

SECTION 3.0 AFFECTED ENVIRONMENT FOR THE EXTENSION OF THE RIGHT-OF-WAY TO THE HARRY ALLEN SUBSTATION AND FOR THE THIRTYMILE SUBSTATION

3.1 INTRODUCTION

Section 3 of this EA presents information on the environment potentially affected by the construction, operation, and maintenance of the facilities associated with the two proposed modifications to the SWIP ROW Grant. The affected environment for the LLCRDA realignment is addressed in Section 5.

3.2 BIOLOGICAL RESOURCES

This portion of the EA documents the biological resources associated with the extension of the ROW to the Harry Allen Substation and relocation of the Robinson Summit Substation site to the Thirtymile Substation site. Information presented in this section has been gathered from the SWIP EIS, and updated based on current BLM RMPs, ongoing discussions with federal and state agencies, field review and surveys, and from information developed from the Biological Assessment (BA) and the Biological Opinion (BO) that have been prepared for the SWIP – Southern Portion.

3.2.1 Vegetation

3.2.1.1 Right-of-Way Extension to the Harry Allen Substation

Vegetation along the ROW extension to the Harry Allen Substation is generally low-growing, relatively sparse, and dominated by creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*). Other shrubby species present include white ratany (*Krameria grayi*), four-wing saltbush (*Atriplex canescens*), Anderson wolfberry (*Lycium andersonii*), bladder sage (*Salazaria mexicana*), spiny hopsage (*Grayia spinosa*), and Nevada ephedra (*Ephedra nevadensis*). Common forbs and grasses include devil's spineflower (*Chorizanthe rigida*), evening primrose (*Oenothera deltoides*), buckwheat (*Eriogonum* sp.), and big galleta grass (*Pleuraphis rigida*).

In addition to shrubs and smaller plants, the area includes several species of cactus and at least one species of yucca. Cacti include beavertail prickly pear (*Opuntia basalaris*), silver cholla (*O. echinocarpa*), diamond cholla (*O. ramosissima*), Mojave barrel (*Ferocactus cylindraceus*), hedgehog (*Echinocereus engelmannii*), and cottontop barrel (*Echinocactus polycephalus*). Mojave yucca (*Yucca schidigera*) is the most common yucca species in the area. All plants of the cactus family cactaceae and all plants of the genus yucca are protected under Nevada Revised Statute (NRS) 527.060-.120, which prohibits destruction without “written permission from the legal owner...specifying locality by legal description and number of plants to be removed or possessed” (NRS 527.100).

3.2.1.2 Thirtymile Substation

The Thirtymile Substation site is strongly dominated by big sagebrush (*Artemisia tridentata*), with occurrences of bitterbrush (*Purshia tridentata*), black sage (*Artemisia nova*), and Utah juniper (*Juniperus osteosperma*), which appears to be in the early stages of invading the substation site. Many of the junipers are relatively small (<2m in height), although there are areas where the plants have been established for longer periods of time.

3.2.2 Noxious Weeds and Invasive Species

Noxious weeds are invasive, non-native species that tend to spread rapidly and often displace native plant species or bring about changes in species composition, community structure, and ecological function. Noxious weeds may compete with native species for critical resources including water, nutrients, and space. Such competition may alter the dynamics of the native plant community, potentially leading to a monoculture of the noxious species. Noxious weeds also may alter soil chemistry in such a manner as to preclude germination or seedling establishment by native species. Moreover, noxious weeds tend to thrive in disturbed areas, such as at electrical transmission tower sites, laydown areas, storage yards, and pulling and tensioning sites. Noxious weeds are formally listed and managed by the Nevada Department of Agriculture.

The noxious weed inventory for the SWIP – Southern Portion included (1) the identification of weed species that are designated noxious, as defined by the Nevada Department of Agriculture, and which have the potential to occur within the area affected by the project and (2) the gathering of information to identify specific noxious weed populations in the project area, including preconstruction surveys along the project ROW. These surveys were conducted from April through June 2006 by Tri County Weed, as recommended by BLM, Ely District Office.

A complete listing of the noxious weeds identified through these surveys is presented in Table 6-2 (Section 6.5) of this EA. In addition, information on noxious weed occurrences within the ROW area, including the location and extent of infestations, was also gathered from the BLM, Ely District Office in the form of a GIS data layer. This inventory did not indicate any additional noxious weed species located within the project corridor, however, it is likely that populations of other noxious species that were not found within the survey area may occur in the vicinity, and these species could become established at disturbed areas on the ROW following construction.

