 3.3.
Environmental Justice	X			There are no environmental justice issues associated with the Project.
Flood Plains	X			Element is not present.
Noxious Weeds, Invasive and Nonnative Species			X	See Section 3.4.
Migratory Birds			X	See Section 3.5.

Supplemental Authority	Not Present	Present, Not Affected	Present, Potentially Affected	Reference Section/Rationale
Native American Religious Concerns		X		See Section 3.6.
Prime or Unique Farmlands	X			Element is not present.
Threatened or Endangered Species	X			Element is not present.
Wastes, Hazardous or Solid	X			Element is not present.
Water Quality (Surface and Ground)			X	See Section 3.7 for surface water quality. Ground water issues are *de minimus* for the Project.
Wetlands and Riparian Zones	X			Element is not present.
Wild and Scenic Rivers	X			Element is not present.
Wilderness	X			Element is not present.

Table 3.1-2: Additional Affected Resources

Additional Affected Resources	Not Present, Not Affected	Present, Potentially Affected	Reference Section
Lands and Realty		X	See Section 3.8
Lands with Wilderness Characteristics	X		The Project Area is within a highly disturbed area with existing powerlines and roads and does not have lands that have wilderness values.
Paleontological Resources		X	See Section 3.9
Rangeland Management		X	See Section 3.10
Social Values and Economics		X	See Section 3.11
Soils		X	See Section 3.12
Special Status Species		X	See Section 3.13
Vegetation		X	See Section 3.14
Wildlife		X	See Section 3.15

Supplemental Authorities

3.2 Air Quality

The Project is located in the northern extent of Grass Valley, less than two miles southeast of the Humboldt River. The Project Area contains relatively flat terrain that has been historically disturbed by grazing, wildland fires, and existing roads and powerlines. The climate is arid, and characterized by warm, dry summers and moderately cold, dry winters. The mean annual precipitation at the Winnemucca Airport, located approximately 3.5 miles southeast of the Project, is 8.3 inches, and the mean annual snowfall is 16.5 inches. The mean annual low temperature is 33 degrees Fahrenheit (°F) and the mean annual high temperature is 64.8 °F (WRCC 2008).

The Bureau of Air Pollution Control (BAPC) is the agency in the State of Nevada that has been delegated the responsibility for implementing a State Implementation Plan (SIP) for air quality (excluding Washoe and Clark Counties, which have their own SIPs). Included in a SIP are the

State of Nevada air quality permit programs ([Nevada Administrative Code] NAC 445B.001 through 445B.3485, inclusive). Also as part of a SIP are the Nevada State Ambient Air Quality Standards (NSAAQS). The NSAAQS are generally identical to the National Ambient Air Quality Standards (NAAQS), with the exception of the following: (a) an additional standard for carbon monoxide in areas with an elevation in excess of 5,000 feet amsl; (b) the recently implemented NSAAQS for particulate matter of aerodynamic diameter less than 2.5 microns ($PM_{2.5}$); c) the revised NAAQS for particulate matter of aerodynamic diameter less than ten microns (PM_{10}); (d) ozone (Nevada has yet to adopt the new and revised federal standards); and (e) a violation of a state standard occurs with the first annual exceedance of an ambient standard, while federal standards are generally not violated until the second annual exceedance. In addition to establishing the NSAAQS, the BAPC is responsible for the Prevention of Significant Deterioration (PSD) program; enforcing the New Source Performance Standards; and implementing the Federal Operating Permit Program (Title V) throughout the State of Nevada.

Attainment status within the Project Area is determined by monitoring ambient levels of criteria pollutants. The attainment or unclassified designation means that no violations of Nevada or national air quality standards have been documented in the region. The Project Area is located within the Winnemucca Segment, a designed “unclassifiable” basin for attainment of all NAAQS (40 CFR 81.329). The Winnemucca Segment is not a Nevada PSD triggered basin for any pollutants. The existing air quality is typical of largely undeveloped regions of the western United States (U.S.) with limited sources of pollutants.

3.3 Cultural Resources

Class III inventories have been completed for the entire Project Area. The portion of the proposed Project that passes through T35N, R38E, section 6 was surveyed by the BLM in 1994 in CR2-2602(P). Two sites, CRNV-22-6065 and CRNV-22-6066 were recorded in the Project Area. Another site, CRNV-02-4038, which had been previously recorded was relocated and the site form updated. All three sites were determined to be ineligible for listing in the National Register of Historic Places (NRHP) by the BLM in concurrence with the SHPO. Far Western Anthropological Research Group, Inc. (FWARG) conducted a Class III Inventory, CR2-3056(P), of the remaining uninventoried portions of the Project Area in 2009 and located one isolated artifact (FWARG 2009). Isolates are considered categorically ineligible to the NRHP.

3.4 Noxious Weeds, Invasive and Nonnative Species

The control of noxious weeds on public land under BLM jurisdiction includes the Federal Insecticide, Fungicide and Rodenticide Act of 1972, Federal Noxious Weed Act of 1974, FLPMA (1976), and the Public Rangelands Improvement Act of 1978.

An "invasive species" is defined as a species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order [EO] 13112). Invasive, nonnative species are species that are highly competitive, highly aggressive, and spread easily. They include plants designated as "noxious" and animals designated as "pests" by federal or state law.

The Nevada Department of Agriculture maintains a Nevada Noxious Weed List. The BLM defines "noxious weed" as "a plant that interferes with management objectives for a given area of

land at a given point in time." The strategy for noxious weed management is to "prevent and control the spread of noxious weeds through local and regional cooperative efforts… to ensure maintenance and restoration of healthy ecosystems on BLM-managed lands." Noxious weed control would be based on a program of "....prevention, education, detection, and quick control of small infestations." Animal and plant species designated as "pests" are generally species that are injurious to agricultural and nursery interests or vectors of diseases, which may be transmissible and injurious to humans.

The State of Nevada has 47 nonnative invasive plant species that require control, of which 14 of these species are identified in the Winnemucca BLM District and include the following: African rue (*Peganum harmala*); Austrian fieldcress (*Rorippa austriaca*); Austrian peaweed (*Sphaerophysa salsula*); Camelthorn (*Alhagi camelorum*); common crupina (*Crupina vulgaris*); Dalmation toadflax (*Linaria dalmatica*); Dyer's woad (*Isatis tinctoria*); Eurasian water-milfoil (*Myriophyllum spicatum*); giant reed (*Arundo donax*); giant salvinia (*Salvinia molesta*); Goat's rue (*Galega officinalis*); houndstongue (*Cynoglossum officinale*); hydrilla (*Hydrilla verticillata*); Iberian starthistle (*Centaurea iberica*); Klamath weed (*Hypericum perforatum*); Leafy spurge (*Euphorbia esula*); Malta starthistle (*Centaurea melitensis*); Mayweed chamomile (*Anthemis cotula*); Mediterranean sage (*Salvia aethiopis*); and purple loosestrife (*Lythrum salicaria*).

Noxious weed species were not detected in the Project Area during surveys. Nonnative, invasive species observed in the Project Area include cheatgrass (*Bromus tectorum*), tall tumble mustard (*Sisymbrium altissimum*), clasping pepperweed (*Lepidium perfoliatum*), and fiddleneck (*Amsinckia menziesii*). These species were prevalent throughout the Project Area.

3.5 Migratory Birds

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds commonly found in the U.S., with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings without a permit. EO 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from the Memorandum of Understanding (MOU) between the BLM and the USFWS, signed January 17, 2001. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS, in coordination with state, tribal, and local governments. The MOU identifies management practices that impact populations of high priority migratory bird species, including nesting, migration, or over-wintering habitats on public lands, and develops management objectives or recommendations that avoid or minimize these impacts.

Three types of habitat occur within the Project Area; big sagebrush shrubland, salt desert scrub, and nonnative grassland. According to the Great Basin Bird Observatory (GBBO), migratory bird species associated with areas characterized by sagebrush and salt desert scrub vegetative communities may include the following: Swainson's hawk (*Buteo swainsoni*); golden eagle (*Aquila chrysaetos*); ferruginous hawk (*Buteo regalis*); prairie falcon (*Falco mexicanus*); western burrowing owl (*Athene cunicularia*); common poorwill (*Phalaenoptilus nuttallii*); gray flycatcher (*Empidonax wrightii*); sage thrasher (*Oreoscoptes montanus*); Brewer's sparrow (*Spizella breweri*); sage sparrow (*Amphispiza belli*); and loggerhead shrike (*Lanius*

ludovicianus). The black-throated sparrow (*Amphispiza bilineata*) serves as an indicator species for the salt desert scrub vegetation community. Other species that may occasionally, seasonally, or opportunistically use the vegetation communities within the Project Area, but are not primarily dependent on it include the sharp-tailed grouse (*Tympanuchus phasianellus*), pinyon jay (*Gymnorhinus cyanocephalus*) and black rosy-finch (*Leucosticte atrata*) (GBBO 2010). The short-eared owl (*Asio flammeus*) may also be present due to grassland habitat within the Project Area.

Migratory bird species observed in the Project Area during a survey conducted by Enviroscientists, Inc. (Enviroscientists) in 2011 include the following: American kestrel (*Falco sparverious*); turkey vulture (*Cathartes aura*); black-throated sparrow; American robin (*Turdus migratorious*); Brewer's blackbird (*Euphagus cyanocephalus*); house finch (*Carpodacus mexicanus*); common night hawk (*Chordeiles minor*); common raven (*Corvus corax*); mourning dove (*Zenaida macroura*); northern harrier (*Circus cyaneus*); red-tailed hawk (*Buteo jamaicensis*); green-tailed towhee (*Pipilo chlorurus*); western kingbird (*Tyrannus verticalis*); and western meadowlark (*Sturnella neglecta*).

The Nevada Department of Wildlife (NDOW) identified a fall raptor migration route that extends north and south through the center of the Project Area. Further correspondence with the NDOW regarding this migration route indicated that the route is used annually from approximately September 30 through November 15 and then again from February 15 to April 15 (NDOW 2011). Raptor foraging habitat is present throughout and adjacent to the Project Area. Existing transmission lines and associated structures may provide perching and nesting opportunities for raptors.

3.6 Native American Religious Concerns

In accordance with the National Historic Preservation Act (P.L. 89-665), the NEPA, the FLPMA (P.L. 94-579), the American Indian Religious Freedom Act (P.L. 95-341), the Native American Graves Protection and Repatriation Act (NAGPRA) (P.L. 101-601) and EO 13007, the BLM must provide affected tribes an opportunity to comment and consult on the proposed Project. The BLM must attempt to limit, reduce, or possibly eliminate any negative impacts to Native American traditional/cultural/spiritual sites, activities, and resources.

On August 23, 2011, letters providing information related to the Proposed Action were sent to the Fort McDermitt Paiute & Shoshone Tribe, Battle Mountain Council and the Winnemucca Tribe. To date, no traditional cultural properties or EO 13007 sites have been identified within the Project Area that might be impacted by the Proposed Action or alternatives.

