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 trinii*) 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).

TABLE 3-1
CULTURAL RESOURCE SITES IN THE THIRTYMILE SUBSTATION AND INTERCONNECTION AREA

	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

TABLE 3-1
CULTURAL RESOURCE SITES IN THE THIRTYMILE SUBSTATION AND INTERCONNECTION AREA

	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 (¾ 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 ¼ mile to the south. These facilities are also located in a ½-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.

SECTION 4.0
ENVIRONMENTAL CONSEQUENCES FOR THE EXTENSION OF THE RIGHT-OF-WAY TO THE HARRY ALLEN SUBSTATION AND FOR THE THIRTYMILE SUBSTATION

4.1 INTRODUCTION

This section addresses the environmental consequences (effects) associated with the No Action Alternative, and the Proposed Action (i.e., amendments to the ROW Grant for the extension to the Harry Allen Substation and locating the Thirtymile Substation site). Environmental consequences associated with the LCCRDA realignment are addressed in Section 5. Mitigation measures to reduce potential effects to the environment are also described with respect to each affected resource presented in this section, where appropriate. Many of the mitigation measures presented in this EA are included in the original SWIP EIS, ROD, and ROW Grant(s). Additional mitigation measures have been proposed by Great Basin or requested or required by the BLM, USFWS and other resource agencies, in connection with the preparation of this EA and the BA, BO, and COM Plan. All of the mitigation measures from these various sources have been incorporated in the COM Plan, and compliance with that plan would be included as an enforceable stipulation in the amended ROW grant, just as it is in the original SWIP ROW grant.

4.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, the SWIP ROW would not be amended as proposed, and the SWIP transmission line would not be constructed due to the inability to interconnect with the existing grid at the southern terminus and the difficulty of interconnecting with the Falcon-to-Gonder 345kV line, which bisects the currently approved substation site. The environmental resources associated with these specific locations would not be affected.

4.3 BIOLOGICAL RESOURCES

Impacts to biological resources include consideration of the effects to vegetation, noxious weeds and invasive species, wildlife, and threatened and endangered species. Following is a discussion of impacts associated with the extension of the ROW to the Harry Allen Substation, and at the Thirtymile Substation, including proposed mitigation measures.

4.3.1 Vegetation

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

Approximately 36 acres of land will be disturbed during construction of the 3.8 mile transmission line extension in this area, including 25 acres of temporary disturbance at tower sites, spur roads, and tensioning and pulling sites, and permanent disturbance of approximately 11 acres (primarily associated with access roads). Vegetation that will be affected is primarily creosote bush and white bursage, with scattered individual Mojave yucca populations and several species of cacti. It is anticipated that salvageable cacti and yucca will be safely stored in temporary plant storage sites. Plant salvage from areas of permanent disturbance will only be

moved once, and replanted as described in the Restoration Plan contained in the COM Plan. In areas of temporary disturbance, salvaged plants will be replanted in temporary storage sites using the procedures identified in the Restoration Plan. Location of these plant storage sites shall be provided by the Construction Contractor on a site-specific basis. These areas shall provide ease of care and maintenance for the plant material as well as provide protection from construction activities. Additionally, as identified in the COM Plan, all activities pertaining to the disturbance of cacti and yucca will be coordinated with the authorized Forestry Officer at the BLM Southern Nevada District Office, including transportation permits, tags, etc. Areas of temporary disturbance will be restored in accordance with the COM Plan.

4.3.1.2 Thirtymile Substation

Construction of the Thirtymile Substation will affect approximately 77 acres. Construction of the transmission interconnections will affect an estimated 23 acres of land, including 19 acres of short-term disturbance and approximately 4 acres of permanent disturbance. The proposed site of the substation is strongly dominated by big sage, with additional occurrences of bitterbrush, black sage, and Utah juniper. Scattered Utah juniper will be selectively cleared during construction in areas of temporary disturbance and areas not permanently displaced by the substation, and long-term access will be restored in accordance with the COM Plan.

4.3.2 Noxious Weeds and Invasive Species

The introduction and spread of invasive and nonnative plant species (including noxious weeds) can contribute to the loss of rangeland productivity, increased soil erosion, reduced species and structural diversity, loss of wildlife habitat, and, in some instances, may pose a threat to human health and welfare. The Carslon-Foley Act (Public Law 90-583) and the Federal Noxious Weed Act, Public Law 93-629 (7 U.S.C. 2801 et seq.: 88Stat. 2148), enacted January 3, 1975, established a federal program to control the spread of noxious weeds. Executive Order 13112 issued February 3, 1999 further defines the responsibilities of federal agencies to prevent the introduction of invasive species and provide for their control by minimizing the economic, ecological and human health impacts that invasive species cause. Executive Order 13112, Invasive Species, was authorized to prevent the introduction of invasive species, provide for their control, and to minimize the impacts caused by these species. NRS 555, Control of Insects, Pests, and Noxious Weeds, provides information regarding the designation and eradication of, and inspection for, noxious weeds within the State of Nevada (Ely PRMP/EIS).

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

Construction of the extension to the Harry Allen Substation will require the construction of new access roads, and result in disturbance at tower pad sites and pulling and tensioning areas. Berms created by access road construction can represent disturbed soils, which may provide suitable habitat for noxious weeds, including salt cedar and other invasive species in this area. Construction activity around tower pads and in pulling and tensioning areas, including movement of heavy equipment and light trucks may also disturb soil and provide weed habitat. Seeds of noxious weeds and invasive species also may be present in the seed bank and soil disturbance can have the effect of “releasing” these seeds, possibly leading to local infestations.

There also is the potential for weeds to be introduced into the project area by construction vehicles.

A comprehensive Noxious Weed Management Plan (part of the COM Plan) has been developed with the goal of keeping the ROW free of noxious weeds. Adherence to the specific weed control mitigation measures in this plan, including measures as identified in the BLM Las Vegas Noxious Weed Plan will minimize the introduction and spread of noxious weeds during and following construction. Early detection and rapid response have been important considerations in the development of this plan which includes (1) identification of problem areas, (2) preventative measures that will be implemented to prevent the spread of noxious weeds during construction, (3) treatment methods during construction and post-construction, and (4) reclamation and post-construction monitoring. Included in this plan are specific measures that address the eradication of existing noxious weed populations, measures to minimize the potential for the spread of noxious weeds through off-site power washing of equipment/vehicles and on-site cleaning of equipment/vehicles with compressed air, and the use of weed free materials during restoration (e.g., hay or straw).

In addition, as a part of the ROW Preparation, Rehabilitation, and Restoration Plan (included in the COM Plan), reseeding practices and seeding mixtures to be used in areas of temporary disturbance will be coordinated with a BLM specialist (e.g., botanist, range management specialist, or soil scientist designated by the BLM Authorized Officer) in order to determine the source type and quantity of seed mixtures and seeding locations. In this regard, mixtures that discourage the establishment of invasive and noxious weeds will be considered, as appropriate.

4.3.2.2 Thirtymile Substation

Acreages of land affected by construction of the Thirtymile Substation are discussed in Section 4.3.1.2. Most of the land will be permanently committed to substation structures and any other cleared ground within the substation fence will be covered with gravel. While no noxious weeds were found at the proposed substation site during weed surveys, exposed, disturbed soils associated with the substation and transmission interconnections may provide suitable habitat for noxious weeds. Construction activity within, and around, the substation site, including movement of heavy equipment and light trucks may disturb soil and provide weed habitat. Seeds of noxious weeds may be present in the seed bank and soil disturbance can have the effect of “releasing” these seeds possibly leading to local infestations. There also is the potential for noxious and invasive weeds to be introduced into the project area by construction vehicles.

As previously described for the extension to Harry Allen, a comprehensive Noxious Weed Management Plan and ROW Preparation, Rehabilitation, and Restoration Plan (part of the COM Plan) have been developed with the goal of keeping the area of affect weed free. Adherence to the specific weed control mitigation measures in this plan, including measures as identified in the BLM Las Vegas Noxious Weed Plan and restoration practices will minimize the introduction and spread of noxious and invasive weeds during, and following, construction of the Thirtymile Substation.

4.3.3 Wildlife

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

There will be some mortality of small vertebrate species and some degradation of general wildlife habitat quality from the construction of the transmission line. Ground-disturbing activities, such as vehicle movement along access roads, and at tower locations, laydown areas, and pulling and tensioning sites, will alter the quality of wildlife habitat in the short-term. Some individuals of small, fossorial species, such as Pocket Mice and Kangaroo Rats, will likely be crushed in their burrows by heavy equipment. Similarly, snakes, lizards, and other diurnal forms may be hit by vehicles on access roads or killed by road building equipment. Potential impacts from the operation of the transmission line may include an increase in hunting perches for avian predators. Mitigation measures, including limiting access to areas previously determined and clearly flagged, controlling speed limits on the ROW, and restoration practices, will assist in reducing impacts to wildlife.

4.3.3.2 Thirtymile Substation

The clearing of the Thirtymile Substation site during construction will result in some mortality of small vertebrate species and the removal of any wildlife habitat on the site. Wildlife occupying the site prior to construction will be displaced, since the existing habitat will be replaced with the substation facilities. Within the transmission line interconnection ROWs to the SWIP – Southern Portion and Falcon-to-Gonder transmission lines, ground-disturbing activities, such as vehicle movement along access roads, and at tower locations and laydown areas, also may result in some mortality and degradation of general wildlife habitat quality. Similar to the ROW extension at the Harry Allen Substation, individuals of small, fossorial species will likely be crushed in their burrows by heavy equipment, and snakes, lizards and other diurnal forms may be hit by vehicles on access roads or killed by construction equipment. Potential impacts from the operation of the substation and transmission line interconnections may include an increase in hunting perches for avian predators. Mitigation measures, including the use of improved existing access into the substation site, clearly flagging areas of disturbance, and restoration practices, will assist in reducing impacts to wildlife.

4.3.4 Migratory Bird Treaty Act

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

Construction of the extension to Harry Allen Substation could potentially result in the loss of bird nests, eggs, or young, and there is a small area of bird habitat located immediately east of the transmission line in the area of the Dry Lake Playa. Adult birds are normally able to avoid construction equipment, however, eggs or young in nests cannot. As stipulated in the COM Plan, mitigation measures to address compliance with the MBTA will include the presence of a biological monitor during the migratory bird-nesting season to minimize the risk that all active nests along the line will not be disturbed. During construction, active nests that could be affected will be identified, and a buffer zone around each nest will be flagged to keep personnel and equipment away from sensitive areas until nests become dormant.

4.3.4.2 Thirtymile Substation

Adult birds are normally able to avoid construction equipment, however, eggs or young in nests cannot. As stipulated in the COM Plan, mitigation measures, including the presence of a biological monitor during the migratory bird-nesting season, will reduce these impacts. During construction, active nests that could be affected will be identified, and a buffer zone around each nest will be flagged to keep personnel and equipment away from sensitive areas.

4.3.5 Threatened and Endangered Species/Special Status Species

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

The Mojave Desert Tortoise is the only federally listed species that is present along the extension of the ROW to the Harry Allen Substation. Tortoise surveys that were conducted in the area during early Summer 2006 revealed a female tortoise carcass and an apparently active burrow. The ROW extension area does not contain designated Critical Habitat for the tortoise.

During construction, tortoises could be crushed in their burrows by heavy equipment. They could also be run over on access roads, especially small juveniles and hatchlings, which are very difficult to see even from a slow-moving vehicle. Mitigation and compensation measures, including limiting access to pre-determined and clearly flagged areas, controlling the speed of vehicles on the ROW, and the presence of tortoise biologists, will help to reduce impacts. While the ROW extension is not located in designated Critical Habitat, tortoise biologists will be present for all construction activities in this area as specified in the BA, BO, and COM Plan. It will be their responsibility to move any tortoises out of the way, to remove tortoises from burrows in construction areas, and to educate all construction personnel regarding the protocol for working in Mojave Desert Tortoise habitat areas.

In addition to the federally listed Mojave Desert Tortoise, there is a limited possibility of impact to the three-corner milkvetch (*Astragalus geyeri* var. *triquetris*), which could potentially be present along the Harry Allen extension. Rare plant surveys conducted along the transmission line route in this area during Spring 2006 resulted in the detection of no sensitive species, with the exception of cacti and yuccas (see Section 4.3.1.1). However, these surveys were conducted during a very dry spring, and plants like the three-corner milkvetch, an annual, did not appear. Prior to ground-disturbing activities, any additional or updated surveys deemed necessary by the BLM, including rare plant surveys would be conducted prior to the initiation of the potentially harmful activities in the area of concern. In the event of a new discovery they will flag off the area and establish a construction restriction buffer.

4.3.5.2 Thirtymile Substation

There are no federally listed threatened or endangered species likely to be affected by construction at the Thirtymile Substation, and rare plant surveys during Spring 2006 did not reveal the presence of any sensitive plants that would be affected by the proposed substation.

4.4 CULTURAL RESOURCES

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

No cultural resource sites were identified within the APE of the ROW extension, therefore impacts are not anticipated.

4.4.2 Thirtymile Substation

Of the 18 cultural resources identified within the APE (see Table 3-1), four are eligible for listing on the NRHP. Once the engineering plans are finalized, a determination as to which sites will be directly affected by the proposed project will be made. To mitigate both direct and indirect impacts to these cultural resources, a Historic Properties Treatment Plan (HPTP) is being developed and will be implemented prior to construction of the substation. These measures will minimize impacts and ensure compliance with Section 106 of the National Historic Preservation Act (NHPA).

4.5 PALEONTOLOGICAL RESOURCES

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

Minimal impacts are expected to any paleontological resources from the construction of the proposed project due to the low paleontological sensitivity within the ROW extension area.

4.5.2 Thirtymile Substation

A paleontological resources treatment plan has been prepared for the proposed project (San Bernardino County Museum 2006) and includes mitigation measures that would address potential impacts to paleontological specimens identified in the intensive pedestrian field inspection which would be conducted prior to construction of the proposed project. These measures include monitoring for paleontological specimens during construction and implementation of appropriate measures (if resources are identified) in order to minimize impacts. The treatment plan is included in the COM Plan for the SWIP – Southern Portion.

4.6 LAND USE, RECREATION, AND ACCESS

This section evaluates the impacts of the two ROW modifications on existing and planned land use, recreational activities, and access. Following is a description of potential land use impacts that could result from the construction and operation of the proposed facilities.

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

The ROW extension to the Harry Allen Substation would be constructed on vacant BLM land and does not conflict with any existing or planned facilities. The extension would be compatible with the Northeast Clark County Land Use Plan, which designates this area as *Heavy Industrial*

and *Open Land*. The BLM bird habitat adjacent to the proposed transmission line would be avoided, and mitigation measures identified to address migratory birds (see Section 4.3.4.1) will reduce any proximity impacts to this small management area. There are no active recreation areas in the immediate vicinity, and additional long-term access will generally be limited to the transmission ROW.