Red brome (*Bromus rubens*), cheatgrass (*Bromus testorum*), and Chilean chess (*Bromus trinitii*) have been identified by the BLM as invasive species of concern. In conjunction with the noxious weed and rare plant surveys conducted for the SWIP – Southern Portion, the identification of invasive species was generally noted, where evident. Based on the arid conditions that were encountered during these surveys, many of the anticipated invasive species may not have been identified.

Below is a description of noxious weeds and invasive species found within the areas of the extension of the ROW to the Harry Allen Substation and the Thirtymile Substation site.

3.2.2.1 Right-of-Way Extension to the Harry Allen Substation

Noxious weeds along the ROW extension included five locations of salt cedar within the Dry Lake Valley, however, no invasive species were identified in the area at that time.

3.2.2.2 Thirtymile Substation

No noxious weeds or invasive species were found at the Thirtymile Substation site.

3.2.3 Wildlife

3.2.3.1 Right-of-Way Extension to the Harry Allen Substation

The mammalian fauna of the project area is dominated by small, mostly nocturnal species of rodents and bats. Owing to the low-growing shrubs and lack of trees, large mammals such as Mule Deer (*Odocoileus hemionus*) are not present or are present only as transients. Mountain Lions (*Puma concolor*) are, like Mule Deer, uncommon and only occur as rare transients. The Coyote (*Canis latrans*) is the only larger mammal that could be common in the area.

In contrast, small mammals may be locally abundant. Some of the rodents present in the project area include White-tailed Antelope Squirrel (*Ammospermophilus leucurus*), Jackrabbits (*Lepus californicus*), Little Pocket Mouse (*Perognathus longimembris*), Long-tailed Pocket Mouse (*Chaetodipus formosus*), Merriam's Kangaroo Rat (*Dipodomys merriami*), Cactus Mouse (*Peromyscus eremicus*), Southern Grasshopper Mouse (*Onychomys torridus*), and possibly Desert Wood Rat (*Neotoma lepida*). Bats that could be present as permanent residents, transients, or summer visitors include several species of *Myotis*, Western Pipistrelle (*Pipistrellus hesperus*), Big Brown Bat (*Eptesicus fuscus*), Townsend's Big-eared Bat (*Corynorhinus townsendi*), Pallid Bat (*Antrozous pallidus*), and Mexican Free-tailed Bat (*Tadarida brasiliensis*).

The avifauna of Mojave desertscrub tends to be sparse and composed largely of species that also occur in the Sonoran and Great Basin deserts. Perhaps the most characteristic songbird of the project area is LeConte's Thrasher (*Toxostoma lecontei*). Other common species include the Red-tailed Hawk (*Buteo jamaicensis*), Ash-throated Flycatcher (*Myiarachus cinerascens*), Loggerhead Shrike (*Lanius ludovicianus*), Horned Lark (*Eremophila alpestris*), Cactus Wren (*Campylorhynchus brunneicapillus*), Gambel's Quail (*Callipepla gambelii*), Greater Roadrunner (*Geococcyx californianus*), and the Black-throated Sparrow (*Amphispiza bilineata*).

The Mojave Desert Tortoise (*Gopherus agassizii*) is known to inhabit the area of the project. Some of the species of lizards that are expected to occur in the area are: Desert Iguana (*Dipsosaurus dorsalis*), Zebra-tailed Lizard (*Callisaurus draconoides*), Great Basin Collared Lizard (*Crotaphytus bicinctores*), Desert Horned Lizard (*Phrynosoma platyrhinos*), Desert Night Lizard (*Xantusia vigilis*), Western Whiptail (*Cnemidophorus tigris*), and possibly the Banded Gila Monster (*Heloderma suspectum cinctum*). Snakes that are likely to be present include the Western Blind Snake (*Leptotyphlops humilis*), Coachwhip (*Masticophis flagellum*), Gopher Snake (*Pituophis catenifer*), Western Shovel-nosed Snake (*Chionactis occipitalis*), Sidewinder (*Crotalus cerastes*), Speckled Rattlesnake (*Crotalus mitchellii*), and the Mojave Rattlesnake (*Crotalus scutulatus*).

3.2.3.2 Thirtymile Substation

Large mammals that may be present at or near the Thirtymile Substation include Elk, Mule Deer, Mountain Lions, Coyotes, and Bobcats (*Lynx rufus*). Small, nocturnal species of rodents and bats make up the bulk of the mammalian fauna. Small rodents that occupy sagebrush habitats include the Dark Kangaroo Mouse (*Microdipodops megacephalus*), Great Basin Kangaroo Rat or Chisel-toothed Kangaroo Rat (*Dipodomys microps*), northern Grasshopper Mouse (*Onychomys leucogaster*), Desert Woodrat (*Neotoma lepida*), and Sagebrush Vole (*Lemmiscus curtatus*). Bats present include several members of the genus *Myotis*, the Big Brown Bat, Hoary Bat (*Lasiurus cinereus*), Western Big-eared Bat, and the Mexican Free-tailed Bat.