3.7 Water Quality

Surface Water Quality

The Project is located within the Grass Valley Hydrographic Basin within the Humboldt River Hydrographic Region. Surface water within the Project Area is limited and generally consists of intermittent water sources. Two ephemeral drainages traverse the Project Area in a southeast to northwest trend. Surface water runoff from the Project Area generally flows northwest toward the Humboldt River.

Additional Affected Resources

3.8 Lands and Realty

The Project Area is located within the checkerboard lands of northern Nevada where the alternate sections are NSPL administered by the BLM and private land (Figure 1.1.1). The NSPL within the Project Area are open public domain lands that have a multiple use designation by the BLM. The lands in the Project Area are zoned by Humboldt County as RR–2.5 and RR–5. The Project Area and immediate vicinity is utilized for several other uses, as shown on the BLM Master Title Plats which have specific authorizations when located on public land. These uses include three transmission line ROWs (NVN-046291, NVN-042767 [now authorized under N-90792], and NVN-052751), one substation (NVN-046290), and a Recreation and Public Purpose (R&PP) lease to Humboldt County.

3.9 Paleontological Resources

The BLM manages paleontological resources under a number of federal laws including the following: FLPMA Sections 310 and 302(b), which direct the BLM to manage public lands to protect the quality of scientific and other values; 43 CFR 8365.1-5, which prohibits the willful disturbance, removal, and destruction of scientific resources or natural objects; and 43 CFR 3622, which regulates the amount of petrified wood that can be collected for personal, noncommercial purposes without a permit.

The Project Area is mapped entirely within Quaternary younger alluvium, which includes playa, dune, and stream deposits, and Lake Lahontan deposits. There are no known paleontological sites in or near the Project Area.

Paleontological resources for the Project Area were analyzed with the use of the Potential Fossil Yield Classification (PFYC) system which provides guidance for the assessment of potential impacts to paleontological resources, field survey and monitoring procedures, and recommended mitigation measures that protect paleontological resources impacted by federal actions. According to the BLM, the Project Area contains moderate potential (PFYC *Class 3a*) for the potential for significant paleontological resources.

The following is a description of the Classification in the Project Area: *Class 3a* - Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered. Common invertebrate or plant fossils may be found in the area, and opportunities may exist for hobby collecting. The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

3.10 Rangeland Management

The Project Area is located within the Thomas Creek grazing allotment (27,126 acres) within the Winnemucca administrative unit. The Thomas Creek grazing allotment occurs on both public and private land resulting in checkerboard land pattern. Within the allotment, there are 761 Animal Unit Months (AUMs), 423 on public and 338 on private. An AUM represents the amount of forage required to support one cow and her calf for one month. There are approximately 36 acres per AUM. The allotment is grazed for cattle, with two permittees from

the beginning of April to the end of August. Rangeland improvements within the Thomas Creek grazing allotment includes a boundary fence and a seasonal drift fence located in the western portion of the allotment and outside of the Project Area (BLM 2011a).

3.11 Social Values and Economics

The Project Area is located in Humboldt County, approximately one mile south of Winnemucca, on State Route 294/South Grass Valley Road. A temporary workforce of 11 employees or contractors would be hired by NVE to complete the approximately eight week long job. It is likely that some of these workers would live outside of the Winnemucca area. These temporary workers would utilize lodging and services in Winnemucca and commute to and from the Project Area; therefore, the socioeconomic impacts associated with the Project are likely limited to occur within Humboldt County.

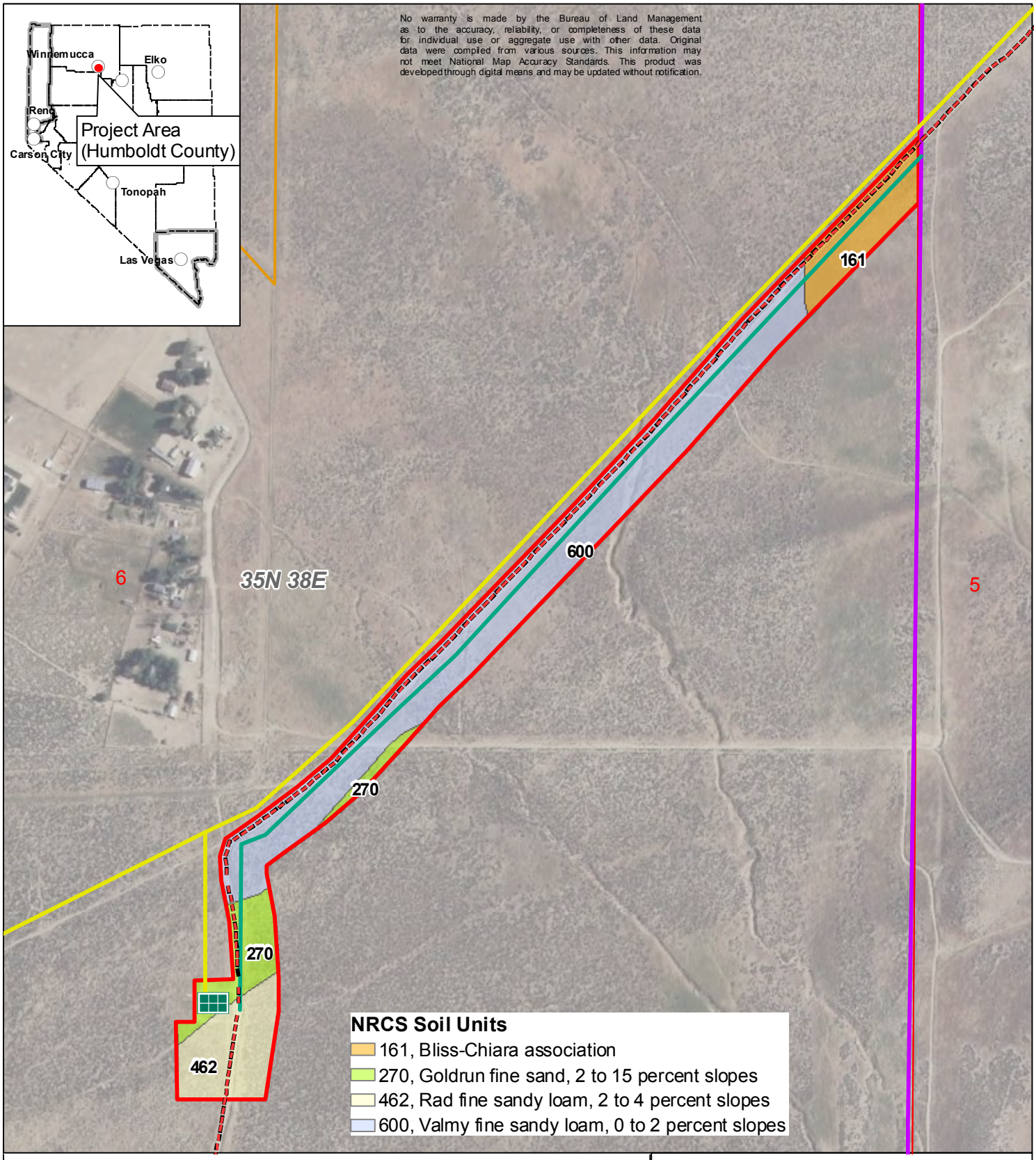
Humboldt County is located in north central Nevada and encompasses 9,704 square miles. The county lies along the Humboldt River and is bordered by Oregon to the north and Pershing, Elko, Lander, and Washoe Counties to the south, east, southeast, and west, respectively. Interstate 80 (I-80) and the transcontinental railroad traverse Humboldt County from the east and west.

The total population of Humboldt County in 2010 was estimated to be 16,528, which was an increase of 36 percent since 1990 (population 13,020) (US Census Bureau 2010a). The population in Winnemucca, the largest city and county seat, in 2010 was 7,396 (U.S. Census Bureau 2010b). Winnemucca is home to numerous restaurants and retail outlets and provides a variety of lodging and recreational opportunities.

The economy of Humboldt County is based on major industries including mining, agriculture and agricultural services, tourism, and construction. Humboldt County is home to gold and other types of mining and is the leading agricultural county in the State of Nevada with over 100,000 acres under cultivation. Tourism is also a large part of the county's economy due to gaming and outdoor recreation (i.e., hunting and fishing). The residents of Humboldt County rely on power from NVE powerlines to service their electrical needs and enhance their standard of living.

3.12 Soils

The information for soils in the Project Area was primarily obtained from the United States Department of Agriculture, Natural Resources Conservation Service (NRCS). The soils within the Project Area are typical of rangeland and cropland and consist of eolian and lacustrine sands derived from mixed rocks and volcanic ash, alluvium derived from mixed rocks with a loess mantle high in volcanic ash, and sandy soils formed on inset fans, fan skirts, basin floors, beach terraces, basin-floor remnants, fan remnants, fan piedmont remnants, and partial ballenas (NRCS 2011). The soil mapping units within the Project Area are shown on Figure 3.12.1 and listed in Table 3.12-1.



Explanation

- Project Area
- Grass Valley Substation
- Proposed Construction Access
- Proposed 120kV Transmission Line
- Existing 120kV Transmission Line
- Existing 60kV Transmission Line
- Existing Distribution Line

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Winnemucca, NV 89445

0 200 400 600 800 Feet

Projection: UTM Zone 11 North, NAD83

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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Soil Associations within the Project Area

Figure 3.12.1

04/12/2012

Foothills and hills generally have a water erosion hazard of severe, and wind erosion hazard of low. Piedmonts generally have a water erosion hazard of low and wind erosion of moderate. Soil erosion potential by water is unknown for the soil units found in the Project Area.

Table 3.12-1: Summary of Soil Mapping Units and Characteristics

Mapping Unit	Soil Series	Acres in the Project Area	Soil Depth in Inches to Restrictive Feature	Hydrological Characteristics	Soil Erosion Hazard	
					By Water	By Wind
Bliss-Chiara (161)	Bliss	2.4	20-36 (Duripan)	Well drained; moderate permeability	N/A	Slight
	Chiara		10-20 (Duripan)	Well drained; N/A	N/A	Slight
Valmy (600)	Valmy	11.8	>80	Well drained; moderately rapid permeability	N/A	Slight
Goldrun (271/272)	Goldrun	2.3	>80	Somewhat excessively drained; rapid permeability	N/A	Slight
Rad (462)	Rad	2.9	>80	Well drained; N/A	N/A	Slight

N/A = not available
Source: NRCS 2011

3.13 Special Status Species

BLM policy for management of special status species is in the BLM Manual Section 6840. Special status species include the following:

- Federally Threatened or Endangered Species: Any species that the USFWS has listed as an endangered or threatened species under the Endangered Species Act of 1973, as amended (ESA) throughout all or a significant portion of its range;

- Proposed Threatened or Endangered Species: Any species that the USFWS has proposed for listing as a federally endangered or threatened species under the ESA;

- Candidate Species: Plant and animal taxa that are under consideration for possible listing as threatened or endangered under the ESA;

- BLM Sensitive Species: 1) Species that are currently under status review by the USFWS; 2) Species whose numbers are declining so rapidly that federal listing may become necessary; 3) Species with typically small and widely dispersed populations; or 4) Species that inhabit ecological refugia or other specialized or unique habitats; and

- State of Nevada Listed Species: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

Nevada BLM policy is to provide State of Nevada listed species and Nevada BLM sensitive species with the same level of protection as is provided to candidate species in BLM Manual 6840.06C. Per wording in Table IIa in BLM Information Bulletin No. NV-2003-097,

Nevada protected animals that meet BLM's 6840 policy definition are those species of animals occurring on BLM-managed lands in Nevada that are: 1) 'protected' under authority of the NAC; 2) have been determined to meet BLM's policy definition of "listing by a state in a category implying potential endangerment or extinction;" and 3) are not already included as federally listed, proposed, or candidate species.