4.6.2 Thirtymile Substation

The Thirtymile Substation and transmission line interconnections would be constructed on vacant BLM land and would permanently displace approximately 81 acres of the 178,716 acre Thirty Mile Spring BLM grazing allotment. While located within the Loneliest Mountain SRMA, there are no existing or planned recreation sites within close proximity to the Thirtymile Substation. Impacts to existing and planned land use and public recreation opportunities from the construction and operation of the Thirtymile Substation would be limited to temporary disruption to traffic and access along Jakes Wash Road and U.S. Highway 50 during construction (see Figure 4). Mitigation measures identified in the COM Plan regarding the use of signage that notifies the public of the timing for construction activities will help reduce any potential conflicts with users, and additional practices outlined during construction and restoration will help minimize damages to resources in this area and provide for public safety.

4.7 VISUAL RESOURCES

The visual assessment focuses on characterizing the impacts resulting from the amount of visual contrast or landscape change that would occur from the introduction of new facilities, as perceived by sensitive viewers, and the consistency of these changes with BLM VRM objectives. The methods used to perform this assessment are consistent with the BLM VRM Handbook-8410.

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

The transmission line extension to the Harry Allen Substation in Dry Lake Valley is within a visual setting that has been significantly modified due to numerous existing transmission lines and substation facilities. Views of this area from Interstate 15 and U.S. Highway 93 range from approximately 1.5 miles and beyond, and the SWIP transmission line will be seen primarily in a back-dropped condition, most often in context with these other facilities. As a result, the new transmission line will cause minimal contrast. Key mitigation measures include the use of dulled steel lattice towers, and non-specular conductors. Based on the contrast analysis, minimal change is expected from the addition of the new transmission line. This change would be consistent with the VRM Class III objective for this area, which requires that the character of the area be partially retained.

4.7.2 Thirtymile Substation

The Thirtymile Substation site and transmission line interconnections are located in proximity to the Falcon-to-Gonder 345kV transmission line and the Gonder-to-Machacek 230kV transmission line. Impacts to sensitive viewers are expected to be minimal. Views from U.S.

Route 50 will be primarily from eastbound traffic, at distances ranging from ½-mile away and farther, in a setting where the facilities should be partially to fully screened by intervening terrain, back-dropped by the Egan Mountains, and viewed in context with the existing 345kV and 230kV lines. Key mitigation measures include the use of non-specular conductors; dulled metal finishes on transmission towers, equipment, and facilities associated with the substation site; and the selective clearing of vegetation associated with temporary use areas, where possible. The substation will be located generally within a BLM Class III area and is immediately adjacent to, and overlapping with, two designated utility corridors that are considered VRM Class IV in the Ely PRMP. The substation will be in conformance with the VRM objectives requiring partial retention of the character of this area while allowing major modification associated with the corridors.

4.8 WILDFIRE MANAGEMENT

This section of the EA evaluates potential effects of the proposed project to wildfire management. Impacts were assessed based on construction activities, including additional access road construction, clearing of vegetation, the type of vegetation located within the affected areas, and the Southern Nevada and Ely BLM District Office guidelines for fire suppression.

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

The majority of the proposed ROW crosses vacant land with sparse vegetation; therefore, a minimal amount of vegetation removal will be required. A new access road would be constructed primarily within the transmission line ROW. While little fuel exists within the area, increases in traffic during construction activities could potentially increase the chance of a human-caused, accidental fire. Long-term or operational impacts to fire management from improved access to the existing road could include human-caused, accidental ignitions from periodic ground maintenance and inspections of the transmission line, or recreational users along the access road. The improved access road could have the potential for use as fire-break lines and help minimize the need to build new breaks in the event of a fire (Ely PRMP, pg. 3.20-8). Mitigation measures and protocols identified in the COM Plan, including fire prevention measures (e.g., restrictions on smoking, no open fires, restrictions on welding and use of spark arresting devices), will reduce the potential for fires during construction. In addition, construction personnel will be trained in fire suppression, and selective vehicles will be equipped with fire suppression tools.

4.8.2 Thirtymile Substation

An existing dirt road will be improved for major access to the area for construction of the Thirtymile Substation and transmission line interconnections. Approximately 77 acres of vegetation will be cleared for the footprint of the substation and approximately 4 acres of additional ground will be permanently disturbed during construction of the substation and transmission line interconnections to the SWIP – Southern Portion and the Falcon-to-Gonder transmission lines. Short-term construction impacts to fire management include an increase in traffic during the construction of the substation, and the use of equipment, which could potentially increase the frequency of human-caused accidental ignitions along the access road

and near the siting area. Long-term or operational impacts and mitigation measures are similar to those previously described for the extension of the ROW to the Harry Allen Substation.

4.9 EARTH RESOURCES

This section evaluates potential impacts from the construction and operation of the proposed extension of the ROW to the Harry Allen Substation and at the Thirtymile Substation to geology, soils, and water resources.

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

4.9.1.1 Geology

No unique or special geological features were identified and no impacts are anticipated.

4.9.1.2 Soils

Soil resources in the area of the ROW to the Harry Allen Substation that may be impacted by the construction of the transmission line are associated primarily with the Dry Lake Playa. While the proposed transmission line crosses only a small portion of the western edge of this playa, the soils in the general vicinity tend to be sandy/silty in composition. Impacts to soils will occur during construction at tower sites, pulling and tensioning sites, and in access development. Curtailing construction during periods of rain, and the use of erosion control mitigation measures, including limiting the areas of disturbance (as possible), and restoration practices described in the COM Plan, would be implemented to minimize the potential for short and long-term impacts to soils.

4.9.1.3 Water Resources

Impacts to ephemeral drainages and washes in this area are expected to be minimal due to the selective location of towers (spanning of drainages), limiting the area of disturbance, and erosion control measures presented in the COM Plan, and effects to groundwater are not anticipated.

Floodplains

Construction and operation of the transmission line in this area will not affect the floodplain. In areas along approximately 2.4 miles of the ROW extension which fall within the 100-year floodplain, transmission structures will be designed to withstand flooding events, and span drainages.

4.9.2 Thirtymile Substation

4.9.2.1 Geology

No unique or special geological features were identified and no impacts are anticipated.

4.9.2.2 Soils

No unique or special soil resources have been identified on the Thirtymile Substation site or the transmission line interconnections. During construction there could be potential erosion from soil runoff into nearby small ephemeral drainages; however, erosion control mitigation measures described in the COM Plan would be implemented as part of the construction, in order to minimize the potential for short-term impacts. The final design and grading of the substation site will be completed in a manner that insures that surface drainage from the substation site will not result in additional erosion or degradation to down-slope areas, and groundwater should remain unaffected.

4.9.2.3 Water Resources

The Thirtymile Substation will be constructed to comply with all local and federal requirements for safety and protection of groundwater. Features such as erosion control and spill prevention mechanisms (e.g., secondary containment basins) will help to prevent or minimize impacts to groundwater. The streambed located along the southwest corner of the substation site will be avoided.

Floodplains

As there are no identified floodplains within the immediate vicinity of the substation site, construction and operation of the substation in this area will not have an affect on any floodplains.

4.10 AIR RESOURCES

Impacts to air quality would primarily be short-term as a result of the construction of the proposed facilities, and operation and maintenance activities associated with the extension of the transmission line to the Harry Allen Substation, and at the Thirtymile Substation site are expected to be minimal. The construction of the facilities would produce two types of air pollution: fugitive dust from soil disturbance and exhaust emissions from construction vehicles and equipment.

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

A construction plan, including a schedule and the number and type of vehicles to be used during construction of the transmission line, is included in the COM Plan. Emissions from construction vehicles are not expected to exceed the air quality standards. Construction/maintenance

activities will comply with the policies identified by Clark County (e.g., Dust Control Permit). Dust and emission-control mitigation measures (including watering roads), mitigation measures limiting disturbance, and restoration and monitoring practices described in the COM Plan will further assist in reducing impacts to air quality along this portion of the alignment.

4.10.2 Thirtymile Substation

Construction/maintenance activities for the Thirtymile Substation and the transmission line interconnections will comply with the policies identified by the BLM and the BAPC. Similar to the ROW extension, dust and emission-control mitigation measures, mitigation limiting disturbance, and restoration and monitoring practices described in the COM Plan will further assist in reducing impacts to air quality during construction at the substation site.

4.11 HAZARDOUS MATERIALS

This section evaluates the potential for impacts related to hazardous materials associated with the construction of proposed facilities, including the transportation of hazardous materials, and vehicle leaks or spills during construction.

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

No hazardous materials would be stored along the ROW extension to the Harry Allen Substation, and therefore the potential for impacts from hazardous materials exists primarily during construction. A spill prevention plan and reference to hazardous material regulations are documented in the COM Plan. During construction of the transmission line, mitigation measures outlined in the COM Plan would be followed to ensure that vehicles will be kept in good working condition and impacts from hazardous materials are minimized.

4.11.2 Thirtymile Substation

While the transformers at the substation will contain oil, it is anticipated that no other hazardous material will be stored on the substation site, and therefore the potential for impacts from hazardous materials exists primarily during construction. The containment would be per federal or local requirements and if applicable the containment would be designed to the Institute of Electrical Electronics Engineers standards (i.e., concrete lined berms around transformer). As described for the extension to the Harry Allen Substation, a spill prevention plan and reference to hazardous material regulations are documented in the COM Plan and similar mitigation measures will be implemented during construction at the substation site.

4.12 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

This section evaluates the potential impacts to socioeconomics and environmental justice from the construction and operation of the proposed project. Both the extension of the ROW to the Harry Allen Substation and the Thirtymile Substation are located in unpopulated areas and no occurrences of disproportionately high percentages of minority or low-income populations exist.

Therefore, no environmental justice impacts would occur from the construction or operation of the transmission line or Thirtymile Substation.

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

During construction of the ROW extension, short-term beneficial impacts, such as increased revenue, could result from construction workers' use of local restaurants and hotels in the North Las Vegas area. The transmission line extension to the Harry Allen Substation will be an unmanned facility, located in an undeveloped area of Clark County, and as such, operation of the transmission line will have minimal effects on Clark County employment, income, or social services.

4.12.2 Thirtymile Substation

During construction of the substation, short-term beneficial impacts, such as increased revenue, could result from construction workers' use of local restaurants and hotels in Ely. The Thirtymile Substation will be an unmanned facility, located in an undeveloped rural area of White Pine County, and as such, operation of the substation will have minimal effects on White Pine County or Ely employment, income, or social services.

4.13 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

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

No ACECs were identified within the BLM Southern Nevada District that would be affected by the extension of the ROW.

4.13.2 Thirtymile Substation

No ACECs were identified within the BLM Ely District that would be affected by the proposed substation.

SECTION 5.0
LEGISLATIVE MODIFICATIONS FOR COYOTE SPRINGS REALIGNMENT

5.1 INTRODUCTION

This section of the EA considers impacts and mitigation associated with the SWIP ROW realignment in the Coyote Springs area that was mandated by Congress in the 2004 LCCRDA legislation.

5.2 AFFECTED ENVIRONMENT

Information on the environment potentially affected by the construction, operation, and maintenance of facilities associated with the realigned portion of the SWIP ROW through the Coyote Spring Valley is discussed in this section. This discussion is organized according to specific resource topics, and is followed by Section 5.3, Environmental Consequences.

5.2.1 Biological Resources

The biological resources along the Coyote Springs Realignment are described below. Information presented in this section was gathered from the previous SWIP EIS, and updated based on current BLM RMPs, PRMPs, ongoing discussions with federal and state agencies, field review and surveys, and from information developed from the BA and the BO that has been prepared for the SWIP – Southern Portion.

5.2.1.1 Vegetation

The vegetation along the entire length of the realignment consists of low shrubs and no trees. The dominant plant association is creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*). Other shrubby species include bladder sage (*Salazaria mexicana*), indigo bush (*Psorothamnus fremontii*), range ratany (*Krameria parvifolia*), Nevada ephedra (*Ephedra nevadensis*), and winterfat (*Krascheninnikovia lanata*). Also present, but less common are spiny menodora (*Menodora spinescens*) and goldenhead (*Acamptopappus shockleyi*). The most common yucca along the realignment is the Mojave yucca (*Yucca schidigera*), with occasional individuals of Joshua tree (*Y. brevifolia*) and banana yucca (*Y. baccata*). Cacti include beavertail cactus (*Opuntia basilaris*), buckhorn cholla (*O. acanthocarpa*), silver cholla (*O. echinocarpa*), barrel cactus (*Ferocactus cylindraceus*), and Engelmann hedgehog (*Echinocereus engelmannii*). This area also supports a diverse annual flora that appears in the spring, following wet winters.

All plants of the cactus family cactaceae and all plants of the genus yucca are protected under 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).

5.2.1.2 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 formerly 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 pre-construction 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. One occurrence of Sahara mustard was documented in the area of the Coyote Springs realignment. 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 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 tectorum*), and Chilean chess (*Bromus trinii*) 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.

5.2.1.3 Wildlife

Wildlife within the realignment area includes mammals, birds, amphibians, and reptiles that are characteristic of warm, arid, creosote bush-dominated landscapes. Small, nocturnal rodent and bat species are most common in the project area. Large mammals such as the Mule Deer (*Odocoileus hemionus*) and Mountain Lion (*Puma concolor*) are unlikely to be regular residents of the area. Other small mammals that may be locally abundant within the Coyote Springs Realignment area include White-tailed Antelope Squirrel (*Ammospermophilus leucurus*), and Jackrabbits (Lepus californicus). Small rodent populations are probably dominated by Heteromyids, a group that is highly adapted to living in hot, dry climates. Kangaroo Rats likely to be present include Merriam's Kangaroo Rat (*Dipodomys merriami*) and Desert Kangaroo Rat (*D. deserti*). Pocket Mice likely to be present include the Desert Pocket Mouse (*Chaetodipus*

penicillatus), Little Pocket Mouse (*Perognathus longimembris*), and Longtail Pocket Mouse (*Chaetodipus formosus*).

Other small rodents likely to be present include the Cactus Mouse (*Peromyscus eremicus*), Western Harvest Mouse (*Reithrodontomys megalotis*), and Desert Woodrat (*Neotoma lepida*). Several species of bats of the genus *Myotis* probably occupy the area as permanent residents, summer visitors, winter visitors, or transients. Other bats present include the Pallid Bat (*Antrozous pallidus*), Big Brown Bat (*Eptesicus fuscus*), Western Pipistrelle (*Pipistrellus hesperus*), and Western Big-eared Bat (*Corynorhinus townsendii*).

Creosote bush-dominated landscapes are typically depauperate in bird species compared with most other vegetative communities. Birds likely to be found and/or nest within the realignment area include, the Gambel's Quail (*Callipepla gambelii*), Red-tailed Hawk (*Buteo jamaicensis*), Mourning Dove (*Zenaida macroura*), Greater Roadrunner (*Geococcyx californianus*), Lesser Nighthawk (*Chordeiles acutipennis*), Ash-throated Flycatcher (*Myiarchyus cinerascens*), and Black-throated Sparrow (*Amphispiza bilineata*).

The Great Basin Spadefoot (*Spea intermontanus*) is the only amphibian likely to be found in the realignment area and, then, only after periods of heavy summer rainfall. Approximately 17 species of lizards could potentially occur in this area, depending on substrates available. For example, in rugged, rocky areas the Common Chuckwalla (*Sauromalus ater*) could occur. Areas with relatively fine, sandy soil may be frequented by the Desert Iguana (*Dipsosaurus dorsalis*), while the Banded Gila Monster (Heloderma suspectum cinctum) shares similar habitats to those of the Mojave Desert Tortoise. Habitat generalists such as the Side-blotched Lizard (*Uta stansburiana*) and Western Whiptail (*Cnemidophorus tigris*) are likely to be found on a variety of substrates.