Birds that are characteristic of sagebrush-dominated communities include Sage Grouse (*Centrocercus urophasianus*), Sage Thrasher (*Oreoscoptes montanus*), and Sage Sparrow (*Amphispiza belli*). Other species that probably occur in the vicinity of the Thirtymile Substation include the Red-tailed Hawk, Gray Flycatcher (*Empidonax wrightii*), Common Raven (*Corvus corax*), Mountain Bluebird (*Sialia currucoides*), and the Brewer's Sparrow (*Spizella breweri*).

The amphibian and reptile fauna of sagebrush dominated habitats are most likely low in diversity. The Great Basin Spadefoot (*Spea intermontana*) is probably the most common amphibian near the Thirtymile Substation. Common lizards include such species as the Western Fence Lizard (*Sceloporus occidentalis*), Sagebrush Lizard (*S. graciosus*), Side-blotched Lizard (*Uta stansburiana*), and the Western Whiptail (*Cnemidophorus tigris*). Snake species include the Striped Whipsnake (*Masticophis taeniatus*), Gopher Snake (*Pituophis catenifer*), Western Terrestrial Garter Snake (*Thamnophis elegans*), Night Snake (*Hypsiglena torquata*), and the Western Rattlesnake (*Crotalus viridis*).

3.2.4 Migratory Birds

The Migratory Bird Treaty Act of 1918 (MBTA) is the domestic law that affirms and implements the United States' commitment to the protection of shared migratory bird resources. The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requires harvest to be limited to levels that prevent overuse. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, of any migratory bird, its eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11).

Virtually all of the bird species found within the SWIP transmission line ROW for the Harry Allen extension and at the Thirtymile Substation site are protected by the MBTA.

A BLM designated bird habitat area is located near the ROW extension, in Dry Lake Valley. The bird habitat consists of a fenced area containing mesquite trees and berms for collecting water.

3.2.5 Wild Horses and Burros

Since 1971, the BLM has been managing free-roaming horses and burros on public lands in accordance with the Wild Free-Roaming Horse and Burro Act. This Act mandates that wild and free-roaming horses and burros be protected from unauthorized capture, branding, harassment, or death, and furthermore that these animals be considered as an integral part of the natural systems, based on their distribution.

In order to support the protection of these animals, the BLM has established Herd Management Areas (HMAs). The desired objective is to manage for sustainable population levels in areas of suitable habitat, while preserving a multiple use relationship with all other resources.

3.2.5.1 Right-of-Way Extension to the Harry Allen Substation

No HMAs have been established by the Southern Nevada District Office that are affected by the extension of the ROW in this area.

3.2.5.2 Thirtymile Substation

No HMAs have been identified in the Egan RMP or the Ely Proposed RMP (PRMP) that are affected by the Thirtymile Substation.

3.2.6 Threatened and Endangered Species/Special Status Species

3.2.6.1 Right-of-Way Extension to the Harry Allen Substation

In the area of the extension of the ROW to the Harry Allen Substation the Mojave Desert Tortoise is the only federally listed wildlife species known to be present. A female tortoise carcass and an apparently active burrow were found in the extension area during surveys conducted in the Summer of 2006. The extension area is not located within U.S. Fish and Wildlife Service (USFWS) designated Critical Habitat for the Mojave Desert Tortoise, or any other listed species.

Rare plant surveys were conducted along the transmission line route in this area during Spring 2006. These surveys resulted in no detection of federally listed or sensitive species, with the exception of cacti and yuccas, which, as previously noted, are protected under Nevada law (NRS 527.060). However, these surveys were conducted during a very dry spring, and plants like the three-corner milkvetch, an annual, did not appear.

3.2.6.2 Thirtymile Substation

No federally listed wildlife or plant species, or designated Critical Habitat, were identified in the Thirtymile Substation area. Rare plant surveys conducted during Spring 2006 did not reveal the presence of any sensitive plant species.

3.3 CULTURAL RESOURCES

Two cultural resource studies were conducted covering the areas of the extension of the ROW to the Harry Allen Substation and at the Thirtymile Substation site (Crews et al. 2007; Deis 2007). A summary of the results of each of these studies is described below.

3.3.1 Right-of-Way Extension to the Harry Allen Substation

Surveys conducted for the extension of the ROW to the Harry Allen Substation included the 200-foot-wide ROW (Crews et al., 2007) and associated new road access. For the purposes of this cultural study, the transmission line ROW and associated access is considered the area of potential effect (APE). No sites were identified within the APE of the ROW extension.