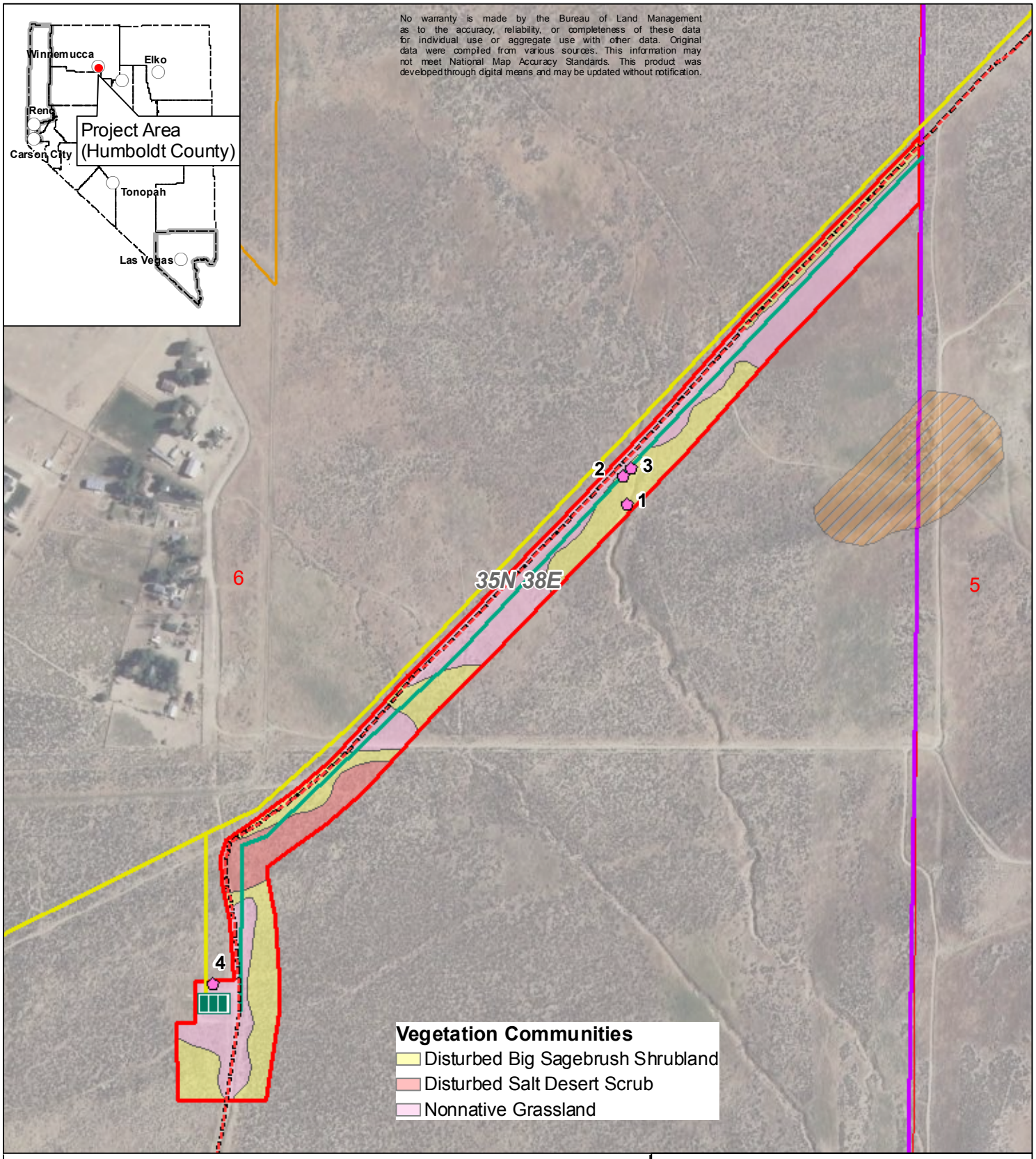
The USFWS, the Nevada Natural Heritage Program (NNHP), and the NDOW were contacted to obtain a list of threatened and endangered and sensitive species that have the potential to occur within the Project Area. In addition, the BLM Sensitive Species List and Special Status Species (threatened and endangered) lists were evaluated for potential to occur in the Project Area. Information from the NNHP, NDOW, and the USFWS indicate that no federally threatened or endangered plant or animal species have the potential to occur within the Project Area.

Special status plant and wildlife field surveys were conducted during July 20-22, 2011 by Enviroscientists (Enviroscientists 2011). Enviroscientists conducted a biological survey of the Project Area which included an assessment of potential sensitive species habitat. Prior to conducting field surveys, Enviroscientists reviewed available literature and corresponded with resource agencies to identify potential biological resources and special status species that have the potential to occur within the Project Area. The survey assessment included: a vegetation community assessment and species inventory; a general wildlife habitat assessment and species inventory; a burrowing owl survey and habitat assessment; a Kearney's buckwheat (*Erigonum nummulare*) survey; and a migratory bird (point count) and raptor survey including an assessment of potential golden eagle or bald eagle (*Haliaeetus leucocephalus*) habitat.

Based on the results of the biological survey and habitat assessment conducted for the Project, no BLM sensitive or federally listed plant species are known to occur within the Project Area; therefore, sensitive plants would not be further analyzed in this EA. Based on the results of the biological survey and habitat assessment, BLM sensitive or special status wildlife species that were determined to have the potential to utilize the Project Area include: western burrowing owl; Swainson's hawk; ferruginous hawk; golden eagle; sage thrasher; Brewer's sparrow; and loggerhead shrike. No greater sage-grouse (*Centrocercus urophasianus*) habitat occurs in the Project Area and no evidence of greater sage-grouse were found during the biological surveys. No federally threatened or endangered species have the potential to occur in the Project Area. Four inactive burrows were identified within the Project Area that met the size requirements for burrowing owl; however, no sign of burrowing owl use or activity was noted in or around these burrows. The locations of the burrows and other biological resources within the Project Area are shown in Figure 3.13.1.

3.13.1 BLM Sensitive Species

Sensitive species are species that require special management consideration to avoid potential future listing under the ESA and that have been identified in accordance with procedures set forth in BLM Manual 6840. BLM policy in BLM Manual 6840.06 states, "Actions authorized by the BLM shall further the conservation and/or recovery of federally listed species and conservation of Bureau sensitive species. Note that "conservation" has a different meaning depending on whether it is referring to ESA listed species or Bureau sensitive species…Bureau sensitive species would be managed consistent with species and habitat management objectives in land use and implementation plans to promote their conservation and to minimize the likelihood and need for listing under the ESA."



Explanation

- Project Area
- Inactive Burrow
- Grass Valley Substation
- Proposed Construction Access
- Proposed 120kV Transmission Line
- Existing 120kV Transmission Line
- Existing 60kV Transmission Line
- Existing Distribution Line
- BLM Fire History 1981 to 2011

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GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Biological Resources within the Project Area

Figure 3.13.1

04/12/2012

Western Burrowing Owl

Lower elevation habitats within the Project Area may provide suitable nesting and foraging sites for burrowing owls. Preferred nesting habitat for burrowing owls consists of areas previously dominated by dense stands of big sagebrush that have burned and converted to low grass species, with a few remaining sagebrush trunks for perches. Nesting normally takes place in abandoned badger burrows (Enviroscientists 2011). Prey consists of rodents and insects; primarily beetles during the breeding season. Four potential burrows were identified within the Project Area during protocol surveys. However, no sign of burrowing owl use or activity was observed at these sites or within the Project Area.

Swainson's Hawk

Swainson's hawks can be associated with Great Basin and Mojave lowland riparian, agriculture, sagebrush and wet meadow habitats. Ideal habitat features include large riparian nesting trees, agricultural fields, and open shrublands within relatively close proximity. Nesting habitat often consists of platforms in old large trees, cliff ledges, juniper, and old raptor or heron nests (GBBO 2010). No Swainson's hawks or nests were observed within the Project Area; however, suitable foraging habitat is present.

Ferruginous Hawk

Ferruginous hawks use sagebrush, piñon-juniper woodlands and salt desert scrub habitats year-round in northern Nevada. Ferruginous hawks in Nevada reportedly prefer landscapes where human presence is minimal and they are generally more sensitive to nest disturbances than most other raptors (GBBO 2010). No ferruginous hawks or nests were observed within the Project Area; however, suitable foraging habitat is present.

Golden Eagle

Golden eagle is protected by the MBTA and the Bald and Golden Eagle Protection Act, both of which prohibit take. The *Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance* provides guidance to conduct informed impact analyses and mitigation during the NEPA process (USFWS 2010). The USFWS was contacted to consult informally regarding the Project to ensure that the Project design measures were sufficient to address any potential impacts to golden eagles (personal communication with Mr. Steve Able on September 28, 2011).

Golden eagles nest in high densities in open and semi-open habitat, but may also nest at lower densities in coniferous habitat when open space is available. Golden eagles currently breed in and near much of the available open habitat in North America west of the 100th meridian. Golden eagles avoid nesting near urban habitats. In the Great Basin, golden eagles nest on cliffs and in scrub forest habitat. Golden eagles forage both close to and far from their nests (up to nine kilometers from the center of their territory) (USFWS 2010).

The NDOW did not identify any active golden eagle nests located within ten miles of the Project Area and no potential golden eagle nesting habitat is known to occur in or within the vicinity of the Project Area (NDOW 2011). During the biological survey for the Project, no golden eagle

nesting habitat was identified in the Project Area or within line of site of the Project Area and no golden eagles were directly observed. The entire Project Area is potential golden eagle foraging habitat.

Sage Thrasher

Sage thrashers are most often associated with sagebrush, montane shrubland, and salt desert scrub habitats. Species abundance can be associated with higher shrub densities and a lack of trees. Nest habitat often consists of low branches in dense shrubs (GBBO 2010). Sage thrasher was not observed within the Project Area or vicinity during surveys. Previous disturbance to habitat in the Project Area and lack of connectivity to other high quality habitats may reduce habitat suitability for sage thrashers in this area.

Brewer's Sparrow

The Brewer's sparrow is typically associated with montane shrubland, sagebrush, and salt desert scrub habitats. This species prefers high shrub density and relatively large habitat patches and mosaics of varying shrub densities. Nesting habitat often consists of dense crown tall shrubs (GBBO 2010). Brewer's sparrow was not observed within the Project Area or vicinity during surveys. Previous disturbance to habitat in the Project Area and lack of connectivity to other high quality habitats may reduce habitat suitability for sage thrashers in this area.