Snake species within the realignment area could total approximately 15, depending on available substrates. The Western Shovel-nosed Snake (*Chionactis occipitalis*), for example, is only likely to be present in areas with fine, sandy soil while the Lyre Snake (*Trimorphodon biscutatus*) and Speckled Rattlesnake (*Crotalus mitchellii*) are most likely to be found on rocky slopes. Other common species could include, but are not limited to, the Gopher Snake (*Pituophis catenifer*), Coachwhip (*Masticophis flagellum*), Glossy Snake (*Arizona elegans*), Night Snake (*Hypsiglena torquata*), and Mojave Rattlesnake (*Crotalus scutulatus*).

5.2.1.4 Migratory Birds

The 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 in the realignment area previously described are protected by the Act.

5.2.1.5 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.

No HMAs have been established by the Ely or Southern Nevada District Offices that are affected by the Coyote Springs Realignment.

5.2.1.6 Threatened and Endangered Species/Special Status Species

The Mojave Desert Tortoise is the only federally listed wildlife species known to be present in the realignment area. Tortoise surveys that were conducted in the area during early Summer 2006, revealed the presence of tortoises along the realignment. Approximately 16 miles of the realignment cross USFWS designated Critical Habitat. Rare plant surveys conducted in the project area during the spring of 2006 did not reveal the presence of any state or federally listed plant species, although the year was exceptionally dry, and some annuals, such as the three-corner milkvetch (*Astragalus geyeri* var. *triquetris*), only occur after heavy rainfall. This species has not previously been recorded along the realignment but could potentially be present after a wet season.

5.2.2 Cultural Resources

Cultural Resource surveys conducted for the Coyote Springs Realignment included the 200 foot wide ROW and proposed access roads (Crews et al., 2007). For the purposes of this cultural study, the transmission line ROW and the associated access roads are considered the APE. These studies identified a total of 58 sites that are located within the APE of the realignment. Of these, 12 are recommended as eligible for listing on the NRHP and for 4 the eligibility for NRHP listing is unknown at this time, and further investigations are necessary to determine their eligibility. These sites are summarized in Table 5-1.

TABLE 5-1
CULTURAL RESOURCE SITES IN THE COYOTE SPRINGS AREA

	Smithsonian Number	7.5-minute Quad	Site Type	NRHP Eligibility Recommendation
1	26LN5019	Wildcat Wash NW	lithic scatter with feature	not eligible
2	26LN5020	Wildcat Wash NW	lithic scatter with features	eligible
3	26LN5021	Wildcat Wash NW	artifact scatter with features	eligible
4	26LN5022	Wildcat Wash NW	lithic scatter with feature	unknown, more information needed
5	26LN5023	Wildcat Wash NW	lithic scatter with feature	eligible
6	26LN5024	Wildcat Wash NW	lithic scatter with tools	not eligible

TABLE 5-1
CULTURAL RESOURCE SITES IN THE COYOTE SPRINGS AREA

	Smithsonian Number	7.5-minute Quad	Site Type	NRHP Eligibility Recommendation
7	26LN5025	Wildcat Wash NW	lithic scatter with features	unknown, more information needed
8	26LN5026	Wildcat Wash NW	lithic scatter with tool/ historic trash scatter	not eligible
9	26LN5027	Wildcat Wash NW	artifact scatter	eligible
10	26LN5028	Wildcat Wash NW	lithic scatter	not eligible
11	26LN5029	Wildcat Wash NW	artifact scatter with features and historic trash	eligible
12	26LN5030	Wildcat Wash NW	lithic scatter with tools	not eligible
13	26LN5032	Lower Pahranagat Lake SE	lithic scatter with tools	not eligible
14	26LN5036	Lower Pahranagat Lake SE	lithic scatter	not eligible
15	26LN5037	Lower Pahranagat Lake SE	lithic scatter	not eligible
16	26LN5038	Lower Pahranagat Lake SE	lithic scatter	not eligible
17	26LN5039	Lower Pahranagat Lake SE	lithic scatter	not eligible
18	26LN5040	Lower Pahranagat Lake SE	lithic scatter	not eligible
19	26LN5041	Lower Pahranagat Lake SE	lithic scatter	not eligible
20	26LN5042	Lower Pahranagat Lake SE	small artifact scatter with rock alignments	unknown, more information needed
21	26LN5043	Lower Pahranagat Lake SE	lithic scatter with tools	not eligible
22	26LN5044	Lower Pahranagat Lake SE	lithic scatter	not eligible
23	26LN5045	Lower Pahranagat Lake SE	lithic scatter with tool	not eligible
24	26LN5046	Lower Pahranagat Lake SE	lithic scatter	not eligible
25	26LN5047	Lower Pahranagat Lake SE	lithic scatter	not eligible
26	26LN5048	Lower Pahranagat Lake SE	lithic scatter	not eligible
27	26LN5049	Lower Pahranagat Lake SE	lithic scatter	not eligible
28	26LN5050	Delamar 3 SW	lithic scatter with rock alignments	eligible
29	26LN5051	Delamar 3 SW	lithic scatter	not eligible
30	26LN5052	Delamar 3 SW	lithic scatter	not eligible
31	26LN5053	Delamar 3 SW	lithic scatter	not eligible
32	26LN5054	Delamar 3 SW	lithic scatter	not eligible
33	26LN5055	Delamar 3 SW	lithic scatter	not eligible
34	26LN5056	Delamar 3 SW	lithic scatter	not eligible
35	26LN5057	Lower Pahranagat Lake SW	lithic scatter	not eligible
36	26LN5058	Delamar 3 SW	lithic scatter	not eligible
37	26LN5075	Wildcat Wash NW	artifact scatter with features	eligible
38	26LN5076	Wildcat Wash NW	lithic scatter with features	eligible
39	26LN5077	Wildcat Wash NW	lithic scatter with features	eligible
40	26LN5078	Wildcat Wash NW	lithic scatter with tools	eligible
41	26LN5079	Wildcat Wash NW	lithic scatter with tools	not eligible
42	26LN5080	Wildcat Wash NW	artifact scatter with features	eligible
43	26LN5081	Wildcat Wash NW	artifact scatter with feature	eligible
44	26LN5082	Delamar 3 SW	lithic scatter with tools	not eligible
45	26LN5083	Delamar 3 SW	lithic scatter with tools	not eligible
46	26LN5084	Delamar 3 SW	lithic scatter with tool	not eligible
47	26LN5085	Delamar 3 SW	lithic scatter with historic/modern rock cairn of unknown function	not eligible
48	26LN5090	Wildcat Wash NW	lithic scatter	not eligible
49	26LN5091	Wildcat Wash NW	lithic scatter	not eligible
50	26LN5092	Wildcat Wash NW	lithic scatter	not eligible
51	26LN5347	Wildcat Wash NW	lithic scatter	not eligible

TABLE 5-1 CULTURAL RESOURCE SITES IN THE COYOTE SPRINGS AREA				
	Smithsonian Number	**7.5-minute Quad**	**Site Type**	**NRHP Eligibility Recommendation**
52	26LN5348	Wildcat Wash NW	lithic scatter	not eligible
53	26LN5349	Wildcat Wash NW	lithic scatter	not eligible
54	26LN5350	Wildcat Wash NW	lithic scatter	not eligible
55	26LN5351	Wildcat Wash NW	lithic scatter with tools	unknown, more information needed
56	26LN5352	Wildcat Wash NW	lithic scatter with tools	not eligible
57	26LN5353	Wildcat Wash NW	phehistoric rock alignment	not eligible
58	26LN5378	Wildcat Wash NW	historic trash scatter	not eligible

5.2.3 Paleontological Resources

The San Bernardino County Museum conducted a paleontological resource study covering the alignment in the Coyote Springs Realignment area (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 Project. The Museum concluded that this portion of the project is located in an area with an undetermined paleontological sensitivity, and recommended that an intensive pedestrian field inspection be conducted prior to construction.

5.2.4 Land Use, Recreation, and Access

This section of the EA documents the existing and planned land use, recreation, and access for the Coyote Springs Realignment. Existing land use data was gathered using aerial photography and field reconnaissance, and through review of land use plans. Planned land use was gathered using existing BLM resource management plans, other BLM documents for projects located in the project areas, and specific development plans. A description of the project setting, ownership/jurisdiction and land use within the corridor area follows.

5.2.4.1 Project Setting

The Coyote Springs Realignment begins approximately 50 miles north of Las Vegas and continues north for approximately 25 miles. The realignment is located in Coyote Spring Valley, west of U.S. Highway 93 and east of the Desert National Wildlife Range (DNWR) in Lincoln and Clark Counties. The realigned transmission line would be located in the utility corridor that was mandated by Congress in the 2004 LCCRDA. This area of the eastern Mojave Desert is generally defined by rolling bajadas that transition into the Sheep Range to the west.

5.2.4.2 Jurisdiction

The extension of the ROW is on BLM land administered by the Southern Nevada District Office in Clark County and by the BLM Ely District in Lincoln County. In Clark County this area is managed under the Las Vegas RMP. The area of the realignment in Lincoln County, while currently managed under the Caliente MFP, will be managed in the future under the Ely RMP. Smaller privately held parcels are found east of the realignment.

5.2.4.3 Existing Land Use

The study area is located predominately on undeveloped desert land (see Figure 8). The DNWR is located to the west of the transmission line and was established for the purpose of perpetuating the Desert Bighorn Sheep and is important habitat for the Mojave Desert Tortoise and other sensitive plants and animals. The DNWR is the largest wildlife refuge within the lower 48 states and, although it is not currently designated wilderness, it is proposed for wilderness designation and is being managed as wilderness (USFWS 2006).

For the length of the Coyote Springs Realignment, U.S. Highway 93 runs parallel to and just east of the realigned ROW, at a distance of up to approximately 0.9 mile away. In the southern portion of the study area, the realignment crosses U.S. Highway 93 before continuing south in the ROW originally granted for the SWIP.

In the central portion of the Coyote Springs Realignment area, immediately east of the transmission line alignment and Highway 93, the Coyote Springs master-planned community development is under construction. This development will include single and multi-family residential areas, commercial and light industrial areas, multiple golf courses, hotels and resorts, open space, and a resource management area. As presently planned, approximately 21,454 acres would be developed over the course of 40 years, including 7,548 acres that will be dedicated as the Coyote Springs Resource Management Area.

The Western Elite Landfill is located on a private in-holding in the central portion of this area, on the west side of U.S. Highway 93, between the highway and the SWIP realignment. A quarry operation and residence also are located on the site. A dirt road on the western side of the property is used as a runway for small aircraft. This runway parallels the transmission line realignment.

An existing Lincoln County Power District 69kV transmission line parallels the west side of U.S. Highway 93 throughout the study area. This 69kV line is crossed by the SWIP realignment in the southern portion of the study area (at the U.S. Highway 93 crossing) and roughly parallels the realignment north through the study area, at distances up to approximately 0.9 mile away.

5.2.4.4 Planned Land Use

The Coyote Springs Realignment is located within the SWIP designated utility corridor. The BLM authorizes ROWs on public lands for a variety of uses, including roads, electrical transmission lines, telephone lines, sewer lines, potable water lines, natural gas pipelines, communication sites, electrical power plants and substations, and related power distribution lines (Las Vegas RMP, pg. 3-57). In addition, Coyote Springs has submitted an application to the BLM for future detention basins within the utility corridor area. Authorizations for the use of designated ROWs are processed on a case-by-case basis.

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 as *Open Land* and *Major Development Project*. *Open Land* allows for deterring development and may contain uses such as public services and facilities, grazing, and some recreational uses. The Coyote Springs master-planned community is designated as a *Major Development Project.* Zoning

within Coyote Springs master-planned community development will consist of Rural Open Land, Medium Density Residential and General Commercial.

5.2.4.5 Recreation

The Delamar Mountain Wilderness is located east of the Coyote Springs Realignment and east of Highway 93 and provides recreational opportunities such as hiking, rock scrambling, climbing, hunting, and horseback riding. The Wilderness (see Figure 8) is located approximately 0.75 to 2.0 miles from the realigned transmission line and is accessible by U.S. Highway 93 and Kane Springs Road (U.S. Department of the Interior 2006).

As previously noted, the primary purpose of the DNWR, which is located on the west side of U.S. Highway 93 and the Coyote Springs Realignment, is to perpetuate the Desert Bighorn Sheep, and other sensitive wildlife and plants, other recreational opportunities such as camping, hiking, backpacking, horseback riding, hunting and bird watching are available. This refuge is accessible from U.S. Highway 93 via Sawmill Road, located approximately 1 mile south of the realignment area (USFWS 2006).

5.2.5 Visual Resources

The landscape in this area is moderately flat to slightly undulating, with relatively low vegetation diversity, creating little visual interest or variation in the valley area crossed by the transmission line (Class C scenery, landscapes with minimal diversity or interest). The DNWR (located to the west) exhibits greater variety in terrain and topographic relief. Sensitive viewers in this area include residences (a single existing residence on the Western Elite Landfill property and future residents associated with the Coyote Springs Development); travelway viewers (U.S. Highway 93, Highway 168, and Kane Springs and Saw Mill roads); and recreational users (historic rest area and potentially dispersed users of the DNWR and Delamar Wilderness). In the Southern Nevada District area the transmission line is in the SWIP designated utility corridor within an area that has been classified as VRM Class III (partial retention of the existing character of the landscape). In the Ely District area (Caliente MFP), the transmission line is also in the SWIP designated utility corridor, within a VRM Class IV area (allowing for major modification). Several existing modifications also occur in this area, including U.S. Highway 93, electrical transmission (69kV) and fiber optic facilities, the Western Elite Landfill, and ongoing disturbance associated with the planned Coyote Springs development.

5.2.6 Wildfire Management

The Coyote Springs Realignment is located in Lincoln and Clark counties, Nevada. Both the Ely and Southern Nevada BLM District Offices have fire management plans (*Ely District Managed Natural and Prescribed Fire Plan* and *Las Vegas Fire Management Action Plan*, respectively). The District Office resource management plans and fire management plans were reviewed to identify potential impacts from the Coyote Springs realignment. Potential impacts from the realignment would be influenced by additional access road construction, the type of vegetation located within the project area, and the guidelines for fire suppression within the project area.

Within the Ely District area, the realignment is located within a salt desert shrub vegetation community and generally has low fuel loads. Typical fire behavior is characterized by winds needed to carry fire in sparsely vegetated areas, natural barriers tending to inhibit fire sizes, and the rapid spread of fire generally requiring wind. The realignment is located in the Mojave FMU (Ely PRMP) and currently is managed as a full fire suppression area. The nearest wildland-urban interface community identified in the Ely PRMP is Alamo, located approximately 13 miles northwest of the realignment . However, the proposed Coyote Springs development is located east of U.S. Highway 93 and the proposed transmission line realignment.