3.3.2 Thirtymile Substation

Surveys conducted for the Thirtymile Substation included the substation, and interconnections to the SWIP 500kV line and the Falcon-to-Gonder 345kV line (Crews et al., 2007; Deis 2007). The APE considered for the substation included the 77-acre footprint of the substation and the APE considered for the transmission line interconnections included the 200-foot ROW for the SWIP – Southern Portion interconnection and two, 160-foot ROWs for the Falcon-to-Gonder 345kV line interconnections. A total of 18 sites were identified within the APEs of both the substation and the interconnections (Table 3-1). Of these, four are recommended as eligible for listing on the National Register of Historic Places (NRHP).

	Site Number	7.5-minute Quad	Site Type	Eligibility	Location	BLM Report No.	Survey Organization
1	26WP7576	Marking Corral Summit	Artifact Scatter	NRHP eligible	Substation	(8111) 2006-1593	EPG, Inc.
2	26WP7577	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Interconnection	(8111) 2006-1593	EPG, Inc.
3	26WP7578	Marking Corral Summit	Small Artifact Scatter (1 Pottery Sherd, 2 flakes)	NRHP ineligible	Interconnection	(8111) 2006-1593	EPG, Inc.
4	26WP7579	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Interconnection	(8111) 2006-1593	EPG, Inc.
5	26WP7161	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	BLM
6	26WP7149	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	EDAW
7	26WP7148	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	EDAW
8	26WP7145	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	EDAW

	Site Number	7.5-minute Quad	Site Type	Eligibility	Location	BLM Report No.	Survey Organization
9	26WP7146	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	EDAW
10	26WP7478	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	BLM
11	26WP7158	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	EDAW
12	26WP7477	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Substation	8111 (NV 040) 2004-1542	BLM
13	26WP7160	Marking Corral Summit	Lithic and Ceramic Scatter	NRHP eligible	Substation	8111 (NV 040) 2004-1542	EDAW
14	26WP5440	Marking Corral Summit	Lithic Scatter/ Historic Debris	Prehistoric: NRHP eligible/ historic: NRHP ineligible	Access	CR99-1309	Summit Envirosolutions
15	26WP5431	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Access	CR99-1309	Summit Envirosolutions
16	26WP5441	Marking Corral Summit	Lithic Scatter/ Historic Debris	NRHP ineligible	Interconnection	CR99-1309	Summit Envirosolutions
17	26WP5438	Marking Corral Summit	Large Lithic Scatter/ Historic Debris	NRHP eligible	Access	CR99-1309	Summit Envirosolutions
18	26WP5439	Marking Corral Summit	Lithic Scatter	NRHP ineligible	Access	CR99-1309	Summit Envirosolutions

3.4 PALEONTOLOGICAL RESOURCES

The San Bernardino County Museum conducted a paleontological resource study covering the areas of the extension of the ROW to the Harry Allen Substation and at the Thirtymile Substation (San Bernardino County Museum 2006). This study included a records search and field review to identify paleontological sensitivity and is included in the COM Plan for the SWIP – Southern Portion. The conclusions of the study are summarized below.

3.4.1 Right-of-Way Extension to the Harry Allen Substation

The records search and field review concluded that the extension to the Harry Allen Substation is located in an area with low paleontological sensitivity and recommended that no further investigation is warranted for this area.

3.4.2 Thirtymile Substation

Based on the records search and field review, the Thirtymile Substation site is located in an area with an undetermined paleontological sensitivity. The paleontological resource study recommended that an intensive pedestrian field inspection be conducted prior to construction.

3.5 LAND USE, RECREATION, AND ACCESS

This section of the EA documents the existing and planned land use, recreation, and access in the areas where the two ROW modifications are proposed. Existing land use data were gathered using aerial photography and field reconnaissance, and through a review of land use plans. Planned land use was gathered using existing BLM RMPs, PRMPs, other BLM documents for projects located in the project areas, and specific development plans. A description of the project setting, ownership/jurisdiction, and existing and planned land use within the areas of the two ROW modifications follows.

3.5.1 Right-of-Way Extension to the Harry Allen Substation

3.5.1.1 Project Setting

The extension of the ROW, from the previously identified terminus of the SWIP project to the existing Harry Allen Substation, is located in Dry Lake Valley, approximately 20 miles northwest of North Las Vegas. This area is part of the Basin and Range Physiographic Province, which is characterized by parallel mountain ranges running north to south, with closed desert basins or playas between the ranges, such as Dry Lake.

3.5.1.2 Jurisdiction

The extension of the ROW is on BLM land administered by the BLM Southern Nevada District Office, and managed under the Las Vegas RMP.