Loggerhead Shrike

Loggerhead shrikes are typically associated with greasewood and sagebrush communities. They also frequent open country in valleys and foothills, juniper or piñon-juniper woodlands. Dense strands of trees and shrubs are used for nesting and roosting sites, as well as for hunting perches (GBBO 2010). No loggerhead shrikes were observed in the Project Area during surveys; however, suitable habitat is present.

Rice's Blue

Potential habitat for Rice's blue (*Euphilotes pallescens ricei*) was evaluated by surveying for Kearney's buckwheat, which is the host plant for this butterfly species. Kearney's buckwheat is found in sandy substrates within salt brush and sagebrush communities and flowers between July and October (Enviroscientists 2011). A special status plant survey conducted in July 2011 by Enviroscientists did not locate Kearney's buckwheat within the Project Area. No potential habitat for Rice's blue was identified in the Project Area so Rice's blue is not further analyzed in this EA.

3.13.2 Nevada Natural Heritage Program Species

Nevada Viceroy

The NNHP identified potential for habitat to occur within the Project Area for Nevada viceroy (*Limenitis archippus lahontani*), a butterfly determined to be critically imperiled by the NNHP. Suitable habitat for Nevada viceroy consists of riparian woodlands, which are not present in the Project Area. Therefore, Nevada viceroy is not further analyzed in this EA.

3.14 Vegetation

The Project is located within the Intermountain Region, Great Basin Division, Central Great Basin Section floristic zone. This region is characterized by elevated valleys and mountains of sandstone, siltstone, and shale derived from volcanic rock. The Central Great Basin Section floristic zone is large and diverse, covering approximately 30,250 square miles (Cronquist et al 1972).

Vegetation in the Project Area consists of Wyoming big sagebrush, salt desert scrub and nonnative annual grass communities. The vegetation communities within the Project Area are highly disturbed and native grass and forb species are generally lacking. The Project Area is on the urban fringe and multiple dirt roads, powerlines, fences, general disturbance from anthropogenic use and past wildfires have resulted in fragmented vegetation communities that lack structure.

Evidence of wildfire within the Project Area was noted during the field surveys. The nearest documented wildfire occurred more than 500 feet away in an unknown year. The 1985 Thomas fire (approximately 1,333 total acres) and the 2007 Thomas fire (approximately 18,328 total acres), both burned within approximately 0.5 mile of the Project Area. Many of the burned areas have been revegetated with recovered native and seeded species. Most of the re-seeding efforts were successful, however, some of the areas within the greater project area contain mainly cheatgrass.

The Wyoming big sagebrush community occupies approximately 7.8 acres of the Project Area. The dominant shrub species in this community is Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*) and to a lesser extent, yellow rabbitbrush (*Chrysothamnus viscidiflorus*). Native grasses and forbs were rare and the understory was dominated by cheatgrass and tall tumble mustard.

Salt desert scrub communities occupy less than 1.8 acres of the Project Area and are associated with the Goldrun fine sand soil unit. Dominant species in the overstory are slow growing and sparse, including: spiny hopsage (*Grayia spinosa*); yellow rabbitbrush; and spiny horsebrush (*Tetradymia spinosa*). Native grasses and forbs were rare and the understory was dominated by cheatgrass and tall tumble mustard, but in some sandier open canopy areas phlox (Phlox sp.) was noted along with a biological crust. Approximately 9.8 acres of the Project Area is dominated by nonnative annual grass composed of cheatgrass and tall tumble mustard. A few remnant shrubs were scattered sparsely throughout this community.

3.15 Wildlife

General Wildlife

Terrestrial wildlife resources in the Project Area are typical of the northern Great Basin. A wide variety of wildlife species common to the Great Basin ecosystem have the potential to utilize the Project Area. The Project Area is located along an urban interface with existing roads, powerlines, fences, and past wildfire disturbance. Wildlife species utilizing this area are likely somewhat tolerant of habitat disturbance and fragmentation.

General wildlife species observed or detected during surveys in the Project Area include: coyote (*Canis latrans*); Kangaroo rat (*Dipodomys sp.*); desert cottontail (*Sylvilagus audubonii*) black-tailed jackrabbit (*Lepus californicus*); western whiptail (*Aspidoscelis tigris*); sagebrush lizard (*Sceloporus graciosus*); western fence lizard (*Sceloporus occidentalis*); common checkered skipper (*Pyrgus communis*); house fly (*Musca domestica*); darkling beetle (*Coelocnemis californicus*); and western white (*Pontia occidentalis*).

Big Game Species

No big game species or their sign were detected in the Project Area during biological surveys, but mule deer (*Odocoileus hemionus)* may occur on a transient basis.

Game Birds

California quail (*Callipepla californica*) were observed in the Project Area during biological surveys. Mourning dove were not observed, but suitable habitat is present in the Project Area.

4 ENVIRONMENTAL CONSEQUENCES

The direct and indirect effects of the Proposed Action and the No Action Alternative on resources present and brought forward for analysis are discussed in this section. Cumulative impacts are discussed separately in Chapter 5. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

4.1 Proposed Action

Supplemental Authorities

4.1.1 Air Quality

The Project has the potential to temporarily disturb up to 19.4 acres of public land administered by the BLM. Travel on access roads within the area of the Proposed Action would create emissions, which would have a potential impact on air quality. Fugitive dust would be created by the operation of equipment and travel on unpaved roads within the Project Area, the expansion of the substation and the temporary work space, and potential improvements of existing access routes. Fugitive dust emissions would be temporary and short-term. Vehicle emissions, in the form of nitrogen oxides, sulfur dioxide, carbon monoxide, and greenhouse gases, would occur anytime the internal combustion engines on the vehicles were operating. Vehicle emissions are regulated by the United States Environmental Protection Agency and controlled by specific design requirements when the vehicle is manufactured.

NVE has committed to the following practices: 1) the use of a water truck to reduce dust during Project activities; 2) a 20 mph speed limit on unpaved roads and on the proposed ROW; 3) excavation and grading activities would be suspended when winds (instantaneous gusts) exceed 25 mph and visible dust persists that creates a health hazard to neighboring property owners and/or visibility impacts to vehicular traffic; and 4) track on material would be removed from paved streets. These practices would reduce the amount of fugitive dust generated and minimize impacts to air quality.

4.1.2 Cultural Resources

Under the Proposed Action, NVE would implement the environmental protection measures outlined in Section 2.1.11 if unknown cultural resources are identified during surface disturbance activities associated with the implementation of the Proposed Action. No impacts to cultural resources are anticipated because there are no NRHP-eligible sites in the Project Area.

4.1.3 Noxious Weeds, Invasive and Nonnative Species

The strategy for noxious weed management is to, “prevent and control the spread of noxious weeds through local and regional cooperative efforts…to ensure maintenance and restoration of healthy ecosystems on BLM managed lands." Noxious weed control would be based on a program of “prevention, education, detection and rapid response (control) of small infestations.” Surface disturbance activities associated with the Proposed Action may have the potential to

facilitate the introduction or establishment of invasive, nonnative species, and noxious weeds. These impacts would be minimized based on implementation of the reclamation measures outlined in Section 2.1.10 and environmental protection measures in Section 2.1.11.

4.1.4 Migratory Birds

Impacts to migratory birds may include temporary displacement from foraging habitats during construction activities and loss of a small amount of habitat due to substation expansion (approximately 300 square feet), power pole installation, and road widening. Temporary work areas including staging areas and construction corridors would cause a small amount of temporary habitat loss until reclamation is complete. No impacts to nesting birds would be expected since nesting surveys would be conducted for any disturbance activities occurring during the nesting season March 1st through August 31st, and appropriate protection measures implemented for any nests found. Powerlines and associated structures would be constructed to conform to those practices and standards described in the *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006). These standards prevent electrocution through proper spacing between transmission line features.

Installation of powerlines may provide additional opportunities for raptor perching and nesting in the Project Area. Increasing raptor perch sites may increase predation rates on prey species associated with raptors; however, existing powerlines in the Project Area already provide perch sites so any increase is likely to be small. The installation of additional powerlines may also increase the risk of collision since the Project Area is within a fall raptor migration route.

4.1.5 Native American Religious Concerns

To date, no concerns have been identified within the Project Area that might be impacted by the Proposed Action; therefore, there would be no impact from the Proposed Action to Native American Religious Concerns.

4.1.6 Water Quality

Surface Water Quality

The Proposed Action could result in impacts to surface water quality as a result of construction activities that could contribute to potential sedimentation, erosion, and soil loss during spring runoff or precipitation events that utilize ephemeral drainages. There are no perennial streams or water bodies within the Project Area that could be impacted by the Proposed Action. Environmental protection measures incorporated into the Proposed Action include that all construction vehicles and equipment staging or storage would be located at least 100 feet away from two ephemeral drainages that traverse the Project Area in a southeast to northwest trend. All disturbed areas would be recontoured, decompacted and seeded immediately after Project-related disturbances, minimizing any impacts to ephemeral drainages and surface water quality.

Additional Affected Resources

4.1.7 Lands and Realty

Land uses within and around the Project Area consist primarily of dispersed recreation, grazing, utility ROWs and an R&PP lease. Three transmission lines and one substation are also located within the Project Area. Impacts to land use authorizations and access would be minimized because Project-related activities would occur adjacent to existing ROWs. Any impacts to public access would be temporary and short-term and signage warning the public of Project construction activities would be posted at either end of the Project Area. No long-term impacts to public access are expected as a result of the Proposed Action.

4.1.8 Paleontological Resources

Since the potential for significant paleontological resources in the Project Area is moderate, and the Proposed Action would result in minimal surface disturbance, the potential for impacts to paleontological resources from the Proposed Action is minimal. If any significant paleontological resources are found during operations, impacts would be mitigated through avoidance and/or data recovery as described in the environmental protection measures outlined in Section 2.1.11.

4.1.9 Rangeland Management

Disturbance associated with the Proposed Action would impact approximately 19.4 acres of public lands that lie within the Thomas Creek grazing allotment. There are 36 acres per AUM in this allotment; therefore, less than one AUM would be impacted from the Project. Due to the minimal amount of surface disturbance resulting from Proposed Action, no impacts are expected on grazing animals.

4.1.10 Social Values and Economics

Approximately 11 individuals would be involved with the temporary construction activities associated with the Project. The personnel could utilize motel rooms and restaurants in the community of Winnemucca, Nevada during the approximate eight-week Project. This temporary workforce would be unlikely to create an impact on public or private services and would not impact public schools, the permanent housing market, or other services associated with permanent workers. These individuals would support local businesses and provide income to the community through the purchase of goods and services. The Project would enhance social values through the increase in power reliability and reduction of outages.

4.1.11 Soils

Project-related activities could contribute to soil and wind erosion over the approximate eight-week long Project and until the disturbed surfaces have been revegetated. Native soils present in the footprint of the substation expansion would be covered with gravel, reducing productivity and increasing infiltration of precipitation (300 square feet). Environmental protection measures discussed in Section 2.1.11 to reduce the disturbance of Project-related activities on soils within the Project Area include stockpiling topsoil for later reapplication, and

prohibiting construction activities when the soil is too wet to adequately support construction equipment. These measures and reclamation activities would minimize impacts to soils.

4.1.12 Special Status Species

4.1.12.1 BLM Sensitive Species

Refer to Section 4.1.4 (Migratory Birds).