The southern portion of the realignment is associated with four separate FMUs identified in the *Fire Management Action Plan* of the BLM. These consist of the *Desert Low Elevation Shrub, Tortoise ACEC North, Tortoise Moderate Density, and Virgin-Muddy-Meadow* FMUs. The *Desert Low Elevation Shrub* is located on the DNWR, west of the realignment. The *Tortoise ACEC North* has an annual target goal of less than 10 acres burned for 90 percent of the burn time. The decadal goal is 250 acres or less, with no prescribed fires within this FMU. The *Tortoise Moderate Density* has an annual target goal of less than 15 acres burned for 90 percent of the burn time, and the decadal goal for this FMU is 500 acres or less, with no prescribed fires. The *Virgin-Muddy-Meadow* has an annual target goal of less than 25 acres for 90 percent of the burn time, and the decadal goal is 250 acres or less, with only salt cedar as prescribed burns (Marfil 2006).

5.2.7 Wilderness and Wild and Scenic Rivers

The Delamar Mountain Wilderness is located east of the realignment and U.S. Highway 93 and provides recreational opportunities such as hiking, rock scrambling, climbing, hunting, and horseback riding. The Wilderness is located approximately 0.75 to 2.0 miles from the realignment and is accessible by Highway 93 and Kane Springs Road (U.S. Department of the Interior 2006). There are no wild and scenic rivers within the project area. The DNWR, located to the west of the realignment, includes portions that are proposed for Wilderness designation and are currently being managed as Wilderness.

5.2.8 Prime and Unique Farmland

There is no Prime and Unique Farmland located within the realignment area.

5.2.9 Earth Resources

This section of the EA includes a description of the geology, soils and water resources associated with the realignment. Information presented in this section is based on previous studies conducted for the SWIP EIS, in association with information from various federal and state agencies and general field review.

5.2.9.1 Geology

The realignment is located in Coyote Spring Valley, generally located between the Sheep Range to the west and the Meadow Valley Range in the east. The general geology of Coyote

Spring Valley comprises four major geologic units: alluvium, Tertiary valley-fill deposits, Tertiary volcanics, and Paleozoic carbonate rocks. The alluvium occurs over the valley floor and comprises interbedded gravels, sand, silt and clay. The maximum thickness of alluvium is not known, but thicknesses of 600 to 850 feet have been penetrated by U.S. Geological Survey and U.S. Air Force test wells.

5.2.9.2 Soils

Soils within the Coyote Springs Realignment are typical desert soils (Entisols and Aridisols). These soils 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. There is also a potential for localized landslides on the steep slopes of the upland areas.

5.2.9.3 Water Resources

There are no perennial surface water bodies or streams within Coyote Spring Valley. Surface water occurs as ephemeral flow in streambeds that drain the upland areas or as temporary ponding of runoff areas. The realignment is located within the Coyote Spring Valley Groundwater Basin in the Lower Colorado River Basin Hydrographic Region.

Floodplains

FEMA has not identified any 100-year floodplains within Clark County that would be crossed by the realignment, and does not have floodplain information available for Lincoln County. Flooding, however, is a recurrent problem over most of the valley floor (both sides of Highway 93), and severe flash floods do occur infrequently in both the Pahranagat Wash and Kane Springs Wash areas.

5.2.10 Air Resources

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

5.2.10.1 Federal

The 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 attainment or nonattainment are described below.

5.2.10.2 State

The Nevada Department of Environmental Protection's BAPC administers the surface area disturbance permitting for Lincoln 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 SAD permit application, a dust control plan must also be prepared and submitted with the application (Air Sciences Inc. 2007).

5.2.10.3 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 acres; 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 air quality status, regulations and requirements specific to the Coyote Springs realignment are as follows. The realignment is located within Clark and Lincoln Counties in Hydrographic Basin 210. The portion of this basin located in Clark County has a federal designation of attainment status for all pollutants. The Clark County Department of Air Quality and Environmental Management manages dust control and emissions within the Clark County portion of the realignment through issuance of a dust permit. The portion of the basin located within Lincoln County has a federal designation of attainment status for all pollutants. The BAPC manages dust control within Lincoln County through a Class II Air Quality Operating Permit.

5.2.11 Hazardous Materials

The proposed Coyote Springs Realignment would occur on BLM land administered by the Southern Nevada and Ely District Offices. Information regarding hazardous materials was obtained from each of the respective office RMPs/PRMPs in characterizing the realignment area.

As a part of the regulated community, 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 regulation as part of the lease or grant terms and conditions. The Las Vegas RMP specifically requires that “all non-interior groups whose activities are on BLM managed lands and facilities will be held responsible for compliance with federal, state, interstate, and local waste management requirements.” No hazardous material sites in the realignment area have been identified.

5.2.12 Socioeconomics and Environmental Justice

This section describes the social characteristics of the study area. The current status and trends for population and economic factors were evaluated and are the basis for socioeconomic environmental consequences for the realignment in the Coyote Springs area as described below.

5.2.12.1 Socioeconomics

The ROW realignment occurs in Clark and Lincoln counties. Clark County's population in 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. Total employment in 2000 totaled 637,339, with 4.2 percent of the work force unemployed. The estimated median household income for Clark County in 2004 was $50,463. Lincoln County's population in the 2000 census was 4,165. Total employment in 2000 was 1,538 and the median household income was $31,979.

The Coyote Springs master-planned community development is under construction and is expected to be approximately 21,454 acres (developed over 40 years). This development will include single and multi-family residential areas, commercial and light industrial areas, multiple golf courses, hotels and resorts, open space and a resource management area.

5.2.12.2 Environmental Justice

As described in Section 3.13, all Federal actions must address and identify, 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 realignment is in an area that is relatively unpopulated at this time (with the exception of the existing private residence in association with the Western Elite Landfill), and plans for the area (Coyote Springs Development) do not suggest the future presence of a high number of low-income groups.

5.2.13 Areas of Critical Environmental Concern

The ROW realignment crosses approximately 1 mile of the Coyote Springs ACEC (see Figure 8), which is designated for the protection of the Mojave Desert Tortoise. The realignment also crosses approximately 16 miles of USFWS designated Critical Desert Tortoise Habitat.

5.3 ENVIRONMENTAL CONSEQUENCES

Section 5.3 addresses the environmental consequences (effects) associated with the realignment in Coyote Spring Valley. Many of the mitigation measures presented in this EA are included in the original SWIP EIS, ROD, and ROW Grants. Additional mitigation measures have been proposed by Great Basin or requested or required by the BLM, USFWS and other resource agencies, in connection with the preparation of this EA and the BA, BO, and COM Plan. All of the mitigation measures from these various sources have been incorporated in the COM Plan, and compliance with that plan would be included as an enforceable stipulation in the amended ROW grant, just as it is in the original SWIP ROW grant.

5.3.1 Biological Resources

Impacts to biological resources included consideration of the effects to vegetation, wildlife, and threatened and endangered species. Following is a discussion of impacts associated with the realignment, including proposed mitigation measures.

5.3.1.1 Vegetation

Approximately 237 acres will be disturbed by the construction of the SWIP in the realignment area. Approximately 134 acres of the total disturbance area will be temporary, including batch plants, tower construction areas, and pulling and tensioning sites. The remaining 103 acres of permanent disturbance are primarily associated with access roads. The vegetation that will be affected is primarily creosote bush and white bursage, with scattered individual Mojave yucca populations and several species of cacti. As identified in the COM Plan, cacti and yucca will be salvaged and replanted off of impact areas (access roads, tower pad sites, etc.), for later replacement in the ROW area and near tower sites, and areas of temporary disturbance will be restored in accordance with the COM Plan.

5.3.1.2 Noxious Weeds and Invasive Species

The introduction and spread of invasive and nonnative plant species (including noxious weeds) can contribute to the loss of rangeland productivity, increased soil erosion, reduced species and structural diversity, loss of wildlife habitat, and, in some instances, may pose a threat to human health and welfare. The Carlson-Foley Act (Public Law 90-583) and the Federal Noxious Weed Act (Public Law 93-629) direct weed control on public land. Executive Order 13112, Invasive Species, was authorized to prevent the introduction of invasive species, provide for their control, and to minimize the impacts caused by these species. NRS 555, Control of Insects, Pests, and Noxious Weeds, provides information regarding the designation and eradication of, and inspection for, noxious weeds within the state of Nevada (Ely PRMP).

Construction of the Coyote Springs Realignment will require the construction of new access roads, and result in disturbance at tower pad sites and pulling and tensioning areas. Berms created by access road construction can represent disturbed soils, which may provide suitable habitat for noxious weeds including Sahara mustard and salt cedar and invasive species. Construction activity around tower pads and in pulling and tensioning areas, including movement of heavy equipment and light trucks may also disturb soil and provide habitat for noxious weeds and invasive species. Seeds of noxious weeds and invasive species also may be present in the seed bank and soil disturbance can have the effect of “releasing” these seeds possibly leading to local infestations. There also is the potential for weeds to be introduced into the project area by construction vehicles.

A comprehensive Noxious Weed Management Plan (part of the COM Plan) has been developed with the goal of keeping the ROW noxious weed free. Adherence to the specific weed control mitigation measures in this plan, including measures as identified in the BLM Las Vegas Noxious Weed Plan will minimize the introduction and spread of noxious weeds during and following construction. Early detection and rapid response have been important considerations in the development of this plan which includes (1) identification of problem areas, (2) preventative measures that will be implemented to prevent the spread of these and other

noxious weeds during construction, (3) treatment methods during construction and post-construction, and (4) reclamation and post-construction monitoring. Included in this plan are specific measures that address the eradication of existing noxious weed populations, measures to minimize the potential for the spread of noxious weeds and invasive species through off-site power washing of equipment/vehicles and on-site cleaning of equipment/vehicles with compressed air, and the use of weed free materials during restoration (e.g., hay or straw).

In addition, as a part of the ROW Preparation, Rehabilitation, and Restoration Plan (included in the COM Plan), reseeding practices and seeding mixtures to be used in areas of temporary disturbance will be coordinated with a BLM specialist (e.g., botanist, range management specialist, or soil scientist designated by the BLM Authorized Officer) in order to determine the source type and quantity of seed mixtures and seeding locations. In this regard, mixtures that discourage the establishment of invasive and noxious weeds will be considered, as appropriate.

5.3.1.3 Wildlife

There will be some mortality of small vertebrate species, and general wildlife habitat quality will be degraded. Ground-disturbing activities will alter the quality of wildlife habitat in the short-term. Some individuals of small, fossorial species such as Pocket Mice and Kangaroo Rats will likely be crushed in their burrows by heavy equipment. Similarly, snakes, lizards, and other diurnal forms may be hit on access roads or killed by road building equipment. Potential impacts from the operation of the transmission line may include an increase in hunting perches for avian predators. Mitigation measures, including limiting access to areas previously identified and clearly flagged, restoration practices, and speed limit restrictions on the ROW, will assist in reducing impacts to wildlife.

5.3.1.4 Migratory Bird Treaty Act

Construction along the Coyote Springs Realignment could potentially result in the loss of bird nests, eggs, or young. Adult birds are normally able to avoid construction equipment, however, eggs or young in nests cannot. As stipulated in the COM Plan, to address compliance with the MBTA mitigation measures will include the presence of a biological monitor during the migratory bird-nesting season, assuring that all active nests along the line will not be disturbed. During construction, active nests that could be affected will be identified, and a buffer zone around each nest will be flagged to keep personnel and equipment away from sensitive areas until nests become dormant.

5.3.1.5 Threatened and Endangered Species/Special Status Species

The Mojave Desert Tortoise is the only federally listed species that is present along the realignment in Coyote Spring Valley. During construction, tortoises could be crushed in their burrows by heavy equipment. They also could be run over on access roads, especially small juveniles and hatchlings, which are very difficult to see even from a slow-moving vehicle. Mitigation and compensation measures identified in the BA, BO, and the COM Plan, including limiting access to pre-determined and clearly flagged areas, controlling the speed of vehicles on the ROW, and the presence of tortoise biologists, will help to reduce impacts. Tortoise biologists will be present for all construction activities in this area. It will be their responsibility to move

tortoises out of the way, to remove tortoises from burrows in construction areas, and to educate all construction personnel regarding the protocol for working in Mojave Desert Tortoise habitat areas.

In addition to the federally listed Desert Tortoise, as previously mentioned, there is a limited possibility of impact to the three-corner milkvetch (*Astragalus geyeri* var. *triquetris*) and the Las Vegas buckwheat (*Eriogonum Corymbosum var. nilesii*), which could potentially be present along the realignment, although recent surveys did not identify any populations.

Prior to ground-disturbing activities, in areas specified by the BLM project manager, a biological monitor will survey and inspect the area for rare plants. In the event of a new discovery they will flag off the area and establish a construction restriction buffer.

5.3.2 Cultural Resources

Of the 58 cultural resources identified within the APE (see Table 5-1), 12 are eligible for NRHP listing. Once the engineering plans are finalized, a determination as to which sites will be directly affected by the proposed project will be made. To mitigate both direct and indirect impacts to these cultural resources, a HPTP is being developed and will be implemented prior to construction of the transmission line in this area.

5.3.3 Paleontological Resources

A paleontological resources treatment plan has been prepared for the proposed project (San Bernardino County Museum 2006) and includes mitigation measures that would address potential impacts to paleontological specimens prior to, and during construction of the proposed project, such as monitoring for paleontological specimens. If resources are identified in the intensive pedestrian field inspection, which would be conducted prior to construction, appropriate measures would be implemented in order to minimize impacts. The treatment plan will be included as an appendix to the COM Plan.

5.3.4 Land Use, Recreation, and Access

The shift of the SWIP alignment in the Coyote Springs area was mandated by Congress in the LCCRDA in order to avoid and minimize potential conflicts with the development of private land on the east side of U.S. Highway 93. This land had previously been transferred by the BLM into private ownership, subject to a reservation of the BLM utility corridor. Following is a description of potential impacts to existing and planned land use, recreational activities, and access that could result from the construction and operation of the transmission line in the realigned location.

The transmission line would be constructed within an approved designated corridor on BLM lands. Approximately 103 acres of land would be permanently displaced by access roads and structure locations. The transmission line has been located to avoid private land, and areas crossed by the transmission line are undeveloped, therefore no direct land use impacts are anticipated.

Planned land use impacts are expected to be minimal, because the transmission line would be located within the SWIP designated utility corridor. The planned Coyote Springs detention basins are being designed to accommodate existing and planned utilities within the designated utility corridor. The transmission line does not conflict with any recreation areas, however, there is a potential for increased off-road and dispersed access to the DNWR from the construction of new access and maintenance roads. Potential increased off-road access will be limited by closing and reclaiming construction roads not needed for maintenance in key locations, and through the use of locking gates or other barriers, to the extent practicable, as described in the COM Plan. No increase in access to the Delamar Mountain Wilderness is expected from construction of new access for the SWIP – Southern Portion in this area because the Wilderness is located east of U.S. Highway 93, on the opposite side of the highway from the transmission facilities.

5.3.5 Visual Resources

The realignment is within a congressionally designated utility corridor and generally parallels an existing 69kV transmission line located to the east of the proposed project, which is visible primarily in the foreground from U.S. Highway 93. In this area the proposed transmission line will be located to the west of, and behind, the 69kV line, and will be partially to fully back-dropped from the majority of transportation, recreation, and residential views with the exception of the crossing of US Highway 93 north of Saw Mill Road. Key mitigation measures include the use of dulled steel lattice structures and non-specular conductors. The current BLM VRM designations for this area are Class III (partially retain the existing character of the landscape) in Clark County, and Class IV (allowing for major modifications) in Lincoln County. In the future, portions of the alignment in Lincoln County will continue to be located in Class IV (allowing for major modifications) as designated in the Ely PRMP. Based on the modified setting (e.g., existing utilities, landfill), the local viewing conditions, and the implementation of the proposed mitigation measures as specified in the COM Plan, the new location of the transmission line (within a designated utility corridor) will be in conformance with these objectives.