3.5.1.3 Existing Land Use, Recreation, and Access

Existing land use within the area of the ROW extension is primarily industrial, consisting of utility facilities such as the Harry Allen Generation Plant, the two Harry Allen Electrical Substations, 500kV, 345kV, and 230kV transmission lines and associated access roads, and the Kern River Natural Gas Pipeline and Metering Station. The Apex Industrial Park is located immediately to the south of U.S. Highway 93 and on both the east and west sides of Interstate 15.

The extension of the ROW is not located within any Recreation Management Units as identified by the Las Vegas BLM RMP; however, there are existing dispersed four-wheel-drive roads within the area. The Las Vegas RMP (Vol. II, Map # 2-10) designates Off-Highway Vehicle (OHV) use in the vicinity of the extension as “limited to existing roads, trails, and dry washes.”

3.5.1.4 Planned Land Use

The ROW extension is located entirely on BLM land, in an area identified in the RMP as having “high potential” for mineral material sale (Las Vegas RMP Vol. II, Map # 3-13). This identification is consistent with the existing and planned industrial uses within the area, although no mineral extraction sites are located along the ROW extension. Although Clark County has no jurisdiction over the management of BLM land, the Northeast Clark County Land Use Plan identifies uses within the area of the realignment, such as *Heavy Industrial* and *Open Land*. *Heavy Industrial* allows for intense industrial operations within close proximity to major transportation and public facilities. The *Open Land* designation allows for deterring development and may contain uses such as public services and facilities, grazing, and some recreational uses.

3.5.2 Thirtymile Substation

3.5.2.1 Project Setting

The proposed Thirtymile Substation site is located in White Pine County, Nevada, approximately 18 miles northwest of Ely, and ½ mile south of Highway 50. The site is immediately west of the SWIP alignment, approximately ¾ mile northwest of the approved Robinson Summit Substation site. This area is part of the Basin and Range Physiographic Province, which is characterized by parallel mountain ranges running north to south with closed desert basins between the ranges. The specific location of the substation is within the foothills of the western side of the Egan Mountain Range.

3.5.2.2 Jurisdiction

The Thirtymile Substation site is located entirely on BLM land administered by the Ely District and adjacent to the SWIP and Falcon-to-Gonder designated BLM utility corridors. This area is currently managed under BLM’s 1984 Egan RMP, but will be managed under the Ely RMP. The Ely RMP, which will replace the Egan RMP, was proposed by the BLM in November 2007 (Ely Proposed Resource Management Plan/Final Environmental Impact Statement, BLM 2007) and is expected to be finalized in mid-2008. Accordingly, the analysis in this EA takes into account both plans, as appropriate.

3.5.2.3 Existing Land Use, Recreation, and Access

The primary land use within the proposed substation site area is range land, and the proposed site is included in the Thirty Mile Spring allotment. The Moorman Ranch, Badger Spring, Copper Flat, and Tom Plain/Uvanda allotments are all within relatively close proximity.

There are no active recreation areas within the vicinity of the Thirtymile Substation; however, the substation is located within the Loneliest Highway Special Recreation Management Area (SRMA). As described in the Ely PRMP, this SRMA (675,123 acres in size) includes all BLM lands extending approximately 4 miles to either side of U.S. Highway 50, and provides access to some of the most popular destinations in the planning area including Illipah Reservoir, Cold Creek Reservoir, Garnett Hills Rock Hounding Area and the Pony Express Trail. The management objectives of this area are to provide recreational opportunities to the public that

would otherwise not be available, reduce conflicts among users, minimize damage to resources, and reduce visitor health and safety issues.

Two other transmission lines are located adjacent to the proposed substation site: the Falcon-to-Gonder 345kV transmission line and the Gonder-to-Machacek 230kV transmission line. Both transmission lines are located approximately ¼ mile south of the proposed substation site, within the Falcon-to-Gonder BLM utility corridor. Within close proximity of the proposed substation site are several dirt roads, including Jakes Wash Road which provides access to U.S. Highway 50, which is located approximately ½ mile north of the proposed site. Dirt roads within the area provide access to dispersed recreational activities on BLM land.

3.5.2.4 Planned Land Use

There are no known development plans for the proposed substation site. The site is adjacent to the designated ½-mile-wide SWIP utility corridor and the Falcon-to-Gonder corridor, allowing for future utility development.

3.6 VISUAL RESOURCES

This portion of the EA focuses on the existing visual conditions as they relate to the proposed ROW modification areas, including scenic quality (scenery), sensitive viewers (residential, recreation, travel ways), agency management objectives (Visual Resource Management or VRM), and cultural modifications. The visual resource inventory is described below.