4.1.13 Vegetation

The Proposed Action would impact approximately 19.4 acres of vegetation within the Project Area, which includes the temporary removal of up to 7.8 acres of big sagebrush shrubland, 1.8 acres of salt desert scrub, and 9.8 acres of nonnative grassland. The vegetation within the Project Area is highly disturbed and does not constitute a rare or unique plant community. The disturbance would be dispersed throughout the vegetation communities in the Project Area. Reclamation would occur upon the completion of the temporary Project-related activities. BLM-approved seed mixes would be applied to disturbed areas, and access to these areas would be closed or restricted until reclamation success criteria is met. It is also likely that vegetation would naturally recolonize due to the narrow linear nature of the disturbance. The environmental protection measures identified in Section 2.1.11 and reclamation activities would minimize impacts to vegetation.

4.1.14 Wildlife

Impacts to wildlife species may include temporary displacement from suitable habitats during construction activities, a small increase in habitat fragmentation, and loss of a small amount of habitat due to substation expansion (approximately 300 square feet), power pole installation, and road widening. Temporary work areas including staging areas and construction corridors would cause a small amount of temporary habitat loss until reclamation is complete.

Installation of powerlines may provide additional opportunities for raptors perching in the Project Area. Increasing raptor perch sites may increase predation rates on prey species associated with raptors; however, existing powerlines in the Project Area already provide perch sites so any increase is likely to be small.

4.2 No Action Alternative

Supplemental Authorities

4.2.1 Air Quality

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operations within the Project Area could occur which includes vehicular travel on unpaved roads within the Project Area. The impacts associated with the No Action Alternative would be similar to those described for the Proposed Action but would be less than those associated with the Proposed Action.

4.2.2 Cultural Resources

Under the No Action Alternative there would be no impacts to cultural resources.

4.2.3 Noxious Weeds, Invasive and Nonnative Species

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur. The impacts associated with the No Action Alternative could result in impacts from establishment of invasive, nonnative species. The vegetation within the Project Area under the No Action Alternative is extensively altered as a result of wildlife, and is dominated by invasive, nonnative weeds; therefore, impacts to invasive, nonnative species as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

4.2.4 Migratory Birds

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. However, authorized ROW maintenance and operation within the Project Area could occur. Migratory birds would experience temporary and short-term displacement as a result of these activities. Impacts to migratory birds as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

4.2.5 Native American Religious Concerns

Under the No Action Alternative, there would be no impacts to Native American religious concerns.

4.2.6 Water Quality

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. However, authorized ROW maintenance and operation within the Project Area could occur. Potential impacts to surface water quality as a result of this alternative would be similar to the Proposed Action and could include spills from surface disturbance from currently authorized ROW activity and activities on private land that do not require a permit. These impacts to water quality would be difficult to quantify based on their unknown occurrence and severity. Impacts to water quality as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

<u>Additional Affected Resources</u>

4.2.7 Lands and Realty

Under the No Action Alternative, the transmission line would not be constructed; therefore, impacts from the Proposed Action would not occur. The long-term impact of reducing acreage from the R&PP lease would not occur. However, operation and maintenance activities for authorized ROWs within the Project Area would continue. Impacts to existing access routes resulting from the No Action Alternative would be similar to the Proposed Action but proportionally less.

4.2.8 Paleontological Resources

Under the No Action Alternative, there would not be any impacts to paleontological resources.

4.2.9 Rangeland Management

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, ongoing authorized ROW activities in the Project Area currently permitted would occur. These impacts would be temporary and short-term. The impacts to rangeland management under the No Action Alternative would be similar to the Proposed Action due to authorized surface disturbance impacts occurring within the Project Area.

4.2.10 Social Values and Economics

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur which could potentially cause temporary minor impacts to the community of Winnemucca, Nevada. These impacts could include traffic and business for motels, restaurants, gas stations, and grocery stores. These impacts would be temporary and short-term. The No Action Alternative would not potentially result in the decrease of power reliability and increase the number of outages.

4.2.11 Soils

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur. Impacts could result in compaction and potential erosion. These impacts would be temporary and short-term. Impacts to soils as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

4.2.12 Special Status Species

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur. Special status species would experience temporary and short-term displacement as a result of these activities. Impacts to wildlife as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

4.2.13 Vegetation

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur. These impacts would be temporary and short-term. Vegetation within the Project Area is minimized by the existence of invasive, nonnative species. The No Action Alternative could include an unknown level of disturbance to the Project Area. Under the No Action Alternative, impacts to vegetation would be similar to, but less than, the Proposed Action.

4.2.14 Wildlife

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur; however, authorized ROW maintenance and operation within the Project Area could occur. Wildlife would experience temporary and short-term displacement as a result of these activities. Impacts to wildlife as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action.

5 CUMULATIVE IMPACTS

A cumulative impact is defined under federal regulations as follows:

> "...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

As required under the NEPA and the regulations implementing the NEPA, this chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Area (CESA) which could result from the implementation of the Proposed Action and No Action Alternative. The extent of the CESA would vary with each resource, based on the geographic or biologic limits of that resource. As a result, the list of projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis would vary according to the duration of impacts from the Proposed Action on the particular resource.

5.1 Assumptions for Analysis

Direct and indirect consequences of the Proposed Action were evaluated previously in Chapter 4 for the various environmental resources. Analyzed in this chapter are those resources from Chapter 4 that have the potential to be incrementally impacted by the Proposed Action within the identified CESA. Based on the preceding analysis in Chapter 4, no cumulative impacts are expected for the following resources: cultural resources; Native American religious concerns; lands and realty; paleontological resources; rangeland management; and social and economic values. Resources have been grouped where similar cumulative impacts are expected.

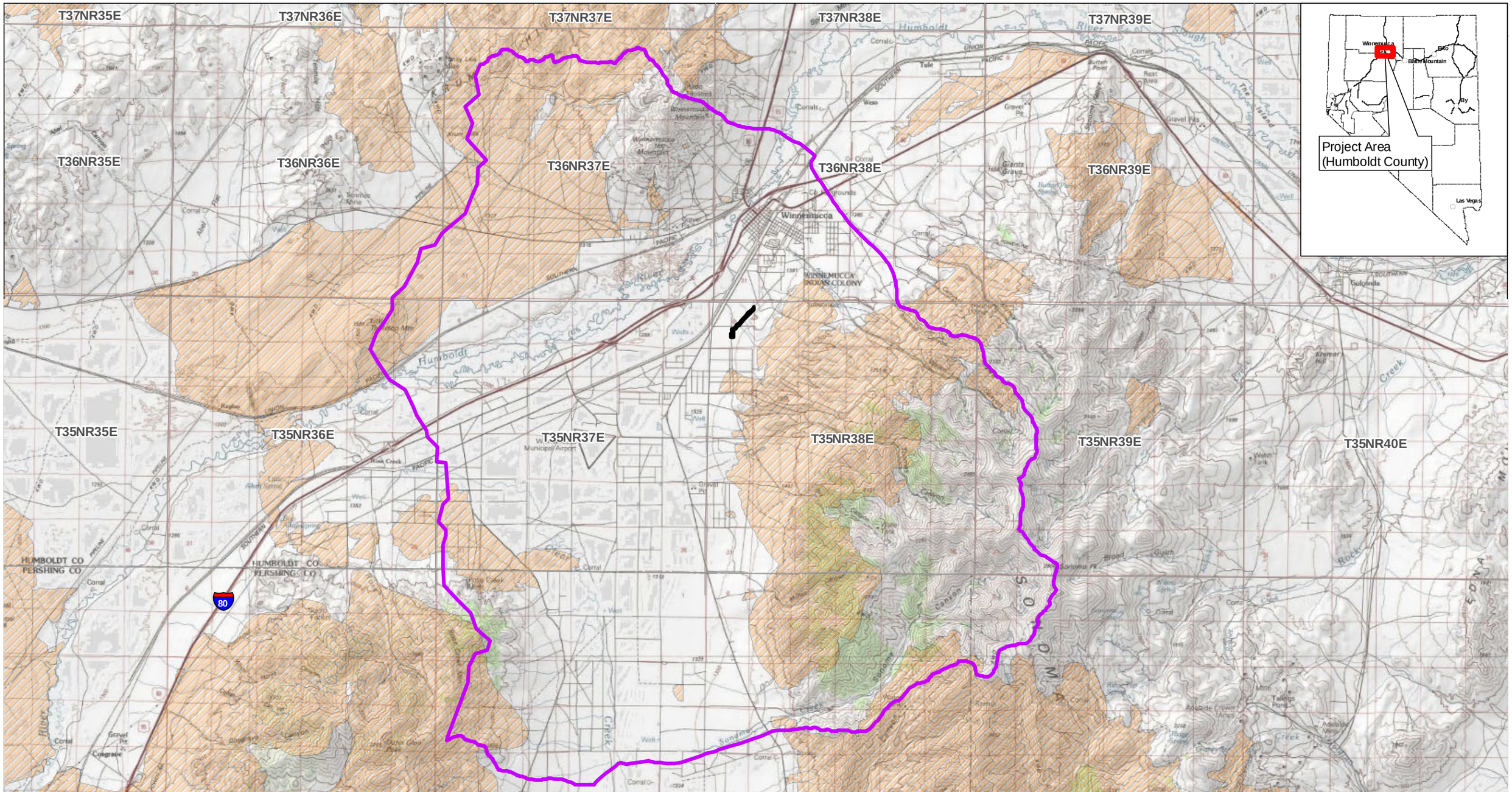
Description of CESA Boundaries

The geographic area considered for the analysis of cumulative effects reflects each evaluated environmental resource and the potential area of impact (Table 5.1-1). The Winnemucca Urban Interface (WUI) is used as the geographic study area for this EA.

The WUI CESA (106,151 acres) is identified as a subset of four adjacent NDWR hydrographic basins (Grass Valley, Paradise Valley, Silver State Valley and Winnemucca Segment) that overlap within the Project Area (Figure 5.1.1). The geographic area considered for the analysis of cumulative effects was selected to reflect the potential area of impact to each resource from the Proposed Action as determined through the analysis in Chapter 3.

Table 5.1-1: Cumulative Effects Study Area

Resource	Cumulative Effects Study Area	CESA Name	CESA Size
Air Quality, Noxious Weeds, Invasive and Nonnative Species, Wildlife, Water Quality, Soils, Vegetation	Grass Valley, Paradise Valley, Silver State Valley and Winnemucca Segment Hydrographic basins.	WUI CESA	106,151 acres



Explanation

- Project Area
- WUI CESA Boundary
- BLM Fire History 1981 to 2011

0 1 2 3 4 5 Miles

Projection: UTM Zone 11 North, NAD83

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

WINNEMUCCA DISTRICT OFFICE
Humboldt River Field Office
5100 East Winnemucca Blvd.
Winnemucca, NV 89445

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BUREAU OF LAND MANAGEMENT

GRASS VALLEY 120KV TRANSMISSION LINE ROW PROJECT

Cumulative Effects Study Area

Figure 5.1.1

04/12/2012

5.2 Past and Present Actions

The LR2000 database was used to query the following past and present activities that have been issued in the CESA by Township, Range, and section (BLM 2011b): mineral exploration or mining projects; transportation networks; ROWs; land exchanges, acquisitions, and sales; and airports. The LR2000 database was queried on October 21, 2011; therefore, any approved projects that were added to the LR2000 database after this date are not included in the analysis.