5.3.6 Wildfire Management

This section of the EA evaluates the effects of the realignment to wildfire management. Impacts were assessed based on construction activities, the type of vegetation located within the affected areas, the potential for fires associated with future use in this area, and the Southern Nevada and Ely BLM District respective guidelines, for fire suppression.

Approximately 36 miles of access roads will be constructed as part of the realignment, including the construction of spur roads from existing access roads and U.S. Highway 93 to tower locations, and construction of access along the proposed realignment. Short-term construction impacts to fire management include an increase in traffic during the construction of the proposed transmission line, which could potentially increase the frequency of human-caused accidental ignitions along the access road and the ROW. Long-term or operational impacts from new access could occur from human-caused, accidental ignitions from periodic ground maintenance and inspections of the transmission line, or recreational users along the access roads.

Mitigation measures and protocols identified in the COM Plan, including fire prevention measures as outlined in Section 4.8 of this EA, will reduce the potential for fires during construction. In addition, public access to new roads along the realignment will be controlled by closing and reclaiming construction roads not needed for operation and maintenance as approved by BLM in consultation with the Project Proponent, and through the use of locking gates or other barriers, to the extent practicable, as also prescribed in the COM Plan. Low fuel loads along the realignment also decrease the potential for accidental ignitions in this area. Although the realignment is located to the west of the proposed Coyote Springs development, these low fuel loads and separation of the development and transmission line by U.S. Highway 93 minimize the potential for the spread of wildfire to this area, unless wind is present.

5.3.7 Earth Resources

This section evaluates potential impacts from the construction and operation of the transmission line in the realigned location based on geology, soils, and water resources.

5.3.7.1 Geology

There are no unique or special geological features in the area of the realignment and no impacts were anticipated.

5.3.7.2 Soils

There are no unique or special soil resources in the area of the realignment. Impacts to soils may occur as erosion into drainages during construction at tower sites, pulling and tensioning sites, and in access development. Curtailing construction during periods of rain, and the use of erosion control mitigation measures including limiting the areas of disturbance, and restoration practices as described in the COM Plan would be implemented to minimize the potential for short- and long-term impacts to soils.

5.3.7.3 Water Resources

Impacts to ephemeral drainages and washes in this area are expected to be reduced based on the selective location of towers (spanning of drainages), limiting the area of disturbance, and erosion control and reclamation measures presented in the COM Plan. Impacts to groundwater are not anticipated.

Floodplains

Although there are no designated floodplains along the realignment, tower structures will be placed to span ephemeral washes/drainages to avoid damage to towers from potential flooding events that may occur in this area.

5.3.8 Air Resources

Impacts to air quality would primarily be short-term as a result of the construction of the proposed facilities and operation and maintenance activities associated with the realignment are expected to be minimal. The construction of the facilities would produce two types of air pollution: fugitive dust from soil disturbance and exhaust emissions from construction vehicles and equipment.

A construction plan, including a schedule and the number and type of vehicles to be used during construction of the transmission line, is included in the COM Plan. Emissions from construction vehicles are not expected to exceed the air quality standards. Construction/maintenance activities will comply with the policies identified by Clark County (e.g., Dust Control Permit), the BLM and the BAPC. Dust and emission-control mitigation measures (including watering roads), mitigation measures limiting disturbance, and restoration and monitoring practices described in the COM Plan will further assist in reducing impacts to air quality along this portion of the alignment.

5.3.9 Hazardous Materials

No hazardous materials would be stored along the ROW in this area, and therefore the potential for impacts from hazardous materials exists primarily during construction. A spill prevention plan and reference to hazardous material regulations are documented in the COM Plan for the SWIP – Southern Portion. During construction of the transmission line, mitigation measures outlined in the COM Plan would be followed to ensure that vehicles will be kept in good working condition, and impacts from hazardous materials are minimized.

5.3.10 Socioeconomics and Environmental Justice

During construction of the transmission line, short-term beneficial impacts, such as increased revenue, could result from the use of local restaurants and hotels in the North Las Vegas area and the Town of Alamo by construction workers. The transmission line will be an unmanned facility located in Clark and Lincoln counties, and operation of the facilities will have minimal effects to Clark and Lincoln County employment, income, or social services. The area of the realignment is relatively unpopulated at this time and plans for the area (Coyote Springs Development) do not suggest the future presence of a high number of low-income groups, therefore, no environmental justice impacts would occur from the construction or operation of the transmission line in this location.

5.3.11 Areas of Environmental Concern

The Coyote Springs Realignment is located within a BLM and congressionally designated utility corridor that crosses a small portion of the Coyote Springs ACEC (designated to protect Mojave Desert Tortoises). However, the mitigation and compensation measures identified under the discussion of Threatened and Endangered Species in Section 5.3.1.5 of this EA and as presented in the BO will help to avoid and reduce potential impacts to the Mojave Desert Tortoise.

SECTION 6.0
POLICY AND RESOURCE UPDATES

6.1 INTRODUCTION

This section of the EA contains updates on the environmental setting of the SWIP – Southern Portion. These updates are based on key policy and/or resource changes that have occurred following the approval of the SWIP Final EIS, the ROD, and ROW Grant(s), including information associated with the following topics:

- Designated Critical Habitat for the Mojave Desert Tortoise
- Sage Grouse
- Migratory Birds
- Noxious and Invasive Weeds
- Environmental Justice
- VRM Classifications
- Cultural Resources
- Tribal Consultation
- Threatened and Endangered Species, Sensitive Species
- Clark County Ozone Non-Attainment

Following is an overview of the affected environment and environmental consequences regarding each of these topics (as appropriate). Additional information in support of this discussion may also be found in the SWIP – Southern Portion BA, BO and COM Plan.

6.2 DESIGNATED CRITICAL HABITAT FOR THE MOJAVE DESERT TORTOISE

6.2.1 Affected Environment

The USFWS designated Critical Habitat for the Mojave Desert Tortoise on February 8, 1994, including specific areas in California, Arizona, and Nevada, which are crucial to the recovery of the species. The final rule for the designation identified four units totaling 1.2 million acres in Nevada, where the majority of the Mojave Desert Tortoise habitat is managed by the BLM, under the Clark County MFP. The designation of Critical Habitat occurred shortly before approval of the SWIP ROD and ROW Grant, and biological opinions were prepared that evaluated the project's effect both on tortoises and their Critical Habitat. An updated BA was submitted to the USFWS in July 2007 and a BO, including an Incidental Take Statement, was issued by USFWS on December 20, 2007. The BO concluded that the SWIP is not likely to jeopardize the continued existence of the threatened desert tortoise (Mojave population). Within areas crossed by the transmission line, Critical Habitat is present in Clark County along both sides of U.S. Highway 93, extending from just north of Dry Lake to the Pahranagat Wash, in Lincoln County.

The BLM in the Southern Nevada District has prepared an RMP designating ACECs for Desert Tortoises, and, under the protection of the ACEC, certain activities are restricted in those areas. Along the transmission line ROW, the BLM has designated the Coyote Springs ACEC.

In July 2006, updated surveys were completed along the ROW, from the Harry Allen Substation, to a point just south of Delamar Lake, a distance of approximately 65 miles. Using a triangular transect method a total of 43.5 miles of transects were walked. Tortoises or sign thereof were found on nine of the transects. Two live tortoises were encountered, both on the same transect and both were in burrows. Otherwise, a total of 32 other observations of sign were tallied in this area.

6.2.2 Environmental Consequences

Direct impacts to designated Mojave Desert Tortoise habitat would result primarily from ground-disturbing construction activities. Impacts will be either temporary (short-term) or permanent (long-term) and they will occur within approximately 37.5 miles of USFWS Critical Habitat, and approximately 19.4 miles of the Coyote Springs ACEC that are crossed by the transmission line. The permanent and short-term disturbances would result in loss of vegetation, and therefore reduce the amount of forage available to tortoises. Table 6-1 includes disturbance areas for USFWS Critical Habitat and BLM ACECs. The disturbance is associated with access roads, tower sites, lay down sites, and pulling and tensioning stations. Permanent disturbances are largely associated with access roads.

TABLE 6-1
TOTAL SURFACE AREA DISTURBANCE IN DESERT TORTOISE HABITAT, ACRES

Disturbance Type	USFWS Designated Critical Habitat	BLM ACECs Coyote Springs
Temporary	238	126
Permanent	122	57
Total Disturbance	360	220

Activities associated with project construction could potentially injure or kill tortoises, and vehicles that stray from construction areas and roads may crush Mojave Desert Tortoises above ground or in their burrows. Tortoises also may be affected by removal from construction areas. In addition, they may be killed or injured by vehicles resulting from increased accessibility of the area during and after construction of the transmission line. Other potential impacts from the operation of the transmission line include the increase in accessibility from new access road construction, resulting in increased illegal collection of tortoises found along or near the roadways. The presence of transmission structures may allow for increased avian predation of Mojave Desert Tortoises by providing perches and nesting sites.

Mitigation measures designed specifically to avoid and reduce impacts to the Mojave Desert Tortoise have been developed as a part of the formal Endangered Species Act consultation and are reflected in the BO. Many of the measures duplicate those developed in the 1992 Draft EIS and previous BA/BO; however, other measures have been designed specifically to reduce or eliminate incidental take of tortoises. Examples include the use of steel, H-frame structures with perch deterrents at selective locations south of State Route 168 in the Coyote Springs ACEC, per agreement with BLM, habitat conservation, educational programs, guidelines for handling, holding, or relocating tortoises, assigning speed limits to construction sites, and monitoring towers for active nest sites, as well as numerous other measures identified in the SWIP – Southern Portion BA, BO and COM Plan. Compensation for the loss of Desert Tortoise habitat is required by applicable endangered species laws, regulations, and agency policies, including the BLM Desert Tortoise protection policies, and will be applied to the SWIP – Southern Portion. The decision regarding the distribution and appropriate use of mitigation remuneration for the

disturbance of Desert Tortoise habitat has been determined through consultations between the USFWS and BLM and is reflected in the stipulations and the terms and conditions contained in the BO. The BO is presented in Appendix B of the EA.

6.3 SAGE GROUSE

6.3.1 Affected Environment

Greater Sage Grouse leks are known to be present at several locations along the route of the SWIP – Southern Portion. Updated Sage Grouse surveys were conducted for the SWIP – Southern Portion and for the proposed ROW modifications during the spring of 2006. During the surveys, 69 males were observed in the Butte/Buck/White Pine Population Management Unit, including 16 males in the White River Valley Complex, and 53 males in the West Schell Complex. Two known active leks were located within 2 miles of the SWIP – Southern Portion.

6.3.2 Environmental Consequences

Impacts to the Greater Sage Grouse from the construction of the transmission line could include the potential loss of nests with eggs or young, loss of nesting habitat, loss of forage and insect prey, and increased potential for colonization by invasive plant species, resulting from ground-disturbing activities associated with clearing of vegetation for construction of access and spur roads, and tower sites. Potential impacts from the operation of the transmission line include new access roads, which could increase public access to areas that support Sage Grouse. Access roads, spurs and towers would be placed in wintering grounds, and towers could provide additional hunting perches for Sage Grouse predators, particularly Golden Eagles.

Mitigation measures that have been identified to reduce the potential effects to Sage Grouse include the modification of the location of the transmission line and the use of steel H-frame structures (including perch deterrents) in selective locations as agreed upon with the BLM and Nevada Department of Wildlife. Additional measures to mitigate impacts during construction include limiting long and short-term access, seasonal timing of construction, and the presence of Biological Monitors during construction activities. These measures are described in greater detail in the SWIP – Southern Portion COM Plan.

6.4 MIGRATORY BIRDS

6.4.1 Affected Environment

The MBTA is the domestic law that affirms or 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 requiring harvest to be limited to levels that prevent over-utilization. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, 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 are protected by the MBTA.

6.4.2 Environmental Consequences

Potential impacts to migratory birds from the construction and operation of the transmission line are primarily associated with the potential for clearing and ground disturbance during critical breeding and nesting periods, which could result in the loss of bird nests, eggs, or young. Adult birds are normally able to avoid construction equipment, however, eggs or young in nests cannot. Other impacts to migratory birds include the potential for collision with transmission conductors or, more likely, the fiber optic shield wire (particularly along waterways, while limited, that may serve as migration corridors).

As stipulated in the COM Plan, mitigation measures, including the presence of a biological monitor during the migratory bird nesting season, will reduce these impacts. During construction, active nests that could potentially be affected will be identified, and a buffer zone around each nest will be flagged to keep personnel and equipment away from sensitive areas. In order to reduce the potential for collisions with migratory birds and, in particular with waterfowl and raptors, flight deterrent devices will be employed in key areas, as specified in the COM Plan.

6.5 NOXIOUS WEEDS AND INVASIVE SPECIES

6.5.1 Affected Environment

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 formerly 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 the BLM, Ely District Office.

A complete listing of the noxious weeds identified through these surveys is presented in Table 6-2. 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 in disturbed areas on the ROW following construction.

TABLE 6-2
NOXIOUS WEED SPECIES FOUND WITHIN PROJECT CORRIDOR

Species	Common Name	Number of Locations
Acroptilon repens	Russian knapweed	1
Brassica tournefortii	Sahara mustard	1
Cirsium vulgare	Bull thistle	4
Tamarix ssp.	Salt cedar	5

Red brome (*Bromus rubens*), cheatgrass (*Bromus testorum*), and Chilean chess (*Bromus trinii*) 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 in addition to the noxious weeds identified in Table 6-2 was generally noted. These were often located in association with existing access roads and other previously disturbed areas in the vicinity of the transmission line where evident. Based on the arid conditions that were encountered during these surveys, many of the anticipated invasive species may not have been identified.

6.5.2 Environmental Consequences

The introduction and spread of invasive and nonnative plant species (including noxious weeds) contributes to the loss of rangeland productivity, increased soil erosion, reduced species and structural diversity, loss of wildlife habitat, and, in some instances, may pose a threat to human health and welfare. The Carlson-Foley Act (Public Law 90-583) and the Federal Noxious Weed Act (Public Law 93-629) direct weed control on public land. Executive Order 13112, Invasive Species, was authorized to prevent the introduction of invasive species, provide for their control, and to minimize the impacts caused by these species. NRS 555, Control of Insects, Pests, and Noxious Weeds, provides information regarding the designation and eradication of, and inspection for, noxious weeds within the state of Nevada (Ely PRMP/EIS).

Construction of the transmission line and substation will require new access roads resulting in disturbance at the substation site, tower pad sites and pulling and tensioning areas. Berms created by access road construction can represent disturbed soils, which may provide suitable habitat for noxious weeds including those listed in Table 6-2 and other invasive species previously described. Construction activity, including movement of heavy equipment and light trucks, also may disturb soil and provide weed habitat. Seeds of noxious weeds and invasive species also may be present in the seed bank and soil disturbance can have the effect of "releasing" these seeds possibly leading to local infestations. There also is the potential for weeds to be introduced into the project area by construction vehicles.