3.6.1 Right-of-Way Extension to the Harry Allen Substation

The landscape in which the ROW extension would be located is characterized by moderately flat topography, with low vegetative diversity creating little visual interest; therefore, the scenic quality is Class C (landscapes with minimal diversity or interest). “Sensitive viewers” of the extended ROW area would be travelers on U.S. Highway 93 and Interstate 15. The Las Vegas BLM RMP designated the Harry Allen Substation area as a Class IV VRM objective; however, this classification has been updated to a Class III VRM objective. Class IV VRM objective allows activities involving major modifications of the landscape’s existing character. Authorized actions may create significant landscape alterations and would be obvious to casual viewers. A Class III VRM objective prescribes partial retention of the existing character of the landscape and allows for actions which may alter the existing landscape, but not to the extent that they attract or focus the attention of the casual viewer. Cultural modifications adjacent to the project include transmission lines and substations, with other energy-related facilities (power plants) in the vicinity.

3.6.2 Thirtymile Substation

The landscape in the vicinity of the proposed Thirtymile Substation site is characterized by rolling foothills. The vegetation found in this landscape is relatively low in species diversity and irregular in form, and the terrain in this area consists of rolling foothills; therefore, the scenic quality for this landscape type is Class B (landscapes with common diversity or interest).

Sensitive viewers identified as having potential views of the substation include travelers on U.S. Highway 50 and Jakes Wash Road. Existing visual modifications near the site include a highway, dirt road, and two transmission lines. The general area of the Thirtymile Substation is a Class III VRM objective. The SWIP designated utility corridor ($\frac{3}{4}$ mile wide) which overlaps with the substation site has been classified as Class IV VRM objective in the Ely PRMP. Existing modifications in the vicinity of the substation site include the Falcon-to-Gonder 345kV transmission line and the Gonder-to-Machacek 230kV transmission line located approximately $\frac{1}{4}$ mile to the south. These facilities are also located in a $\frac{1}{2}$ -mile-wide designated utility corridor with a Class IV VRM objective, as identified in the Ely PRMP.

3.7 WILDFIRE MANAGEMENT

3.7.1 Right-of-Way Extension to the Harry Allen Substation

The extension of the ROW to the Harry Allen Substation is located in Clark County, on BLM land administered by the Southern Nevada District Office. The Southern Nevada District Office has a fire management plan (Fire Management Action Plan) that outlines the fire management practices within the project area. This plan, along with the Las Vegas RMP, was reviewed to identify potential impacts from the transmission line. Potential impacts from the ROW extension would be influenced by additional access road construction, the type of vegetation located within the project area, and the guidelines for fire suppression.

The ROW extension is located within Mojave desertscrub vegetation that is dominated by creosote bush and white bursage and is habitat for Desert Tortoises. Dry Lake Valley includes a *Tortoise Moderate Density Fire Management Unit (FMU)* that has an annual target goal for acres burned of 15 acres or less for 90 percent of the burn time. It also has a decadal goal of less than 500 acres affected, with no prescribed burns within the FMU. The *Las Vegas Valley Apex FMU* has an annual target burn goal of 1 acre or less for 90 percent of the time. The decadal goal is less than 100 acres affected, with only salt cedar or landscape debris piles as prescribed burns (Marfill 2006). The area includes sparse vegetation along the ROW extension; therefore, fuel for potential wildfires is minimal.

3.7.2 Thirtymile Substation

The Thirtymile Substation is located in White Pine County, on BLM land administered by the Ely BLM District. The Ely BLM District Office has an Ely Fire Management Plan (BLM 2004a) that incorporates the Ely District Managed Natural and Prescribed Fire Plan, which outlines fire management practices within the project area. This plan has been reviewed to identify potential impacts from the substation. Potential impacts from the substation would be influenced by improvements of an existing road, the type of vegetation located within the project area, and the guidelines for allowable acres burned or level of fire suppression within the project area.

The Ely PRMP identifies vegetation types within the district and the typical fire behavior associated with each type. The substation is located within a sagebrush-dominated vegetation community with scattered juniper, and has fuel loads that vary substantially, depending on site conditions and history. Typical fire behavior is characterized as quickly spreading where grasses are present. In juniper areas, events are either single tree, low intensity or wind driven, high intensity events. Where fuel continuity is absent, winds are needed to spread the fire. As

presented in the Ely PRMP, the substation is located on the edge of the Northern Benches and Northern Mountains FMUs, and is identified as a full suppression fire management area. The nearest wildland-urban interface community identified in the Ely PRMP is the Town of Ruth, located approximately 12 miles southwest of the substation.

For the purposes of this analysis, communities within 50 miles of the Thirtymile Substation project area have been identified and listed in Table 3-2. In the event of a fire that could affect one of these communities, the fire management staff of the BLM Ely District Office would evaluate current fire conditions and available resources to determine the tactics for fighting the fire.