Past and present actions in the WUI CESA include the following: exploration; livestock grazing; rangeland improvements; vegetation treatments; wildland fire; transportation networks (including railroads); ROWs; land sales and acquisitions; recreation (e.g., Winnemucca Regional Raceway); airport conveyance; and geothermal leases.

Mineral Exploration and Mining

Approximately 79 acres of surface disturbance associated with mineral exploration are located within the WUI CESA. Additionally, there are approximately 1,900 acres associated with 44 sand and gravel extraction operations in the WUI CESA.

Livestock Grazing and Rangeland Improvements

Nine allotments are located in the WUI CESA. The acreage of each of these allotments within the WUI CESA is shown in Table 5.1-2.

Table 5.1-2: Allotment Acreage within the WUI CESA

Grazing Allotment Name*	WUI CESA (acres)
Clear Creek	3
Diamond S	12
Dolly Hayden	21,322
Harmony	595
Melody	818
Rock Creek	1
Sand Dunes	16,428
Sonoma	20,605
Thomas Creek	27,126

* 19,240 acres within the CESA is non-BLM-administered land not designed for grazing.

Wildland Fires

Wildland fires burned approximately 33,633 acres within the WUI CESA (Figure 5.1.1). A detailed description is shown in Table 5.1-3. The total of acreage of the fires overlaps; therefore, that total amount of acreage burned within the WUI CESA is less than the amount shown below. Table 5.1-3 does not include fire disturbance within the Project Area, which is unknown.

Table 5.1-3: Wildland Fires within the WUI CESA

Year	Fire	Acreage Burned (approximate)
1985	Unknown*	10,454
1985	Unknown	3,193
1986	Unknown	452
1987	Unknown	1,301
1988	Unknown	419
1996	Unknown	1,957
1998	Unknown	1,933
1999	Unknown	18
1999	Unknown	466
1999	Unknown	2
1999	Unknown	18
1999	Unknown	21
1999	Unknown	87
1999	Unknown	46
2001	Krum	3,556
2001	Callahan Two	5
2001	Water Canyon	46
2001	Thomas Canyon	6
2001	Humboldt Canyon	30
2001	Clear Creek	1,148
2006	Cyanco	<1
2006	Commander	22
2006	Shooting Range	2
2006	Winnemucca Mountain	6
2006	Two Angels	<1
2007	Sonoma Canyon	<1
2007	Alice	15
2007	Minad	<1
2007	Thomas	15,936
2008	Bodily	4
2010	Campfire 1	<1
2010	Sonoma	<1
2010	Rose Creek	<1
2010	Thomas	<1

*Fires that are Unknown do not have a name.

Transportation Networks

The approximate lengths of transportation networks within the WUI CESA are listed below in Table 5.1-4.

Table 5.1-4: Transportation Networks within the WUI CESA

Transportation Network	WUI CESA
Grass Valley Road	12 miles
Jungo Road	7 miles
I-80	11 miles
Railroads	22 miles

ROWs

The following ROWs are located within the WUI CESA: 31 ROWs associated with power transmission lines totaling approximately 1,496 acres; six ROWs associated with water facilities totaling approximately 39 acres; one ROW associated with a water plant totaling approximately one acre; 24 ROWs associated with communication sites totaling approximately nine acres; 17 ROWs associated with telephone lines totaling approximately 879 acres; 30 ROWs associated with roads totaling approximately 1,123 acres; seven ROWs associated with oil and gas pipelines totaling approximately 623 acres; one ROW associated with a power transmission facility totaling 26 acres; one ROW associated with the railroad totaling approximately 26 acres; three ROWs for wind energy site testing project areas totaling approximately 26,441 acres; one ROW associated with a community pit totaling approximately 20 acres; and three ROWs totaling 52 acres associated with other federal facilities.

Land Exchange, Acquisitions, and Land Sales

There are 13 authorized and closed land sales totaling approximately 61,510 acres within the WUI CESA.

Recreation

The Winnemucca Regional Raceway is located within the WUI CESA. Dispersed recreation occurs throughout the CESA; however, there are no data on the level of use.

Airport Conveyance

One airport conveyance lease is located in the WUI CESA totaling 640 acres.

5.3 Reasonably Foreseeable Future Actions

Activities/events that would continue to occur in the WUI CESA include the following: livestock grazing; mineral exploration; sand and gravel extraction operations; wildland fire; transportation networks; ROW construction and maintenance activities; and dispersed recreation.

Reasonably Foreseeable Future Actions (RFFAs) in the WUI CESA include the following: 11 land sales; one sand and gravel extraction operation; and one ROW classified as other.

Continuation of Past and Present Actions

Livestock grazing and road maintenance are expected to continue at their current levels.

Land Exchange, Acquisitions, and Land Sales

Pending land sales total approximately 5,109 acres within the WUI CESA.

5.4 Cumulative Impacts for the Proposed Action

5.4.1 Air Quality

The CESA for air quality is the WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions within the WUI CESA that are likely to have contributed to air quality impacts include wildland fire, dispersed recreation, livestock grazing, mineral exploration, industrial operations (i.e., potato processing plant, limestone mill plant, concrete readymix plant), and transportation networks. These activities are principally contributing point source particulate matter emissions and fugitive dust to the air quality impacts; however, products of combustion are also emitted. Impacts from wildland fires would be of short duration and localized.

RFFAs: RFFAs within the WUI CESA that may contribute to air quality impacts include dispersed recreation, livestock grazing, mineral exploration, transportation, industrial operations, and wildland fires, which would likely be of a similar magnitude as the present actions within the CESA. These impacts result in impacts to air quality from the emissions of point source particulate matter, fugitive dust, and the products of combustion.

Cumulative Impacts: Cumulative impacts to air quality within the WUI CESA would result from the past and present actions and RFFAs when combined with the Proposed Action. The impacts of the Proposed Action on air quality when assessed within the WUI CESA with other past, present and RFFAs are unlikely to affect the current air quality conditions. Furthermore, environmental protection measures and reclamation of Project-related proposed surface disturbance would gradually eliminate fugitive dust from wind erosion.

5.4.2 Noxious Weeds, Invasive and Nonnative Species

The CESA for noxious weeds, invasive and nonnative species is WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions with impacts from noxious weeds, invasive and nonnative species have included mineral exploration, sand and gravel extraction operations, livestock grazing, rangeland improvements, wildland fire, transportation networks, ROWs, land sales, and dispersed recreation. The impacts associated with these activities are difficult to quantify. No noxious weed species were detected in the Project Area. Nonnative, invasive species found in the Project Area include cheatgrass, tall tumble mustard, clasping pepperweed, and fiddleneck. These species were prevalent throughout the Project Area. Weedy, invasive species generally occupy areas of previous disturbance.

RFFAs: Potential impacts from noxious weeds, invasive and nonnative species as a result of federal land sales, ROWs, livestock grazing, mineral exploration, sand and gravel extraction operations, transportation networks, dispersed recreation, or loss of vegetation associated with wildland fires could occur, and result in continued potential of noxious weeds, invasive and nonnative species infestations. These impacts are difficult to quantify based on the unknown

occurrence and severity resulting in the proliferation of noxious weeds, invasive and nonnative species within the CESA.

Cumulative Impacts: Cumulatively, the past, present, and RFFAs in combination with the Proposed Action would result in potential impacts from noxious weeds, invasive and nonnative species that would be limited to infestations following removal or disturbance of vegetation. Wildland fires have impacted a large portion of the WUI CESA (Figure 5.1.1). The Proposed Action (19.4 acres) would impact 0.02 percent of the CESA (106,151 acres). The past and present actions and RFFAs would impact an undetermined percentage of the WUI CESA that is not readily quantifiable. The potential impacts from the Proposed Action would be minimized due to the implementation of environmental protection measures outlined in Section 2.1.11 including the following BMPs: reclamation efforts; treatment of identified noxious weeds prior to Project Area disturbance; weed-free restoration and revegetation; and other applicable BMPs. As a result, a minimal incremental impact from noxious weeds, invasive and nonnative species in the WUI CESA is expected.

5.4.3 Migratory Birds, Special Status Species, Wildlife

The CESA for migratory birds, special status species, and general wildlife is the WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Mineral exploration (estimated 132 acres), sand and gravel extraction operations, transportation networks, ROWs, and dispersed recreation contribute to loss and degradation of suitable habitats, habitat fragmentation, and temporary or permanent displacement from suitable habitats. Approximately 33,633 acres within the WUI CESA have been disturbed by wildland fires between 1981 and 2008, which is approximately 32 percent of the CESA. Wildland fires often contribute to fragmentation, loss, and degradation of suitable habitats by converting native vegetation communities to less desirable invasive species such as cheatgrass. Portions of ten grazing allotments occur within the WUI CESA. Grazing may contribute to the spread of invasive weeds and loss and degradation of suitable habitats for some species. Existing powerlines in ROWs pose collision risks for avian species and may increase raptor predation rates on some species by providing perching sites.

RFFAs: Potential increases in land sales, sand and gravel extraction operations, and ROWs in the WUI CESA would likely increase losses of suitable habitat, habitat fragmentation, degradation of suitable habitats, and temporary or permanent displacement from suitable habitats. Pending land sales may affect approximately 5,109 acres of habitat (4.8 percent of the WUI CESA).

Cumulative Impacts: Impacts from the Proposed Action would contribute to losses of suitable habitat, habitat fragmentation, and temporary displacement from suitable habitats. Total disturbance from the Proposed Action is estimated at 19.4 acres (approximately 0.002 percent of the WUI CESA). Addition of powerlines in the area would likely increase collision risks for avian species and may also increase raptor predation rates on some species by providing additional perching opportunities.

5.4.4 Soils

The CESA for soils is the WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted soils include: mineral exploration; sand and gravel extraction operations; livestock grazing; rangeland improvements; ROWs; land sales and acquisitions; transportation networks; and dispersed recreation that disturbed or impacted soils, or that increased erosion or sedimentation. Wildland fires have affected soils but these conditions have been stabilized through emergency stabilization and rehabilitation efforts and natural recovery. Impacts from these activities include loss of soils productivity due to changes in soil physical properties, soil fertility, soil movement in response to water and wind erosion, and loss of soil structure due to compaction. There are no specific data that quantify soil loss in the WUI CESA.

RFFAs: Potential impacts to soils from livestock grazing, mineral exploration, sand and gravel extraction operations, vegetation treatments, transportation networks, ROWs, dispersed recreation, or loss of vegetative cover associated with potential wildland fires could occur. Impacts associated with RFFAs would be similar to the impacts described for past and present actions.

Cumulative Impacts: The Proposed Action (19.4 acres) would impact approximately 0.02 percent of the CESA (106,151 acres). The potential impacts from the Proposed Action would be minimized due to the implementation of environmental protection measures outlined in Section 2.1.11 and from reclamation efforts. As a result, a minimal incremental impact to soils in the WUI CESA is expected.