Based on the results of the noxious weed survey, and from information provided by the BLM, a noxious weed risk assessment was completed for the project indicating that the construction of the SWIP – Southern Portion represents a low to moderate level of risk (BLM Noxious Weed Risk Assessment, 2-8-07). Under a "moderate" designation control measures are important to prevent the spread of noxious weeds on disturbed sites, preventative management measures are required to reduce the risk of introduction or spread of noxious weeds into the area, and monitoring is required for up to three consecutive years to provide for control of newly

established populations of noxious weeds and follow-up treatments for previously treated infestations.

A comprehensive Noxious Weed Management Plan (part of the COM Plan) has been developed with the goal of keeping the ROW free from noxious weeds. Adherence to the specific weed control mitigation measures in this plan, including measures identified in the Las Vegas BLM Noxious Weed Plan, will minimize the introduction and spread of noxious and invasive weeds during and following construction of the SWIP – Southern Portion. Early detection and rapid response have been important considerations in the development of this plan which includes (1) identification of problem areas, (2) preventative measures that will be implemented to prevent the spread of these and other noxious weeds during construction, (3) treatment methods during construction and post-construction, and (4) reclamation and post-construction monitoring. Included in this plan are specific measures that address the eradication of existing noxious weed populations, measures to minimize the potential for the spread of noxious weeds through off-site power washing of equipment/vehicles and on-site cleaning of equipment/ vehicles with compressed air, and the use of weed free materials during restoration (e.g., hay or straw). The application and use of pesticides for the control of noxious weeds is also addressed in this plan, including daily reporting requirements. Pesticide use reports shall include details such as treatment rate, approximate acreage treated, target species, and weather conditions on the day of the treatment.

In addition, as a part of the ROW Preparation, Rehabilitation, and Restoration Plan (included in the COM Plan), reseeding practices and seeding mixtures to be used in areas of temporary disturbance will be coordinated with a BLM Botanist in order to determine the source type and quantity of seed mixtures and seeding locations. In this regard, mixtures that discourage the establishment of invasive and noxious weeds will be considered, as appropriate.

Follow-up long-term monitoring is an important measure to prevent the further spread of any populations of noxious weeds in the project ROW. Weed monitoring will be conducted per the monitoring schedule, and as prescribed in the Noxious Weed Management Plan as approved by BLM.

The construction contractor and/or owner will implement noxious weed controls measures in accordance with existing regulations, BLM requirements, and as specified in the Noxious Weed Management Plan.

6.6 ENVIRONMENTAL JUSTICE

6.6.1 Affected Environment and Environmental Consequences

As designated by Executive Order 12898 of February 11, 1997, all federal actions must address and identify 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 proposed project area of influence.

The SWIP – Southern Portion is located within a sparsely to unpopulated area, and the Coyote Springs development is expected to be a master-planned community; therefore there are no

current or expected occurrences of disproportionately high percentages of low-income populations who might be impacted from the proposed project.

6.7 VISUAL RESOURCE MANAGEMENT CLASSIFICATIONS

6.7.1 Affected Environment

Revisions to the VRM designations within the Southern Nevada District Office have occurred since the approval of the SWIP Final EIS and ROD (1994), including portions of the Coyote Spring Valley and Harry Allen Substation areas that have been modified from a VRM Class IV (allowing for major modification) to a Class III (partial retention).

6.7.2 Environmental Consequences

The effects of the revisions to the VRM designations within the Southern Nevada District are described in Section 3.6.1 and consistency with the revised designation is assessed in Section 4.7.1 for the ROW Extension to the Harry Allen Substation, and in Sections 5.2.5 and 5.3.5 for the Coyote Springs Realignment. In these and other areas in the Southern Nevada District, mitigation measures, including the use of dulled metal steel structures and non-specular conductors, will reduce visual impacts and allow for conformance with these VRM objectives.

6.8 CULTURAL RESOURCES

Cultural resource surveys have been conducted for the length of the SWIP – Southern Portion and are being documented in a cultural inventory survey report. An HPTP is also being prepared for the project. These documents will be submitted to the SHPO and BLM, and appropriate mitigation measures will be included in the COM Plan.

6.9 TRIBAL CONSULTATION

While the transmission line does not cross any Native American Reservations, the BLM has, and will continue to address NHPA Section 106 Consultation, including consultation with potentially affected Native American Tribes, per the Executive Order on Tribal Consultation. This consultation will include consideration for the extension to Harry Allen, Coyote Springs Realignment, and the Thirtymile Substation Realignment.

6.10 THREATENED AND ENDANGERED SPECIES/SENSITIVE SPECIES

6.10.1 Affected Environment

As described in the SWIP BA and BO, federally designated threatened and endangered species that could be affected by the project include the Bald Eagle, the Southwest Willow Flycatcher, and the Mojave Desert Tortoise (as previously described). In addition, there are several special status species that possess a level of protection or concern in the State of Nevada that could potentially be found in the project area. Both the threatened and endangered species and

sensitive species are discussed in detail in the SWIP BA (T&E Species), and the appendix to the BA (Non-Listed Sensitive Species).

6.10.2 Environmental Consequences

Direct and indirect effects identified for the threatened and endangered species, exclusive of the Desert Tortoise, are anticipated to range from minimal to non-existent. Concerns associated with effects to other sensitive species would primarily be related to vegetation clearing and ground disturbance during the construction of project facilities. The locations of sensitive species (e.g., Las Vegas Valley buckwheat and three-cornered milkvetch) are presented in the COM Plan. Mitigation measures including selective tower placement, the use of alternative tower types, seasonal timing of construction, limiting ground disturbance and permanent access, and compliance with the Flagging, Fencing, and Signage Plan (incorporated as part of the COM Plan), will help reduce potential impacts to sensitive species, as described in the SWIP – Southern Portion BA, BO and COM Plan.

6.11 CLARK COUNTY OZONE NON-ATTAINMENT

6.11.1 Affected Environment

The 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 SWIP – Southern Portion crosses two hydrologic basins in Clark County which the EPA has classified as non-attainment for the eight-hour ozone standard. These include basin number 216 (Garnet Valley [Dry Lake]) and basin number 217 (Hidden Valley [North]).

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 acres; require trenches equal to or greater than 100 feet in length; or include the mechanical demolition of any structure larger than or equal to 1,000 square feet (Air Sciences Inc., 2007).

6.11.2 Environmental Consequences

Impacts to air quality would primarily be short-term as a result of the construction and operation and maintenance activities of the transmission line. The construction of the facilities would produce two types of air pollution: fugitive dust from soil disturbance and exhaust emissions from construction vehicles and equipment. No impacts to ozone levels in the non-attainment areas are expected as there will be insignificant quantities of volatile organic compounds and oxides of nitrogen (the precursors to ozone) emitted from construction vehicles and equipment.

A construction plan, including a schedule and the number and type of vehicles to be used during construction of the transmission line, is included in the COM Plan. Emissions from construction vehicles are not expected to exceed air quality standards. Construction/maintenance activities will comply with the policies identified by Clark County (e.g., Dust Control Permit), the BAPC, and the BLM. Dust and emission control mitigation measures (including watering roads),

mitigation measures limiting disturbance, and restoration and monitoring practices described in the COM Plan will further assist in reducing impacts to air quality.

SECTION 7.0
CUMULATIVE IMPACTS ASSESSMENT

7.1 CUMULATIVE IMPACTS ASSESSMENT

This section addresses the cumulative impacts associated with the ROW modifications considered in this EA. Cumulative impacts result, "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).

The ROW modifications addressed in this section include the Proposed Action (extension of the ROW to the Harry Allen Substation in Dry Lake Valley and the shifting of the granted Robinson Summit Substation northwest to the Thirtymile Substation site), and the realignment of the transmission line ROW in Coyote Spring Valley under LCCRDA from the east to the west side of U.S. Highway 93.

The methodology used to analyze the potential cumulative impacts included identification of the affected environment and environmental consequences associated with each modification individually (presented in Sections 3.0, 4.0, and 5.0 of this EA), and the cumulative effects associated with past, present and future conditions relevant to these modifications when considered collectively.

The following sections provide (1) a summary description of the general existing and planned conditions associated with each of the modified areas, (2) a description of the specific past, present, and future actions most relevant to each modification, and (3) the cumulative effects anticipated for these modifications.

The area of cumulative impact directly reflects each modification, the resources affected (e.g., visual resources, biological resources) and the setting. For the purposes of this cumulative assessment a general area of affect has been identified for each modification to assist in the discussion of impacts. These areas have been defined by topography and the presence of other existing and planned facilities that most directly effect and/or contribute to the cumulative effects associated with each modification. Each area is described below and illustrated on Figures 9 through 11.

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

The general area of cumulative effect identified for the extension of the ROW to the Harry Allen Substation is defined on the west by the Arrow Canyon Range, on the east by the Union Pacific Railroad (UPRR) and Dry Lake Range, on the north by the Moapa Indian Reservation and the Crystal Substation, and to the south by the Apex Industrial Park.

Figure 9

Figure 10

Figure 11

7.1.2 Thirtymile Substation

The general area of cumulative effect identified for the Thirtymile Substation has been defined by the foothills of the Egan Range and Butte Mountains that enclose the substation site, including the previously approved Robinson Summit Substation site and portions of U.S. Highway 50, Jakes Wash Road, and Thirtymile Road.

7.1.3 Coyote Springs Realignment

The general area of cumulative effect identified for the Coyote Springs Realignment includes Coyote Spring Valley and is defined on the west by the Sheep Range and Desert National Wildlife Range and on the east by the Delamar Mountains, Meadow Valley Mountains, and the Arrow Canyon Range. To the north, the area is defined by the upper reaches of the Pahranagat Wash, and to the south in the general vicinity of Sawmill Road.

7.2 EXISTING AND PLANNED CONDITIONS

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

This proposed modification consists of a 3.8 mile extension of the previously approved ROW, which is necessary to interconnect at the Harry Allen Substation. Approximately 36 acres of land will be disturbed during the construction of the 15 additional transmission structures required for the extension. Of this amount, approximately 11 acres will be permanently displaced for access roads and tower locations in comparison to the approximate 80 acres that would have been required if the Dry Lake Substation would have been constructed. The remaining 25 acres will be restored as specified in the COM Plan. Improved access associated with the construction will not cross over the Arrow Canyon Range and into Hidden Valley. The extension is located in an area north of Las Vegas in the Dry Lake Valley that has been, and continues to be, highly modified by the presence of energy-related facilities, including numerous transmission lines into existing substations, several generation facilities, and gas transmission pipelines as listed in Table 7-1. In particular, in-and-around the Apex Industrial Park, a total of 21 energy, transportation, and/or industrial facilities have altered the setting of the local area of cumulative effect. These modifications, virtually all of which underwent NEPA review, are generally illustrated in Figure 9.

7.2.2 Thirtymile Substation

Construction of the Thirtymile Substation and the related transmission interconnections will result in approximately 19 acres of temporary and 81 acres of permanent disturbance which is approximately the same amount of disturbance that would be associated with the currently approved substation site. With approval of this substation site the previously approved substation would not be built. This disturbance will be within, and immediately adjacent to the SWIP and Falcon-to-Gonder designated utility corridors in a rural area in the western foothills of the Egan Range characterized by Great Basin sage scrub. Short and long-term access to the substation will be via an existing road resulting in negligible change to the environment. The Gonder-to-Machacek 230kV and the Falcon-to-Gonder 345kV transmission lines pass approximately ¼ mile south of the Thirtymile Substation site and U.S. Highway 50 passes

approximately ½ mile to the north, as illustrated in Figure 10. Other planned, major projects in this area are presented in Table 7-1. As illustrated in this table, and addressed in other NEPA documents up to an additional four 500kV transmission lines may be developed within the SWIP designated utility corridor in this area including future lines associated with the WPES and other transmission lines currently proposed by Nevada Power Company/Sierra Pacific and TransCanada.

TABLE 7-1
EXISTING CONDITIONS AND
REASONABLY FORESEEABLE FUTURE ACTIONS

Project	Location	Description	Status*
ROW Extension to the Harry Allen Substation			
Southwest Intertie Project 500kV Transmission Line and Substations	Midpoint, Idaho to Dry Lake Valley, Nevada	500kV transmission line with interconnections into Midpoint, Robinson Summit and Dry Lake Substations	P
Harry Allen 230kV and 500kV Substations/Switchyards	Apex Industrial Park	Two substations are located in this area in the vicinity of the Harry Allen Generation Station	P
Crystal Substation	Dry Lake Valley, north of Harry Allen Substations	500kV – 230kV substation	P
Kern River Natural Gas Pipeline	West of Interstate 15	Natural gas pipeline and compressor station	P
Harry Allen-to-Mead 500kV Transmission Line – First Circuit	Between Mead Substation, located south of Lake Mead and the Harry Allen Substation, northeast of Las Vegas	500kV transmission line	P
Harry Allen-to-Mead 500kV Transmission Line – Second Circuit	Parallel to First Circuit, and in some areas sharing towers with First Circuit	500kV transmission line	F
Harry Allen-to-Northwest and Harry Allen-to-Crystal 500kV Transmission Lines	Between Harry Allen, Chuck Lenzie Power Plant and the existing Northwest and Crystal Substations	Two 500kV transmission lines	P
Harry Allen-to-Apex and Silverhawk 500kV Transmission Lines	Between Harry Allen and the Apex and Silverhawk Generating Stations	500kV transmission line	P
Harry Allen-to-Pecos, Harry Allen-to-Northwest, and Harry Allen-to-Reid Gardner Transmission Lines	Between Harry Allen Substation, Pecos, and Reid Gardner Substations	230kV transmission lines	P
Harry Allen-to-Red Butte Transmission Line	Between Harry Allen Substation and Red Butte Substations	345kV transmission line	P
Georgia Pacific Las Vegas Plant, Gypsum Division	Apex Industrial Park	Gypsum wallboard manufacturing facility, approximately 100 acres	P
Nevada Cogen #1 Chevron and Northern Star Generating	Apex Industrial Park	An 85 MW natural gas plant that provides electrical power to Nevada Power and thermal heat to Georgia Pacific, for gypsum board production	P
Apex Generating Station, LS Power	Apex Industrial Park	A 550 MW natural gas, combined cycle power plant; approximately 200 acres	P
Harry Allen Generation Station, NPC	Highway 93 and Interstate 15	A 150 MW natural gas, simple cycle peaking power plant; planned expansion includes a 500 MW natural gas, combined cycle unit	P, F