TABLE 3-2 WILDLAND-URBAN INTERFACE COMMUNITIES OF THIRTYMILE SUBSTATION	
Communities within 50 Miles of Thirtymile Substation	Approximate Distance to Substation (miles)
Cherry Creek	36
Duckwater	46
Ely	19
Lund	40
McGill	20
Preston	35
Ruth	12

3.8 WILDERNESS AND WILD AND SCENIC RIVERS

There are no Wilderness or Wild and Scenic River designations within the extension of the ROW to the Harry Allen Substation or the Thirtymile Substation site.

3.9 PRIME AND UNIQUE FARMLANDS

There is no prime and unique farmland located within the extension of the ROW to the Harry Allen Substation or the Thirtymile Substation site.

3.10 EARTH RESOURCES

This section describes the geology, soils, and water resources in the areas affected by the two proposed ROW modifications. Information presented in this section is based on studies conducted for the SWIP EIS, information obtained from various federal and state agencies, and a general in-field review.

3.10.1 Right-of-Way Extension to the Harry Allen Substation

3.10.1.1 Geology

The geology of the Dry Lake Valley is generally comprised of three major geologic units: alluvium, Tertiary valley-fill deposits, and Paleozoic carbonate rocks. Alluvium occurs over the valley floor and consists of interbedded gravels, sand, silt, and clay.

3.10.1.2 Soils

Soils in the Dry Lake are typical desert soils (entisols and aridisols), which are susceptible to erosion by wind and water. The potential for erosion is generally slight, except where the soils have been disturbed or along the banks of washes.

3.10.1.3 Water Resources

Surface water within the Dry Lake Valley occurs as ephemeral flow in streambeds that drain the upland areas or in temporary ponding of runoff in the Dry Lake playa (the dry bottom of an undrained desert basin). Frequent floods of longer duration are to be expected within the Dry Lake Valley, causing ponding that may be present for periods of several months or more.

The ROW extension is located within the Garnet Valley (Dry Lake Valley) Groundwater Basin, in the Colorado River Basin Hydrographic Region. Groundwater under Dry Lake Valley is situated in the California Wash Flow System and occurs at depths ranging from 230 to 285 feet and is derived from two sources: recharge over the basin and subsurface inflow on the west from Hidden Valley. Water from this system ultimately reaches the Colorado River.

Floodplains

The northern 2.4 miles of the ROW extension are located within the Dry Lake playa 100-year floodplain, as designated by the Federal Emergency Management Agency (FEMA).

3.10.2 Thirtymile Substation

3.10.2.1 Geology

The land surrounding the substation site is composed of alluvial deposits washed down from surrounding mountains and hills associated with the Egan Mountain Range.

3.10.2.2 Soils

The alluvial soils within the proximity of the substation site are prone to water and wind erosion. Soils in this area are of mixed type, generally composed of silty loamy soils mixed with clay and skeletal rock.

3.10.2.3 Water Resources

Several small intermittent drainages descend from the foothills into this area, and an unnamed streambed is located along the southwest corner of the substation site. No riparian areas or wetlands are associated with the substation site. The substation site is located within the Central Hydrographic Region of Nevada in the Jakes Valley Groundwater Basin. Review of the USGS SIR 2007-5089 Appendix A, land elevation altitude to groundwater elevation (i.e., depth to water table) indicates ranges from 100 feet in the southern part of the basin to 350 feet in the center of the basin.

Floodplains

FEMA has not mapped floodplains within the substation site area, and field review did not result in the identification of any active floodplains.

3.11 AIR RESOURCES

Air resources within the project area are regulated at the federal, state, and local levels as described below:

3.11.1 Federal

The U. S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards for certain pollutants. The attainment status for the proposed project area was examined in consideration of Federal designations contained in 40 CFR §81.329. The hydrographic areas and the associated pollutants for which they are designated as attainment or nonattainment are described below.

3.11.2 State

The Nevada Department of Environmental Protection's Bureau of Air Pollution Control (BAPC) administers the surface area disturbance permitting for White Pine County, Nevada. The BAPC issues a Class II Air Quality Operating Permit for Stand-Alone Surface Area Disturbance for any land disturbance that will equal or exceed five acres of total disturbance. If the total disturbance is equal to or exceeds 20 total acres then in addition to the preparation of the surface area disturbance (SAD) permit application, a dust control plan must also be prepared and submitted with the application (Air Sciences Inc. 2007).

