

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 (*Psoralea 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 (*Myiarchus 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.

	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 Pahrnagat Lake SE	lithic scatter with tools	not eligible
14	26LN5036	Lower Pahrnagat Lake SE	lithic scatter	not eligible
15	26LN5037	Lower Pahrnagat Lake SE	lithic scatter	not eligible
16	26LN5038	Lower Pahrnagat Lake SE	lithic scatter	not eligible
17	26LN5039	Lower Pahrnagat Lake SE	lithic scatter	not eligible
18	26LN5040	Lower Pahrnagat Lake SE	lithic scatter	not eligible
19	26LN5041	Lower Pahrnagat Lake SE	lithic scatter	not eligible
20	26LN5042	Lower Pahrnagat Lake SE	small artifact scatter with rock alignments	unknown, more information needed
21	26LN5043	Lower Pahrnagat Lake SE	lithic scatter with tools	not eligible
22	26LN5044	Lower Pahrnagat Lake SE	lithic scatter	not eligible
23	26LN5045	Lower Pahrnagat Lake SE	lithic scatter with tool	not eligible
24	26LN5046	Lower Pahrnagat Lake SE	lithic scatter	not eligible
25	26LN5047	Lower Pahrnagat Lake SE	lithic scatter	not eligible
26	26LN5048	Lower Pahrnagat Lake SE	lithic scatter	not eligible
27	26LN5049	Lower Pahrnagat 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 Pahrnagat 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	prehistoric 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 Pahrangat 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.