TABLE 7-1 EXISTING CONDITIONS AND REASONABLY FORESEEABLE FUTURE ACTIONS			
Project	**Location**	**Description**	**Status***
Chuck Lenzie Generating Station, NPC	Apex Industrial Park	A 1,200 MW natural gas, combined cycle power plant	P
Silverhawk Power Station, NPC/Southern Nevada Water Authority (SNWA)	Apex Industrial Park	A 570 MW natural gas, combined cycle power plant	P
Reid Gardner Power Plant Nevada Power	Near the Town of Moapa, off of the Moapa Paiute Reservation	A 605 MW coal-fired power plant	P
Apex Regional Landfill, Republic Services	Apex Industrial Park	Municipal landfill permitted for 1,100 acres, currently using about 250 acres	P
Apex Landfill Pit Las Vegas Paving	Apex Industrial Park	Sand and gravel operations covering about 300 acres	P
Apex Quarry and Plant, Chemical Lime Company and Granite Construction	Apex Industrial Park	Limestone mining, milling, and processing operations by Chemical Lime, granite crushes overburden; approximately 1,500 acres	P
Interstate 15	Diagonally through the southeast portion of Nevada	Four-lane interstate highway and easement	P
UPRR	Generally parallels Interstate 15 through Dry Lake Valley	Mainline railroad track, access road, and future addition of a second track	P, F
U.S. Highway 93	Approximately 1 mile south	US Highway	P
Coyote Springs Realignment			
Southwest Intertie Project 500kV Transmission Line and Substations	Midpoint, Idaho to Dry Lake Valley, Nevada	500kV transmission line with interconnections into Midpoint, Robinson Summit and Dry Lake Substations	P
MCI Fiber Optic Line	Lincoln and Clark counties (located within BLM utility corridor)	Fiber optic line	P
Lincoln County Power District 69kV transmission line	Lincoln and Clark counties (located within BLM utility corridor)	69kV transmission line	P
SNWA Water Pipeline	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	Water pipeline system	F
SNWA 230kV Transmission Line	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	230kV transmission line	F
Lincoln County Power District 2x138kV Transmission Line	Lincoln and Clark counties (Located within BLM utility corridor)	2x138kV transmission line, single - circuit, or 1x138 transmission line double-circuit	F
SPPC/NPC 500kV Transmission Line (1 of 2)	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	500kV transmission line	F
SPPC/NPC 500kV Transmission Line (2 of 2)	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	500kV transmission line	F
TransCanada (Northern Lights) 500kV Transmission Line	Eastern Montana to Las Vegas, Nevada (located within BLM utility corridor)	500kV DC transmission line	F
TransCanada (Northern Lights) 500kV Transmission Line	Wyoming to Las Vegas, Nevada (located within BLM utility corridor)	500kV DC transmission line	F

TABLE 7-1 EXISTING CONDITIONS AND REASONABLY FORESEEABLE FUTURE ACTIONS			
Project	**Location**	**Description**	**Status***
Coyote Springs/ Pardee Homes Development	State Road 168 and Highway 93	Housing and golf development	F
BLM Utility Corridor	Coyote Spring Valley	Corridor established through LCCRDA for linear/utility facilities	P
Coyote Spring Valley Well and Moapa Transmission Project	Coyote Spring Valley	Groundwater test well and pipeline	P
U.S. Highway 93	North-South corridor through eastern side of Nevada	Two-lane U.S. highway	P
Western Elite Landfill and Quarry	West of Highway 93 in Lincoln County	Landfill and quarry operation	P
Thirtymile Substation			
Southwest Intertie Project 500kV Transmission Line and Substations	Midpoint, Idaho to Dry Lake Valley, Nevada	500kV transmission line with interconnections into Midpoint, Robinson Summit and Dry Lake Substations	P
WPEA/GBT 500kV Transmission Line	White Pine County (located within BLM utility corridor)	500kV transmission line	F
SPPC/NPC 500kV Transmission Line (1 of 2)	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	500kV transmission line	F
SPPC/NPC 500kV Transmission Line (2 of 2)	White Pine, Lincoln, and Clark counties (located within BLM utility corridor)	500kV transmission line	F
TransCanada (Northern Lights) 500kV Transmission Line	Eastern Montana to Las Vegas, Nevada (located within BLM utility corridor)	500kV DC transmission line	F
TransCanada (Northern Lights) 500kV Transmission Line	Dillon, Montana to Las Vegas, Nevada (located within BLM utility corridor)	500kV DC transmission line	F
BLM Utility Corridor	Follows the SWIP ROW Grant	Multiple interstate high voltage electric transmission lines, substations, and gas pipelines; future addition of new lines	P, F
Gonder-to-Machacek 230kV Transmission line	Approximately ¼ mile south of the proposed Thirtymile Substation site	230kV transmission line	P
Falcon-to-Gonder 345kV Transmission line	Approximately ¼ mile south of the proposed Thirtymile Substation site	345kV transmission line	P
U.S. Highway 50	Approximately ½ mile north of the proposed Thirtymile Substation site	Two-lane U.S. highway	P
***P = Past or Present, F = Future**			

7.2.3 Coyote Springs Realignment

In addition to the Proposed Action, this EA also evaluated the realignment of approximately 25 miles of the transmission line ROW in Coyote Spring Valley. The LCCRDA of 2004 mandated relocation of the existing SWIP designated utility corridor from the east to the west side of U.S. Highway 93 in the Coyote Springs area, and realignment of the SWIP ROW to be within the relocated utility corridor. LCRRDA also specified that a proposed SNWA/Lincoln County Water

District water pipeline be sited in the relocated utility corridor. A primary purpose of designated utility corridors is to reduce the level of cumulative impacts through the consolidation of ROWs. Approximately 237 acres of land will be disturbed during construction of the realigned portion of the SWIP transmission line. Of this amount, approximately 103 acres may be permanently displaced for access roads and at tower sites. The remaining 134 acres would be restored as specified in the COM Plan. As presently proposed by other utilities, up to a total of six additional transmission lines (or circuits) are to be located within the SWIP designated utility corridor in this area, as well as a proposed water pipeline as presented in Table 7-1.

As illustrated in Figure 11, in addition to the existing and planned utilities in this area, the Western Elite Landfill and Quarry (industrial area) is located to the west of U.S. Highway 93, and to the east side of the highway in this area is the Coyote Springs Planned Development. Components of this proposed development include single and multi-family residential areas (up to 111,000 residential dwelling units), commercial and light industrial areas, multiple golf courses, hotels and resorts, open space and a resource management area. A DEIS was completed for this project in November 2007. Under the preferred alternative, approximately 21,454 acres would be developed over the course of 40 years, including 7,548 acres that will be dedicated as the Coyote Springs Resource Management Area. This planned development also includes the construction of flood detention basins totaling approximately 3,331 acres. Of these, eight detention basins with trash racks and sediment storage for off-site storm flows could be built west of U.S. Highway 93 within the BLM utility corridor (up to 244 acres).

7.3 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

Table 7-1 contains a list of past, present and reasonably foreseeable future actions in the region which, due to general proximity, could potentially have cumulative impacts with each of the SWIP ROW modifications considered in this EA. Following this table is a description of other projects or planning actions that are known to have included the SWIP Project in the documentation of cumulative effects in their respective NEPA documents.

In addition to the analysis completed in the SWIP EIS, several other NEPA documents have been completed which include the SWIP in their cumulative analyses, including the following:

- Harry Allen-to-Crystal 500kV Transmission Line - EA
- Harry Allen 500kV Substation - EA
- Harry Allen-to-Northwest 500kV Transmission Line - EA
- Chuck Lenzie (formally Duke) Natural Gas Generating Station - EA
- Silverhawk Generating Station - EA
- Harry Allen-to-Lenzie 500kV Transmission Line - EA
- Harry Allen-to-Mead 500kV Transmission Line - EA
- Harry Allen-to-Harvey Well Water Pipeline - EA
- Kern River II Natural Gas Pipeline - EIS
- Falcon-to-Gonder 345kV Transmission Line - EIS
- Ely BLM PRMP - EIS
- White Pine Energy Station - DEIS

With respect to the WPES, the power plant proposed by Great Basin's affiliate WPEA, the WPES DEIS evaluates the SWIP as both a cumulative action and a connected action. This is because full build-out of the proposed WPES (i.e., to approximately 1600 MW) is unlikely to

occur without construction of all or a portion the SWIP or a similar transmission project (see WPES DEIS at pg. 2-39). On the other hand, the SWIP is not dependent on the WPES because, as previously noted, the SWIP would serve other independent functions (e.g., interconnect existing utility grids in northern and southern Nevada, increase regional transmission system reliability, provide transmission service for other generation including proposed or potential renewable energy projects) and may be constructed by Great Basin, in whole or in part, in the absence of the WPES.

7.4 ANALYSIS OF THE CUMULATIVE EFFECTS

The following sections provide a description of the potential cumulative effects when considering the modifications collectively with respect to specific environmental resources, followed by a summary of overall cumulative environmental effects. In particular, the potential effects associated with multiple transmission lines and other linear facilities currently planned within the designated BLM utility corridor are addressed.

7.4.1 Biological Resources

Cumulative effects to biological resources are generally additive and would be proportional to the amount of ground disturbance within specific project areas. In particular, the cumulative effect of several projects constructed in the same area such as the BLM utility corridor (i.e., SWIP, NPPC/SPPC and TransCanada 500kV transmission lines) at the local level is likely to produce impacts that will vary to some extent depending upon proximity of additional lines. Increasing numbers of transmission lines, roads and development (e.g., Coyote Springs) in areas of wildlife habitat are an important consideration. Such impacts can be minimized through the concentration of linear projects (transmission lines, pipelines, etc.) into designated corridors with the goal of reducing habitat fragmentation. Following is a description of these effects associated with each of the modifications.

While it is assumed that the effects of multiple transmission lines would “multiply” to some extent the native habitat acreage disturbed or lost, access roads developed in association with the extension of the transmission line to Harry Allen Substation and the Coyote Springs Realignment may serve more than one transmission line project and would therefore minimize the requirements for new access in certain areas resulting in reduced ground disturbance. Construction of the facilities associated with the ROW extension to Harry Allen Substation will result in a total of approximately 25 acres of temporary disturbance and 11 acres of permanent disturbance and the Coyote Springs Realignment will result in a total of approximately 134 acres of temporary disturbance, and approximately 103 acres of permanent disturbance. In these modified locations, areas not permanently displaced by project facilities and long-term access will be restored and/or closed in accordance with direction from the BLM as presented in the COM Plan, and in the specific areas of the extension of the ROW to Harry Allen, and the realignment in Coyote Springs, cacti and yucca will be salvaged and replanted off of impact areas for later replacement. It is expected that the development of future facilities in the area will include similar restoration requirements to help minimize the cumulative effects associated with the loss of vegetation and habitat in these two areas of modification. This most recently includes plans such as those proposed for the Coyote Springs Planned Development which include the dedication of 7,548 acres as a resource management area.

Ground disturbance associated with the ROW extension to Harry Allen Substation and the Coyote Springs Realignment could also increase the potential for the spread of noxious and invasive weeds, as could other projects in the immediate area including future transmission lines (see Table 7-1) and the Coyote Springs Development. Adherence to the specific weed control measures identified in the Noxious Weed Management Plan and the ROW Preparation, Rehabilitation and Restoration Plan (part of the COM Plan, and discussed in Section 6.5 of this EA), including measures identified by the BLM will minimize the introduction and spread of noxious and invasive weeds during, and following, construction. The adherence of future projects in the area to similar standards will help minimize cumulative effects with respect to the introduction and spread of noxious weeds.

The Mojave Desert Tortoise is known to be present along the ROW extension to the Harry Allen Substation, and in the area of the Coyote Springs Realignment where the transmission line would be located in some areas designated as Critical Habitat. The Clark County Department of Comprehensive Planning and USFWS have addressed cumulative effects to biological resources from development and construction activities on a county-wide basis, and the Final Multi-Species Habitat Conservation Plan (prepared by Clark County; the Cities of Las Vegas, North Las Vegas, Boulder City, Mesquite, and Henderson; and the Nevada Department of Transportation) address sensitive and protected biological resources and require mitigation for the effects to Desert Tortoise (as described in Section 6.2 of this EA). Section 7 Consultation with USFWS has been completed for the SWIP – Southern Portion, and the BA and BO address direct and indirect impacts to the Desert Tortoise in these locations, and also prescribe mitigation measures including compensation and other measures (use of H-frames in the Coyote Springs ACEC) that are included in the COM Plan. Because plans and mitigation requirements have been, and will continue to be, developed to address potential impacts to the Desert Tortoise, and because consultation and detailed mitigation planning will occur on other future projects including the Coyote Springs Planned Development, cumulative effects associated with other future development should be minimized.

Impacts to other sensitive species including the Las Vegas Valley buckwheat that could be affected by the physical loss of habitat associated with successive projects in the areas of modification associated with the extension to the Harry Allen Substation and the realignment in Coyote Springs will also be minimized through careful siting, construction sequencing, and monitoring. Effects to migratory birds will be mitigated by the use of biological monitors during construction in the migratory bird season and by the avoidance of sensitive nesting areas until nests become dormant. It is expected that development of future facilities in the area will employ similar mitigation measures and practices to minimize cumulative impacts.

No threatened or endangered species, or designated Critical Habitat, were identified in the Thirtymile Substation area. Rare plant surveys conducted during Spring 2006 also did not reveal the presence of any sensitive plant species at this location. The substation will not affect populations of Sage Grouse in locations well to the north (Butte Valley) and south (Jakes Valley). Similar to the other modifications, mitigation measures, construction sequencing and monitoring as prescribed in the COM Plan for the SWIP – Southern Portion, as well as mitigation measures associated with other future projects within the designated corridor in this area will minimize cumulative effects to biological resources including potential effects to habitat and migratory birds.

7.4.2 Cultural Resources

No cultural resource sites were identified in association with the ROW extension to the Harry Allen Substation, therefore, this modification should not contribute cumulatively to effects to cultural resources in this area.

The potential exists for cumulative impacts to archaeological and historic sites and TCPs as a result of the Thirtymile Substation and Coyote Springs Realignment, as a total of 76 cultural sites were identified within the APEs associated with the Thirtymile Substation and the Coyote Springs Realignment. Of this total, 16 are recommended as eligible for listing on the NRHP. However, because of mitigation measures, it is anticipated that any potential direct impacts from project construction of these modifications would be fully mitigated through commonly employed practices such as data recovery and construction monitoring, as would be the case with other potential future transmission lines and facilities planned for the SWIP corridor. Important resources that would be affected by construction activities would be avoided, or if this is not possible, recovered for their scientific value. The impact on cultural resources from future utility projects cannot currently be determined but the cumulative effects of all of the transmission lines planned within the corridor being in-place is not expected to be measurably different than the additive impacts of each single project, but again, the impacts of direct disturbance to sites would be mitigated.

The construction of new access associated with the utility corridor could also result in additional indirect cumulative impacts to cultural resources through incidental destruction, or vandalism by the public. However, as presented in the COM Plan, mitigation measures, including the closure of new access roads not required for maintenance, as deemed practicable and identified by the BLM and the Project Proponent, would limit new or improved accessibility.

Projects in the vicinity of the SWIP such as the Coyote Springs Planned Development may also contribute cumulatively to cultural resource impacts. At the time of the completion of the DEIS for the Coyote Springs Planned Development, a total of 31 archaeological sites had been identified. Of these a total of 26 are considered to be potentially eligible for listing on the NHRP, however, consultation with the Nevada SHPO would require the development of mitigation actions that would reduce or compensate for damages to, or the loss of, any NHRP eligible resource.