3.11.3 Local

The Clark County Department of Air Quality and Environmental Management administers the surface area disturbance permitting for Clark County through the issuance of a Dust Control Permit. A Dust Control Permit is required for projects that are greater than or equal to 0.25 acre; require trenches equal to or greater than 100 feet in length; or include the mechanical demolishing of any structure larger than or equal to 1,000 square feet (Air Sciences Inc. 2007).

The specific air quality regulations and requirements for the ROW extension and the Thirtymile Substation are described below.

3.11.4 Right-of-Way Extension to the Harry Allen Substation

The ROW extension is located within Clark County in Hydrographic Basin 216. This basin has a federal designation of nonattainment status for the 8-hour ozone standard. The Clark County Department of Air Quality and Environmental Management manages dust control and emissions within the extension area as described above (Air Sciences Inc. 2007).

3.11.5 Thirtymile Substation

Thirtymile Substation is located within White Pine County. The county has a federal designation of attainment status of all pollutants. The BAPC manages dust control within the county through a Class II Air Quality Operating Permit as described above (Air Sciences Inc. 2007).

3.12 HAZARDOUS MATERIALS

3.12.1 Right-of-Way Extension to the Harry Allen Substation

The extension of the ROW to the Harry Allen Substation occurs on BLM land administered by the Southern Nevada District Office. The Las Vegas RMP requires that “all non-interior groups whose activities are on BLM-managed land and facilities will be held responsible for compliance with federal, state, interstate, and local waste management requirements. There are no known hazardous material sites in the ROW extension area.

3.12.2 Thirtymile Substation

The Thirtymile Substation would be located on BLM land administered by the Ely District Office. As previously stated, the BLM has an obligation to abide by the existing federal and state statutes and regulations regarding hazardous materials and to require that leasees and ROW grantees also abide by such regulations as part of the lease or grant terms and conditions. There are no known hazardous material sites in the substation area.

3.13 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

This section describes the social characteristics of the modification areas, including a discussion on socioeconomics and environmental justice. The current status and trends for population and economic factors have been considered for the extension of the ROW to the Harry Allen Substation and at the Thirtymile Substation, as described below.

3.13.1 Right-of-Way Extension to the Harry Allen Substation

3.13.1.1 Socioeconomics

Population data reviewed were produced by the Bureau of the Census, U.S. Department of Commerce. The extension of the ROW is located in unpopulated/uninhabited land, in open desert scrub range. The nearest concentrated population to the extension of the ROW occurs approximately 17 miles southeast of the siting area.

Clark County's population according to the 2000 census was 1,375,765, and the county had a population percent change of 24.3 percent calculated between April 1, 2000 and July 1, 2005. The population estimate of Clark County for 2005 is 1,710,551. Employment in 2000 totaled 637,339, with 4.2 percent of the work force unemployed. The estimated household income for Clark County in 2004 was \$50,463.

3.13.1.2 Environmental Justice (Executive Order 12898 of February 11, 1997)

All federal actions must identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States. The criterion for a finding of possible environmental justice issues is the occurrence of more than 50 percent of the population being minority or low-income in the project area of influence.

The extension is located in an unpopulated area with no occurrences of disproportionately high percentages of minority or low-income populations. The closest major population to the ROW extension occurs approximately 17 miles southeast of the siting area, and this extension does not cross the Moapa Indian Reservation.

3.13.2 Thirtymile Substation

3.13.2.1 Socioeconomics

Population data reviewed were produced by the Bureau of the Census, U.S. Department of Commerce. The substation site is located in unpopulated/uninhabited, open range land. The nearest concentrated populations to the Thirtymile Substation occur in Ely (approximately 18 miles southeast) and in the Town of Ruth (approximately 12 miles southwest of the siting area), both of which have low-population densities.

White Pine County's population according to the 2000 census was 9,181, and the county had a population percent change of -2.0 percent calculated between April 1, 2000 and July 1, 2005. The population estimate of White Pine County for 2005 is 8,994. Employment in 2000 totaled 3,321, with 3.8 percent of the work force unemployed. The estimated household income for White Pine County in 1999 was \$44,616.

3.13.2.2 Environmental Justice (Executive Order 12898 of February 11, 1997)

The project is associated with an unpopulated area with no occurrences of disproportionately high percentages of minority or low-income populations. The nearest populations to the Thirtymile Substation occur in Ely (approximately 18 miles southeast of the siting area) and in the Town of Ruth (approximately 12 miles southwest of the siting area).

3.14 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

3.14.1 Right-of-Way Extension to the Harry Allen Substation

The extension of the ROW is not located within a designated BLM Area of Critical Environmental Concern (ACEC). The Coyote Springs ACEC is located approximately 2.5 miles to the northwest in the Arrow Canyon Range and Hidden Valley.

3.14.2 Thirtymile Substation

The substation site is not located within a designated BLM ACEC.