5.4.5 Vegetation

The CESA for vegetation is the WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted vegetation include: mineral exploration; sand and gravel extraction operations; livestock grazing; rangeland improvements; ROWs; transportation networks; land sales and acquisitions; and dispersed recreation that utilized, impacted or reduced vegetation. Changes in vegetation were associated with wildland fire and fire rehabilitation treatments. Impacts to vegetation from these activities include removal of vegetation, compaction, mixing, and erosion of soils. The extent of these impacts varies with the type of activity.

RFFAs: Potential impacts from livestock grazing, sand and gravel extraction operations, transportation networks, ROWs, dispersed recreation, or loss of vegetation associated with wildland fires could occur. There are no specific data on the potential impacts to vegetation from dispersed recreation, grazing, or potential wildland fires. There are approximately a total of 5,139 acres of pending land sales, sand and gravel extraction operations, and one ROW project within the WUI CESA.

Cumulative Impacts: The Proposed Action (19.4 acres) would impact 0.02 percent of the CESA (106,151 acres). The potential impacts to vegetation from the Proposed Action would be minimized due to reclamation efforts. As a result, a minimal incremental impact to vegetation in the WUI CESA is expected.

5.4.6 Water Quality

The CESA for Water Quality is the WUI CESA, which encompasses 106,151 acres, and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted water quality include: minerals activities; ranching operations including grazing and irrigation from wells; water use by the City of Winnemucca; ROWs; road construction and maintenance; dispersed recreation; and wildfires that introduced sediment to ephemeral streams or springs or consumed water within the WUI CESA. Impacts from grazing could include cattle congregating around water sources causing bank trampling, which in turn could cause increased sedimentation. Increased sedimentation could also occur when vehicles or cattle use stream crossings or remove vegetation from the sides of the streams. There are no specific data that quantify the amount of sedimentation. A total of 79 acres has been disturbed by past and present mineral activities within the CESA (0.07 percent of the WUI CESA). There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed and some areas have naturally revegetated over time. Approximately 30,735 acres of ROWs that were issued within the WUI CESA had the potential to create surface disturbance and cause increased sedimentation. The WUI CESA is located within several grazing allotments as depicted in Table 5.1-2. Livestock grazing and associated management could have impacted vegetation.

RFFAs: Potential impacts to water quality could result from minerals activities, ranching operations including grazing and irrigation from wells, water use by the City of Winnemucca, ROWs, road construction and maintenance, railroad maintenance, wildland fires, and dispersed recreation that could introduce sediment to ephemeral streams or springs or consume water within the WUI CESA. There are no specific data on the amount of sedimentation or water use that could result from these activities. Impacts from RFFAs would be similar to those described for past and present actions.

Cumulative Impacts: The Proposed Action (19.4 acres) would impact 0.02 percent of the WUI CESA (106,151 acres); however, BMPs would minimize those impacts. Therefore, the incremental impacts to surface water quality as a result of the Proposed Action when added to the past and present actions and RFFAs would be minimal.

5.5 <u>Cumulative Impacts from the No Action Alternative</u>

5.5.1 Air Quality

Cumulative impacts to air quality within the CESA would result from the past and present actions and RFFAs when combined with this alternative; however, the incremental contribution of this alternative is less than the Proposed Action and would be relatively small. The cumulative emissions are generally dispersed and the stationary sources would be regulated by the BAPC to ensure that impacts would be reduced to levels that are consistent with the ambient air quality standards.

5.5.2 Noxious Weeds, Invasive and Nonnative Species

Cumulatively, the past and present actions and RFFAs would result in potential impacts from invasive, nonnative species that would be limited to infestations following removal of vegetation. These impacts would be localized. Therefore, impacts from invasive, nonnative species as a result of this alternative would be less than the Proposed Action and in combination with past and present actions and RFFAs would be minimized.

5.5.3 Migratory Birds, Special Status Species, Wildlife

Cumulatively, the past and present actions and RFFAs would result in potential impacts to migratory birds, special status species, and wildlife and their habitats. The No Action Alternative would not result in any additional incremental impacts to migratory birds, special status species, or wildlife when combined with past and present actions and RFFAs.

5.5.4 Soils

Cumulatively, the past and present actions and RFFAs would result in the displacement of soils and could result in increased erosion by wind and water. These impacts would be localized. Therefore, impacts to soils as a result of this alternative would be less than the Proposed Action, and in combination with past and present actions and RFFAs, would be minimized.

5.5.5 Vegetation

Cumulatively, the past and present actions and RFFAs would result in the removal of vegetation. These impacts would be localized; therefore, impacts to vegetation as a result of this alternative would be less than the Proposed Action, and in combination with past and present actions and RFFAs, would be minimized.

5.5.6 Water Quality

Cumulatively, the past and present actions and RFFAs would result in the erosion of soils and potential sedimentation to surface water features. The No Action Alternative which includes the ongoing operations and maintenance of the existing ROWs within the Project Area would have incremental effects to surface water quality. These impacts would be localized; therefore, impacts to surface water quality as a result of this alternative would be less than the Proposed Action, and in combination with past and present actions and RFFAs, would be minimized.

6 MITIGATION AND MONITORING

6.1 Proposed Action

The following environmental protection measures included in the Proposed Action as outlined in Section 2.1.11 are reiterated below for reference:

Applicant Committed Environmental Protection Measures from Section 2.1.11

General Measures

- The limits of the temporary construction ROW would be marked with staking or flagging. All environmentally sensitive areas would be flagged or fenced for avoidance;
- Prior to construction, all construction personnel would be instructed on the protection of sensitive resources that have the potential to occur on site;
- NVE would limit construction in residential areas to between daylight and dusk, seven days a week;
- All construction vehicle movement would be restricted to the ROW, pre-designated access roads, and public roads;
- Smoking would only be permitted in paved or cleared areas. All cigarettes would be thoroughly extinguished and disposed of in a trash receptacle;
- Non-specular conductors would be installed to reduce visual impacts;
- Fences and gates, if damaged or destroyed by construction activities, would be repaired or replaced to their original preconstruction condition as required by the landowner or the land management agency; and
- All existing roads would be left in a condition equal to or better than their preconstruction condition.

Soils

- In areas where extensive grading would be required, topsoil (where present) would be stockpiled and segregated for later reapplication;
- Erosion control Best Management Practices (BMPs), such as straw bales (certified weed-free) and waddles, would be implemented to control erosion and sedimentation in ephemeral drainages on site; and
- Construction would be prohibited when the soil is too wet to adequately support construction equipment.

Noxious Weeds, Invasive and Nonnative Species

- Prior to preconstruction activities, NVE personnel would identify all noxious weeds present on the land to be included in the ROW Grant and provide this information to the BLM. A determination would be made by the BLM of any noxious weeds that require flagging for treatment and NVE would treat the noxious weeds as required by the BLM;

- All gravel and/or fill material would be certified as weed-free; and

- All off-road equipment would be cleaned (power or high-pressure cleaning) of all mud, dirt, and plant parts prior to initially moving equipment onto public land. Equipment would be cleaned again if it leaves the Project site prior to reentry. Personnel trucks leaving the site and travelling on paved roads to commute to the worksite would not require cleaning every morning.

Vegetation

- Wherever possible, vegetation would be left in place. Where vegetation must be removed, it would be cut at ground level to preserve the root structure and allow for potential resprouting; and

- All temporary construction areas, including stringing sites that have been disturbed, would be recontoured and restored as required by the landowner or land management agency. The method of restoration typically would consist of seeding or revegetating with native plants (if required), installing cross drains for erosion control, and placing water bars in the road. Seed would be certified as weed-free.

Surface Water Quality

- All construction vehicles and equipment staging or storage would be located at least 100 feet away from any ephemeral drainages; and

- Erosion control BMPs, such as straw bales (certified weed free) and waddles, would be implemented to control erosion and sedimentation in ephemeral drainages on site.

Wildlife and Sensitive Species

- The migratory bird breeding season runs from March 1 through August 31. Peak nesting season occurs from April 15 through July 15. Nesting surveys for migratory birds would be conducted by a qualified biologist for any surface disturbing activities occurring between March 1 and August 31. Nesting surveys for migratory birds would be conducted no less than three days and no more than ten days prior to initiation of surface disturbance and results reported to the BLM biologist before proceeding with surface disturbance. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer would be delineated after consultation with the BLM biologist and the buffer area avoided preventing destruction or disturbance to nests or birds until they are no longer actively breeding or rearing young. The site characteristics to be used to determine the

size of the buffer area are as follows: a) topographic screening; b) distance from disturbance to nest; c) the size and quality of foraging habitat surrounding the nest; d) sensitivity of the species to nest disturbances; and e) the protection status of the species;

- During burrowing owl nesting season (March 1 to August 31), a burrowing owl survey following the Winnemucca BLM's survey protocol would be conducted prior to surface disturbance in the areas identified as potential burrowing owl habitat within the Project Area. A burrowing owl survey would be conducted no less than three, and no more than ten days prior to initiation of surface disturbance and results reported to the BLM biologist before proceeding with surface disturbance;

- Excavations left open overnight would be covered or fenced, secured in place, and strong enough to prevent wildlife from falling in;

- If a sensitive plant or animal species is identified during construction, work near the sensitive species would be halted, and the BLM biologist would be notified immediately to determine appropriate protection measures; and

- Structures would be constructed to conform to those practices described in the *Suggested Practices for Avian Protection on Power Lines* developed by the Avian Power Line Interaction Committee (APLIC) (2006). Design features would consist of APLIC construction standards. APLIC standards prevent avian electrocution through proper spacing between transmission line features. In addition, all practices and procedures in the Edison Electric Institute's APLIC and United States Fish and Wildlife Service (USFWS) *Avian Protection Plan Guidelines* (APLIC and USFWS 2005) would be followed.

Cultural and Paleontological Resources

- Prior to construction, NVE would provide training for contractors, workers, and individuals involved with the Project regarding the potential to encounter historic or prehistoric sites and objects, proper procedures in the event that cultural items or human remains are encountered, prohibitions on artifact collection, and respect for Native American religious concerns. As part of this training, all construction personnel would be instructed to inspect for cultural objects when excavating or conducting other ground-disturbing activities;

- Any cultural or paleontological resource discovered by the permit holder, or any persons working on their behalf, during the course of activities on federal land would be immediately reported to the authorized officer by telephone, with written confirmation. The permit holder would suspend all operations in the immediate area of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. This evaluation would determine the significance of the discovery and what mitigation measures are necessary to allow activities to proceed. The holder is responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer; and

- If human remains are encountered during Project construction, all work within 300 feet of the remains would cease, and the remains would be protected. If the remains are on land managed by the BLM, BLM representatives would be immediately notified. If the remains are Native American, the BLM would follow the procedures set forth in 43 CFR 10, Native American Graves Protection and Repatriation Regulations. If the remains are located on state or private lands, the Nevada State Historic Preservation Office (SHPO) and the BLM would be notified immediately. Native American human remains discovered on state or private lands would be treated under the provisions of the Protection of Indian Burial Sites section of the Nevada Revised Statutes (NRS) in Chapter 383. The Nevada SHPO would consult with the Nevada Indian Commission and notify the appropriate Native American tribe. Procedures for inadvertent discovery are listed under NRS 383.170.