7.4.3 Paleontological Resources

The potential exists for cumulative impacts to paleontological resources as a result of future development including additional planned transmission lines in the immediate vicinity of the proposed modification areas and in association with the SWIP corridor. The level of potential cumulative impacts is dependent on the sensitivity and potential of disturbed areas to contain fossils. A paleontological resources treatment plan has been prepared for the SWIP – Southern Portion (San Bernardino County Museum, 2006) and includes mitigation measures that would address potential impacts to paleontological specimens prior to construction and during construction of the proposed project, such as monitoring for paleontological specimens during construction. If resources are identified during the intensive pedestrian field inspection which would be conducted prior to construction, appropriate measures would be implemented in order to minimize impacts. The treatment plan will be included as an appendix to the COM Plan.

In the area of the ROW extension to the Harry Allen Substation, investigations concluded that this area was of low sensitivity would not add to cumulative impacts to paleontological resources and no further investigations would be required. The Thirtymile Substation and the Coyote Springs Realignment are both located in areas of an undetermined paleontological sensitivity that will undergo intensive pedestrian field inspection prior to construction. It is anticipated that future projects located in or near the SWIP corridor in these areas would require the same level of study as that conducted in the areas of modification. Similar to cultural resources, it is anticipated that significant resources that would be affected by construction activities would be avoided, or if this is not possible, recovered for their scientific value. In addition, mitigation measures established in the respective COM Plans associated with these projects would also be implemented thereby avoiding or reducing the cumulative effects to paleontological resources.

7.4.4 Land Use, Recreation, and Access

Existing and planned land use within the area of the ROW extension, and Harry Allen Substation (see Table 7-1 and Figure 9) is primarily industrial in a heavily modified setting, consisting of numerous utility facilities such as the Harry Allen Generation Plant, the two Harry Allen Substations, 500kV, 345kV and 230kV transmission lines and associated access roads, and the Kern River Natural Gas Pipeline and Metering Station. The ROW extension would be constructed on vacant, non-grazing BLM land and is consistent with the Northeast Clark County Land Use Plan, which designates this area as *Heavy Industrial* and *Open Land*. There are no active recreation areas in the immediate vicinity, and the Las Vegas RMP designates OHV use in the vicinity of the extension as “limited to existing roads, trails, and dry washes.” In this regard additional long-term access associated with the extension to Harry Allen will generally be limited to the transmission ROW and, while resulting in additional access, the cumulative effects will be reduced through mitigation measures including the closure of new access roads not required for maintenance as deemed practicable and identified by the BLM in coordination with the Project Proponent that would limit new or improved accessibility.

The ROW relocation in the area of the Coyote Springs Realignment occurs within a vacant area designated as a BLM utility corridor (non-grazing lands) in which numerous electric transmission lines and one pipeline currently exist or are proposed for the future (See Table 7-1). In addition, the Coyote Springs Development (approximately 21,454 acres) includes proposed detention basins within the utility corridor in Coyote Spring Valley north of State Route 168. The location of the SWIP alignment in the designated utility corridor and near these basins has been specifically designed to optimize the location for the addition of future ROWs and linear facilities, while minimizing potential cumulative impacts to multiple resources. The addition of new access into this area west of U.S. 93 may increase the potential for OHV use associated with residents of the Coyote Springs Development near the Desert National Wildlife Range. However, again, mitigation measures including the closure of new access roads not required for maintenance, as deemed practicable and identified by the BLM in strategic locations, would limit new or improved accessibility, and access established by the SWIP may reduce the amount of overall new access associated with additional transmission lines and other linear facilities in this area

At the Thirtymile Substation cumulative impacts to existing and planned land use and recreation are anticipated to be minimal. While the Thirtymile Substation and interconnections will displace a small amount of potential grazing land (81 acres of the 178,716-acre Thirty Mile Spring BLM grazing allotment), the substation is located on vacant land in association with the designated

Falcon-to-Gonder and SWIP utility corridors, and as such will accommodate and consolidate existing and future interconnections in an area that is readily accessible from U.S. Highway 50. No new additional roads will be required to access the site and there are no existing or planned active recreational areas in the immediate vicinity of the substation site.

7.4.5 Visual Resources

Increased modifications to the landscape due to the addition of transmission towers (resulting in more contrast of form, line color, and texture) within a multi-line corridor, typically cause an increase in the visibility at longer distances because of the cumulative physical contrast with the natural landscape. Usually, the first transmission line or substation located within a corridor will cause the greatest incremental change, and then each additional line will add cumulatively, but often increasingly less, to the visual impact.

The transmission line extension to the Harry Allen Substation would add cumulatively to the visual impacts in the Dry Lake Valley area because it would be located there in addition to the multiple lines associated with the Harry Allen 230kV and 500kV substation (see Figure 9), and the Crystal Substation and associated lines to the north, east and south. Visual impacts in this area are primarily associated with viewers on I-15 and U.S. Highway 93. The local and regional setting within this area has been significantly modified by the presence of these and other facilities, and the introduction of the extended transmission line into the Harry Allen Substation should not add substantially to the cumulative effects given the viewing distance (1.5 miles and beyond), and the back-dropped condition, most often in context with these other facilities. Mitigation measures including the use of dulled finishes on structures, and the use of non-specular conductors will further reduce cumulative effects in this area

Existing transmission lines and the resulting visual impacts are present within Coyote Spring Valley (69kV line) and in the immediate vicinity of Thirtymile Substation site (230kV and 345kV lines). In addition, the Western Elite Landfill and Quarry, and the planned Coyote Springs Development have, and will substantially alter the appearance of the natural landscape in Coyote Spring Valley, especially with the introduction of the newly planned residential/resort community. The SWIP will add increasingly to these visual impacts. Casual observers from U.S. Highway 93, and U.S. Highway 50 (substation) as well as other local roads would be affected, with the greatest incremental impact taking place on Highway 93 in association with the Coyote Springs Realignment and Coyote Springs Development and on eastbound U.S. Highway 50 near the Thirtymile Substation. Additional lines, if constructed, will add further to the visual cumulative impacts in these areas, although the Ely PRMP has designated the SWIP corridor as VRM Class IV, allowing for these major modifications in the corridor. In general, the grouping of facilities within the SWIP utility corridor would minimize overall cumulative effects on a regional basis through consolidation. However, in the immediate viewshed of the corridor area, the cumulative visual contrast could be slightly increased as each new project is added, and the multiple lines become more noticeable to the casual observer. Measures to minimize these impacts, such as the selective location of towers within the corridor, the use of similar structures and the similar placement of structures (matching spans), dulled finishes on structures, and the use of non-specular conductors will reduce these cumulative effects.

7.4.6 Wilderness and Wild and Scenic Rivers

No cumulative impacts to wild and scenic rivers are anticipated for the three modifications. No wild or scenic rivers are present in the areas of modification, and the nearest Wilderness area, the Delamar Wilderness area, is located approximately 0.75 to 2 miles east of the Coyote Springs Realignment and separated from the realignment by U.S. 93 and areas of private land in select locations. The realignment of future power lines and portions of the Coyote Springs development would be visible from the wilderness area to the west within this modified setting; however, impacts to viewers from the Delamar Wilderness and Meadow Valley Range Wilderness would be minimized based on distance to and the backdropped conditions of the SWIP, and implementation of the mitigation measures previously described.

7.4.7 Wildfire Management

Cumulative effects with respect to wildfire management are primarily associated with potential impacts that are influenced by construction activities and additional access and the types of vegetation located in the areas of modification, as well as fire suppression. There will be incremental cumulative effects from the addition of new access associated with the SWIP, as well as other planned future utilities that could allow for human-caused, accidental ignitions from maintenance activities or recreational users along access roads associated with the ROW extension to the Harry Allen Substation and the Realignment at Coyote Springs. However, mitigation measures including the closure of new access roads not required for operation and maintenance as approved by BLM in coordination with the Project Proponent would limit new or improved accessibility, and the potential for future lines to utilize long-term access associated with the SWIP could reduce these effects. In addition, improved access associated with the modifications and future transmission lines could have the potential for use as fire-break lines and help minimize the need to create new breaks in the event of a fire.

Fire suppression, including mitigation measures and protocols identified in the COM Plan for the SWIP will be applied during construction of the ROW extension to Harry Allen Substation, Thirtymile Substation, and the Realignment at Coyote Springs, and similar measures will also be required for future projects that will assist in reducing potential cumulative effects from fire related incidents that could affect other facilities and developments. These measures, including fire prevention measures (restrictions on smoking, no open fires, restrictions on welding and use of spark arresting devices, etc.) will reduce the potential for fires during construction, and it is assumed that for the SWIP and all future projects, construction personnel would be trained in fire suppression and appropriately equipped to deal with fires, should the need arise.

7.4.8 Earth Resources

There are no unique or special geological features in the areas of modification. Cumulative impacts to earth resources associated with the areas of modification primarily include effects to soils, including the potential for increased wind and water erosion during construction. Impacts to surface water associated with each modification are limited, and none of the modifications are expected to directly affect groundwater resources. With respect to soil erosion, the cumulative impacts would not be measurably different than the additive impacts of each of the incremental transmission line effects. Each additional transmission line or facility introduced into the utility corridor or in the area of cumulative effect associated with the utility corridor would add to

potential wind and water soil erosion dependent on the mitigation measures implemented for each project. Curtailing construction during periods of rain, limiting the areas of disturbance, and the use of erosion control mitigation measures and restoration practices as described in the COM Plan would be implemented to minimize the potential for short and long-term impacts to soils. Impacts to ephemeral drainages and washes in this area are expected to be reduced based on the selective location of towers (spanning of drainages), limiting the area of disturbance, and erosion control and reclamation measures presented in the COM Plan.

Generally, ground disturbance and new access would be incrementally less for each successive project within the corridor in proximity to the areas of modification, which would typically add less impact from each project. However, the cumulative effects of all transmission lines in the corridor would likely be greater than any single project. Indirect and off ROW impacts could result from increased OHV travel on-and-off access roads associated with the construction and maintenance of the ROW extension to Harry Allen and the Coyote Springs Realignment could result in greater ground disturbance over time, but mitigation measures including the closure of new access roads not required for maintenance as deemed practicable and identified by the BLM would limit new or improved accessibility. Access developed for construction of the modifications may also be potentially used by future projects, thereby reducing the amount of overall ground disturbance and cumulative effects to soils.

7.4.9 Air Resources

Cumulative impacts to air quality associated with the ROW extension to Harry Allen Substation, the Thirtymile Substation, and the Coyote Springs Realignment are anticipated to be minimal as air-related impacts are primarily short-term in duration resulting from the construction of the proposed facilities and limited operation and maintenance activities. Cumulative impacts to air quality could occur if other projects within the corridor were constructed at the same time as the SWIP (e.g., detention basins for the Coyote Springs Development), however, at this time the sequence for the construction of these facilities is unknown. If multiple projects were constructed during the same time period, adherence to air permit requirements, and mitigation measures including dust suppression as outlined in respective COM Plans would effectively reduce these cumulative effects (see also Section 6.11 of this EA). Exceedance of regulatory standards is not anticipated.

7.4.10 Hazardous Materials

No hazardous material sites in the areas of modification have been identified. No hazardous materials would be stored along the ROW extension to the Harry Allen Substation, along the Coyote Springs Realignment, or at the Thirtymile Substation. Therefore the potential for cumulative impacts from hazardous materials exists primarily during construction. A spill prevention plan and reference to hazardous material regulations are included in the COM Plan. During construction of the transmission line, mitigation measures outlined in the COM Plan would be followed to ensure that vehicles will be kept in good working condition and impacts from hazardous materials are minimized.

At this time the sequence for the construction of these facilities is unknown. If multiple projects were constructed during the same time period, adherence to spill prevention measures, regulations regarding the use of hazardous materials, and measures regarding the handling of

hazardous materials as outlined in respective COM Plans would effectively reduce cumulative impacts.

7.4.11 Socioeconomic and Environmental Justice

Cumulative socioeconomic impacts are generally only a concern if they would overextend public services and accommodations in the project area. Because of the small size of the work force associated with transmission line construction, and its transitory nature, cumulative impacts are not expected with regard to the construction of the ROW extension, the Coyote Springs Realignment, or the Thirtymile Substation.

Environmental justice addresses environmental concerns within the context of federal actions in the areas of minority and low-income populations. The ROW extension, construction and operation of the Thirtymile Substation, and Coyote Springs Realignment would not add cumulatively to impacts to minority or low-income populations because such populations were not identified in association with the three modification areas addressed in this EA (see also Section 6.6 of this EA).

7.4.12 Areas of Critical Environmental Concern

No ACECs would be affected by the extension of the ROW to the Harry Allen Substation, or at the Thirtymile Substation. The Coyote Springs Realignment slightly alters the original alignment at the northern end of the Coyote Springs ACEC (approximately 1.0 mile), which is designated for the protection of the Mojave Desert Tortoise. In this area, Section 7 Consultation with USFWS has been completed, and the BA and BO address direct and indirect impacts to the Desert Tortoise in these locations, and also prescribe mitigation measures including the use of H-frame structures, seasonal restrictions, tortoise monitoring, compensation and other measures included in the COM Plan as described in Section 7.4.1, above (see also Section 6.2 of this EA). It is expected that future projects may benefit from the access developed for the SWIP in this area, and that similar consultation with USFWS to minimize direct and cumulative impacts will occur.

7.5 SUMMARY

Construction and maintenance of the modifications in the SWIP ROW will add cumulatively to other existing and future projects (identified in Table 7-1) within the region as previously described, however the extension of the ROW to the Harry Allen Substation and a small portion of the Coyote Springs Realignment are the only areas that were not accounted for in the original project analysis in the SWIP EIS in areas that have been, or are presently being substantially altered by other development. The 3.8-mile ROW extension to the Harry Allen Substation includes disturbance areas not included in the original cumulative analysis, however the Thirtymile Substation and the Coyote Springs Realignment (with the exception of an additional 1.5 miles) are relocations of facilities accounted for in the original project analysis. As part of the Proposed Action, the approved Robinson Summit Substation will not be constructed, but rather, replaced by the Thirtymile Substation. The Coyote Springs Realignment is a relocation of the previously approved and planned SWIP ROW from the eastern to the western side of U.S.

Highway 93 based on LCCRDA, therefore overall impacts from these modifications are not expected to add substantially to those previously documented in the SWIP EIS.

To a large degree, the cumulative effects to all environmental resources should be minimized in the long-term based on extensive planning and the location of the SWIP and other planned linear facilities within a common utility corridor (to the extent possible). The location of the SWIP, as well as other existing and planned linear facilities within this corridor, allows for the consolidation and therefore reduction of the incremental impacts associated with past, present, and future actions within a defined and relatively confined area. In particular, by consolidating these facilities within an established utility corridor, future lines and linear facilities are located in a previously planned for and modified setting, and may potentially benefit from long-term access established for the SWIP thereby reducing cumulative effects related to impacts resulting from the construction of new access and the land disturbance required for new access.

The BLM has worked, and will continue to work with the Project Proponent to position the transmission line in a manner that (1) accommodates existing and potential future utilities to the greatest degree possible, (2) minimizes environmental impacts, and (3) maintains consistency with the original ROW grant. This includes consideration for multiple transmission lines, including those proposed by other entities. The BLM also has taken additional steps to further accommodate future lines by requiring the SWIP to use double-circuit structures in the Pahranagat Wash area, south of the Delamar Valley and Dry Lake.

SECTION 8.0
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