Hazardous and Regulated Materials and Solid Waste

- All construction vehicles would be maintained in accordance with the manufacturers' recommendations. All vehicles would be inspected for leaks prior to entering the jobsite. All discovered leaks would be contained with a bucket of absorbent materials until repairs can be made;

- All hazardous waste materials would be properly labeled in accordance with Title 40 of CFR 262. A list of hazardous materials expected to be used during construction of the Project is presented in Table 2.1-1;

- Hazardous material storage, equipment refueling, and equipment repair would be conducted at least 100 feet away from ephemeral drainages;

- Spilled materials of any type would be cleaned up immediately. A shovel and spill kit would be maintained on site at all times to respond to spills; and

- All sanitary wastes would be collected in portable, self-contained toilets at all construction staging areas and other construction operation areas and managed in accordance with local requirements.

Air Quality

- Project vehicle speeds would be limited to 20 mph in the Project Area;

- All areas subject to ground disturbance would be watered using water trucks, as needed, to control dust;

- Paved public streets would be swept if visible soil material is tracked on by construction vehicles; and

- Excavation and grading activities would be suspended when winds (instantaneous gusts) exceed 25 mph and visible dust persists that create a health hazard to neighboring property owners or visibility impacts to vehicular traffic.

Fire Prevention and Response

- In the event of a fire, the field crew would evacuate and immediately call "911" or the Central Nevada Interagency Dispatch Center at (775) 623-3444. All fires would be reported to the jurisdictional fire agency, regardless of size and actions taken.

- NVE would designate a Fire Marshal (NVE Fire Marshal), who would coordinate with a Fire Marshal to be designated by the prime contractor (Contractor Fire Marshal) and the BLM's fire management representative, as necessary. The Contractor Fire Marshal would be responsible for the following tasks:

    - Conducting regular inspections of tools, equipment, and first aid kits for completeness;

    - Conducting regular inspections of storage areas and practices for handling flammable fuels to confirm compliance with applicable laws and regulations;

    - Posting smoking and fire rules at centrally visible locations on site;

    - Coordinating initial response to contractor-caused fires within the ROW;

    - Conducting fire inspections along the ROW;

    - Ensuring that all construction workers and subcontractors are aware of all fire protection measures;

    - Remaining on duty and on site when construction activities are in progress and during any additional periods when fire safety is an issue, or designating another individual to serve in this capacity when absent;

    - Reporting all wildfires in accordance with the notification procedures described below:

        - Initiating and implementing fire suppression activities until relieved by agency or local firefighting services in the event of a Project-related fire. Project fire suppression personnel and equipment, including water tenders, would be dispatched within 15 minutes from the time that a fire is reported; and

        - Coordinating with the NVE Project Manager regarding current fire conditions potential and fire safety warnings from the BLM and communicating these conditions to the contractor's crew.

- The NVE Construction Forman or Contractor Fire Marshal would immediately notify firefighting services of any fires on site;

- Contractors would be notified to stop or reduce construction activities that pose a significant fire hazard until appropriate safeguards are taken;

- If an accidental fire occurs during construction, immediate steps to extinguish the fire (if it is manageable and safe to do so) would be taken using available fire suppression equipment and techniques. Fire suppression activities would be initiated by NVE or its contractor until relieved by agency or local firefighting services;

- Smoking would only be permitted in designated cleared areas and would be prohibited while walking or working in areas with vegetation or while operating equipment. In areas where smoking is permitted, all burning tobacco and matches would be completely extinguished and discarded in ash trays, not on the ground;

- "NO SMOKING" signage and fire rules would be posted at the construction staging area during the fire season;

- Fire suppression equipment would be present in areas where construction tools or equipment have the potential to spark a fire;

- Extra precautions would be taken when fire danger is considered to be high;

- All field personnel would be instructed regarding emergency fire response. The contractors would receive training on the following: initial fire suppression techniques; fire event reporting requirements; methods to determine if a fire is manageable; fire control measures to be implemented by field crews on site; when the worksite should be evacuated; how to respond to wildfires in the vicinity; and how to maintain knowledge of and plans for evacuation routes;

- No open burning, campfires, or barbeques would be allowed along the ROW, at construction staging areas, substations, on access roads, or in any other Project-related construction areas;

- All welding or cutting of powerline structures or their component parts would be approved by the NVE Construction Foreman. Welding or cutting activities would cease one hour before all fire response personnel leave a construction area to reduce the possibility of material associated with welding activities smoldering and starting a fire. Welder vehicles would be equipped with fire suppression equipment;

- All internal combustion engines, both stationary and mobile, would be equipped with approved spark arresters that have been maintained in good working condition. Light trucks and cars with factory-installed (type) mufflers in good condition would be used on roads cleared of all vegetation with no additional equipment required. Vehicles equipped with catalytic converters are potential fire hazards and would be parked on cleared areas only;

- The use of torches, fuses, highway flares, or other warning devices with open flames would be prohibited. NVE and its contractors would only use electric or battery-operated warning devices on site;

- Equipment parking areas, small stationary engine sites, and gas and oil storage areas would be cleared of all extraneous flammable materials. "NO SMOKING" signs would be posted in these areas at all times;

- Fuel tanks would be grounded;

- NVE and the contractors would provide continuous access to roads for emergency vehicles during construction;

- All motorized vehicles and equipment would be equipped with the following fire protection items: one long-handled round-point shovel; one ax or Pulaski fire tool; one five-pound ABC Dry Chemical Fire Extinguisher; one five-gallon water backpack (or other approved container) full of water or other extinguishing solution; and a hard hat, work gloves, and eye protection;

- Project construction worksites would include the following equipment: power saws, if required by construction, equipped with an approved spark arrester and accompanied by one five-pound ABC Dry Chemical Fire Extinguisher and a long-handled, round-point shovel when used away from a vehicle; fuel service trucks with one 35-pound capacity fire extinguisher charged with the necessary chemicals to control electrical and fuel fires; at least two long-handled, round-point shovels and two five-pound ABC Dry Chemical Fire Extinguishers at wood cutting, welding, or other construction work sites that have a high risk of starting fires; at least one radio and/or cellular telephone to contact fire suppression agencies or the Project management team; and backpumps filled with water (two at each wood-cutting site, one at each welding site, and two at each tower installation or construction site, or any activity site at risk of igniting fires; and

- During periods of increased fire danger, a fire suppression vehicle would be available in the construction area or stationed near high-risk construction work sites and would be equipped with the following items: One water tank with a minimum capacity of 500 gallons; 250 feet of 0.75-inch heavy-duty rubber hosing; one pump with a discharge capacity of at least 20 gallons per minute (the pump would have fuel capacity to operate for at least a two-hour period; and one tool cache (for fire use only) containing a minimum of two long-handled round-point shovels, two axes or Pulaski fire tools and one chainsaw of 3.5 (or more) horsepower with a cutting bar of at least 20 inches in length.

Recommended Mitigation Measures

As a result of the analysis presented above, no additional mitigation measures were identified by the BLM for the Project.

6.2 No Action Alternative

There are no mitigation measures or monitoring recommended as part of the No Action Alternative.

7 LIST OF PREPARERS

Bureau of Land Management

Julie McKinnon	Project Lead, Lands and Realty
Angie Arbonies	Vegetation/Soils
Daniel Kozar	GIS
Dr. Mark Hall	Native American Consultation
Joanne Lowden	Special Status Species/T&E Species/General Wildlife
Joey Carmosino	Recreation/Visual Resource Management
Kristine Struck	Lands with Wilderness Characteristics
Lisa Ross	Public Outreach
Lynn Ricci	NEPA Compliance
Morgan Lawson	Rangeland Management
Peggy McGuckian	Cultural/Paleontological Resources
Robert Burton	Noxious Weeds, Invasive and Nonnative Species
Michael Truden	Humboldt River Field Manager
Zwaatnje Rorex	Planning & Environmental Coordinator

Enviroscientists, Inc.

Melissa Sherman	Project Manager
Opal Adams	Project Principal, Paleontology, Technical Review
Nick Mitrovich	Air Quality, Cultural Resources, Noxious Weeds, Invasive and Nonnative Species, Migratory Birds, Native American Religious Concerns, Water Quality, Land Use Authorizations and Access, Rangeland Management, Social Values and Economics, Soils, Special Status Species, Vegetation, Wildlife, Cumulative and LR2000
Catherine Lee	Review/Editing
Gail Liebler	GIS Data Management/Figure Production
Jess Kohler	GIS Data Management/Figure Production

8 CONSULTATION AND COORDINATION

Tribal Consultation

On August 23, 2011, letters providing information relating to the Proposed Action were sent to the Fort McDermitt Paiute & Shoshone Tribe, Battle Mountain Council and the Winnemucca Tribe.

9 REFERENCES

Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC and the California Energy Commission. Washington, D.C. and Sacramento, CA.

APLIC and USFWS. 2005. *Avian Protection Plan (APP) Guidelines*. A joint document prepared by the Edison Electric Institute's Avian Power Line Interaction Committee and the U.S. Fish and Wildlife Service.

Bureau of Land Management (BLM). 1982. *Sonoma-Gerlach Management Framework Plan*. Amended in January 1999.

_____. 2011a. Bureau of Land Management Thomas Creek Rangeland information. October 2011. E-mail contact.

_____. 2011b. *Bureau of Land Management's Land & Mineral Legacy Rehost 2000 System - LR2000*. http://www.blm.gov/lr2000/. Accessed October 2011.

Cronquist, A., A.H. Holmgren, N.H. Holmgren, and J.L. Reveal. 1972. *Intermountain Flora: Vascular Plants of the Intermountain West U.S.A.* 7 vols. The New York Botanical Garden. Bronx, NY.

Enviroscientists, Inc. (Enviroscientists). 2011. *Biological Survey Report for NV Energy's Grass Valley 120kV Transmission Line Project, Humboldt County, Nevada*.

Far Western Anthropological Research Group, Inc. (FWARG). 2009. *Grass Valley Class III Cultural Inventory*.

Great Basin Bird Observatory (GBBO). 2010. *Nevada Comprehensive Bird Conservation Plan*, ver. 1.0. Great Basin Bird Observatory, Reno, NV.

Humboldt County. 2002. *Humboldt County Regional Master Plan*. http://www.hcnv.us/planning/master_plan.htm.

Natural Resource Conservation Service (NRCS). 2011. *Web Soil Survey*. http://websoilsurvey.nrcs.usda.gov/app/.

Nevada Department of Wildlife (NDOW). 2011. RE: *NV Energy Grass Valley Transmission Line Project*. June 29, 2011.

U.S. Census Bureau. 2010a. *Profile of General Population and Housing Characteristics*: *Humboldt County, Nevada*. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table. Accessed April 12, 2012.

_____. 2010b. *Profile of General Population and Housing Characteristics*: *Winnemucca city, Nevada*. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table. Accessed April 12, 2012.

Western Regional Climate Center (WRCC). 2008. *Period of Record Monthly Climate Summary*. http://www.wrcc.dri.edu/summary/Climsmnv.html.